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# Continuous Band Sealer Instruction Manual

**Distributed By:**

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Sealer Sales, Inc.  
8820 Baird Avenue  
Northridge, Ca 91324  
[www.sealersales.com](http://www.sealersales.com)

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# General Information

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**Thank you for purchasing our continuous band sealer.**

This owner's manual contains information relating to your band sealer machine. The manual will provide you with basic information concerning both operation and maintenance of your new machine. Please read it carefully as failure to do so may result in bodily injury and/or damage to the equipment.

Please fill in the information below. You will find the information on the machine identification plate. You will need this information when ordering replacement parts or making technical inquiries.

No part of this manual may be duplicated, reproduced, stored in a retrieval system, translated, transcribed, or transmitted in any form without the express prior written permission of Sealer Sales.

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## **EQUIPMENT INFORMATION**

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❖ Model #

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❖ Serial #

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❖ Purchase Date:

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❖ Reference # (found on packing slip)

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❖ Owner:

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# Safety Instructions

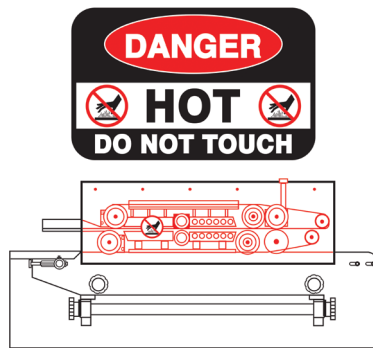
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***WARNING!*** Below are general safety precautions and warnings that should be understood prior to setting up or operating your equipment. Read and fully understand all instructions and warnings prior to using this unit. Your safety is most important! Failure to comply with procedures may result in serious injury or property damage. Remember: **Your personal safety is your responsibility.**

Unsafe practices or unauthorized modifications could result in accidents or property damage. Failure to follow these safety rules and take necessary precautions can result in serious injury as well as damage to equipment.

- ❖ Never operate or service your band sealer until you have read this manual completely and understand it fully.
- ❖ Plug the band sealer into a standard 120 Volt, 60Hz wall outlet or surge protector. We highly suggest using a surge protector. Some special order units are 220 Volt, 50Hz. Make adjustments as necessary.
- ❖ Do not use the band sealer if the power cord, plug or any other parts are damaged. Be sure not to allow the power cord to drape into your work area. Check that all parts are operating properly and perform the intended functions. Check for all other conditions that may affect the operation.
- ❖ Reduce risk of unintentional starting. Make sure the power switch is in the "OFF" position before attaching to the power source.
- ❖ Always disconnect sealer from power source before servicing, changing accessories or cleaning the unit.
- ❖ To provide protection against the risk of electrical shock, the power connection must be properly grounded at all times.
- ❖ Do not leave the sealer unattended when in use. Disconnect the sealer from the power source before leaving the work area.
- ❖ Band sealer is used solely for sealing thermoplastic materials. Using the machine for any other purpose can cause damage to the machine and operator.
- ❖ Always operate machine on a flat stable surface.
- ❖ While operating machinery, wear close-fitting clothing and tie back long hair to prevent any external items from getting caught in the machine. Do not wear jewelry when operating the band sealer.



- ❖ While machine is operating do not touch the heating and/or cooling blocks. Blocks are extremely hot and may burn your hands.



- ❖ While machine is in operation, do not place fingers, tools, or other foreign objects on or into the machine. Do not touch any moving parts while machine is operating. Fingers may get caught in between the gears /pinch points and cause significant injury.
- ❖ Thermoplastic bags and material are hand fed into the machine. Place bag on the guide and carefully feed the bag through the band sealer. Fingers may be placed on the guide but do not allow fingers to touch any of the moving parts on the band sealer.
- ❖ Use emergency stop to turn off machine should material/bags get jammed into the machine. Carefully pull material out of the band sealer. Do NOT use fingers to touch any part of the machine.
- ❖ The band sealer is not water resistant or water proof. Spraying down the machine will damage machine or cause electrical shock. Do not submerge the band sealer into water or liquid.
- ❖ Do not operate band sealer in a corrosive or humid environment.
- ❖ Always keep the machine clean, lubricated and in good working condition. Follow any maintenance and lubrication procedures outlined in this manual. Make sure unit is disconnected from power source before cleaning.
- ❖ NEVER use any accessories or parts from other manufacturers. Machine should not be altered or modified using parts that are not genuine authorized parts. Doing so will VOID YOUR WARRANTY.
- ❖ Never leave the band sealer unattended. Be safe, disconnect the band sealer from power source before leaving work area.
- ❖ Close supervision is necessary when any appliance is near children or persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge . This sealer is NOT to be used by children or by persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge.
- ❖ DO NOT use the band sealer outdoors.
- ❖ DO NOT use the band sealer while under the influence of drugs, medications or alcohol.

**SAVE THESE INSTRUCTIONS - REFER TO THEM OFTEN AND USE THEM TO INSTRUCT OTHERS.**

# Introduction

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Our band sealers are equipped with electronic temperature controllers and variable speed conveyors to seal all types of thermoplastic materials (PP, PE, stand up pouches, gusseted bags, moisture barrier bags, etc.). Seals are created using PTFE bands which maintain high seal quality and produce consistently strong, clean seals on all heat sealable bags. Because bags are placed on a conveyor system, the width of the bag does not matter. These versatile machines offer several adjustments which allow them to be used for a wide range of applications. These machines are used extensively in the food, medical, chemical, cosmetic, and electronic industries.

The FRM-1120C band sealer adopts dry ink coding designed to print date and lot codes at the seal line. Ink dries instantly upon contact with packaging materials and produces clear and legible characters. For FRM-1120C, the standard font size is 18PT which allows for two-line printing. An optional 10.5PT font size which allows for three-line printing can be purchased separately. Please ask your distributor for more information.

The FRS-1120W band sealer adopts hot stamp printing to print date and lot codes at the seal line. Hot stamp printing is similar to an analog printing press. Color ribbon printing provides a stronger adhesion print than dry ink coding and works best for humid environments.

The FRM-1120C / FRS-1120W are stand alone units with casters providing easy mobility for the band sealer. In addition, the sealer is equipped with a tilting mechanism which allows the conveyor to tilt up to 30 degrees, ideal for packaging liquids and grains.

## Features of our FRM-1120C and FRS-1120W Band Sealer

*Your band sealer is equipped with a wide range of standard features and capabilities.*

- ❖ Simple to use – minimal operator training
- ❖ Fast warm up time
- ❖ Unit feeds right to left
- ❖ Rust inhibiting stainless steel construction
- ❖ Equipped with bag entry guide for easy bag feeding and straight seals
- ❖ Industrial grade safety emergency stop switch
- ❖ 10amp protection power surge breaker
- ❖ Equipped with photo sensor for optimal printing precision
- ❖ Dry ink coder for printing characters at the seal line (FRM-1120C)
- ❖ Hot stamp printing coder for printing characters at the seal line (FRS-1120W)
- ❖ Wide seal (8mm) to assure airtight seal
- ❖ PTFE sealing belts
- ❖ Extended forced-air cooling system with extra wide cooling bars and 6 heat transfer orifices
- ❖ One pair of brass sealing bars
- ❖ Sealing method – constant heat



- ❖ Adjustable 2-way pulley system for optimal stability and embossing clarity
- ❖ Knurled pressure rolls with variable pressure adjustment
- ❖ PID digital temperature controller 0-300°C (572°F) with dual alphanumeric displays (target & current temperature)
- ❖ Motorized rubber conveyor with speed control
- ❖ Capable of speeds up to 394 inches/minute

## How Does the Band Sealer Work?

### Basic

#### Principles

FRM-1120C is easy to use. To seal, adjust temperature and place bag on conveyor

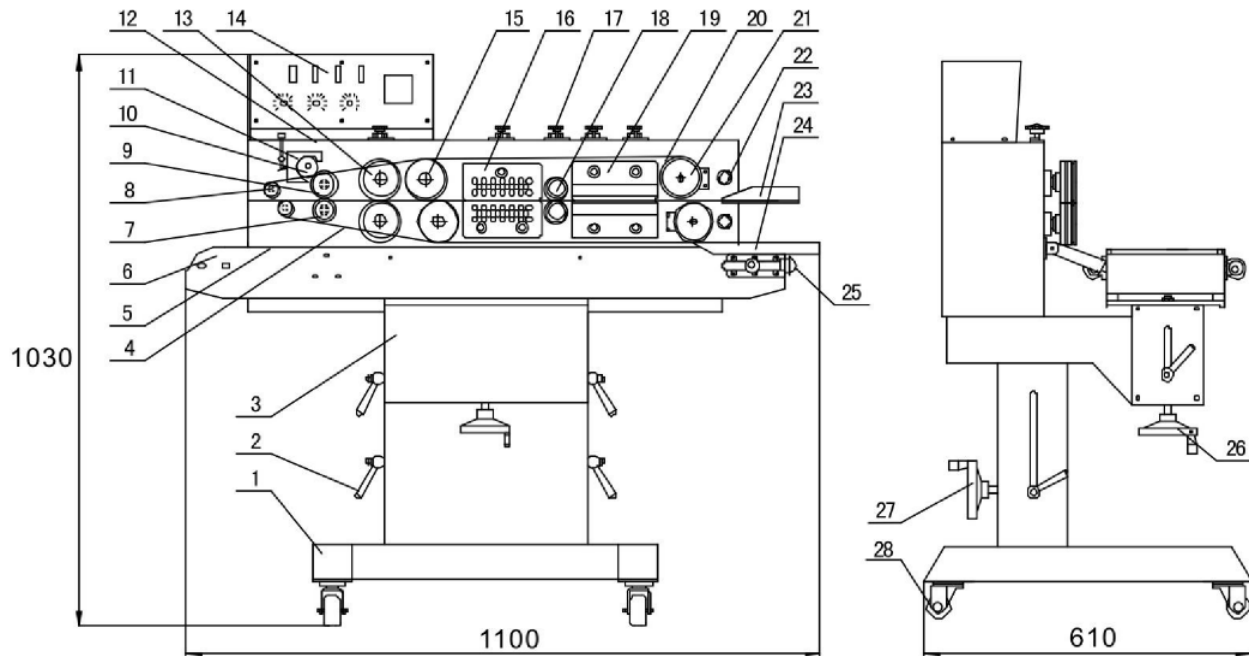
Our band sealers are comprised of a stainless steel frame, speed adjusting mechanism, sealing temperature control system and transmission system. Turning on the heat for the band sealer will cause a rapid rise in the temperature of the heating blocks. Required temperature and speed can be adjusted via the temperature controller and speed adjusting device. Plastic material to be sealed is placed on the guide and conveyor. Conveyor will then take the material between the two heating blocks to fuse the material together. Material will then pass through the cooling blocks to allow the material to congeal. Finally, a photoelectric sensor will direct the dry ink coder to print a clear and legible print at the seal line.

The motor drives the sealing belts, drive belts and conveyor simultaneously.

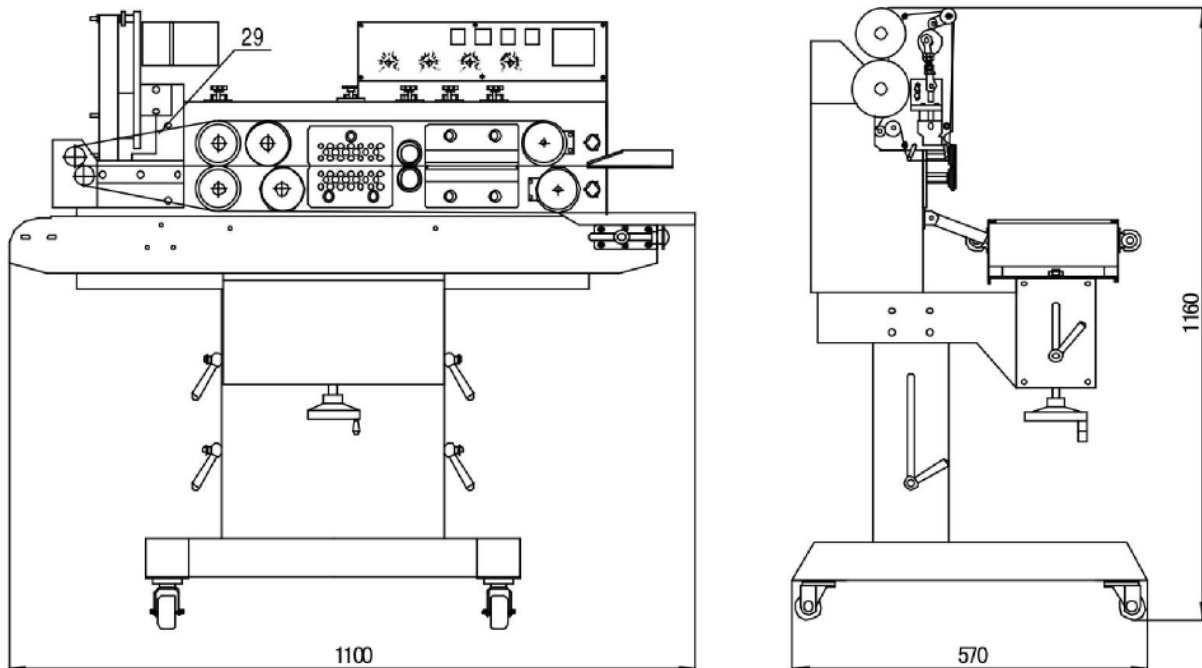
## Specifications

|                        | FRM-1120C  | FRS-1120W               |
|------------------------|--|-------------------------|
|                        | Dry Ink Coding   | Hot Stamp Printing      |
| Power                  | 110V/60Hz  |                         |
| Motor Power            | 100W   |                         |
| Sealing Speed          | 0-394 inches/minutes   |                         |
| Sealing Width          | 10mm   |                         |
| Temperature Range      | 0-300°C (572°F)  |                         |
| Conveyor Size          | 43" x 8"   |                         |
| Max Conveyor Load      | 22-lbs   |                         |
| Printing Heating Power | 40 x 2 (W)   | 50 x 2 (W)              |
| Character Size         | 3x5x7mm / 18PT – 2 lines<br>2x3x7mm / 10.5PT – 3 lines (additional option available) | 2x4x15mm                |
| Printing Colors        | Black, White   | Black, Blue, Red, White |
| Dimensions             | 43" x 24" x 41"  |                         |
| Weight                 | 187lbs (n.w.) / 275lbs (g.w.)  |                         |

## Band Sealer Diagram

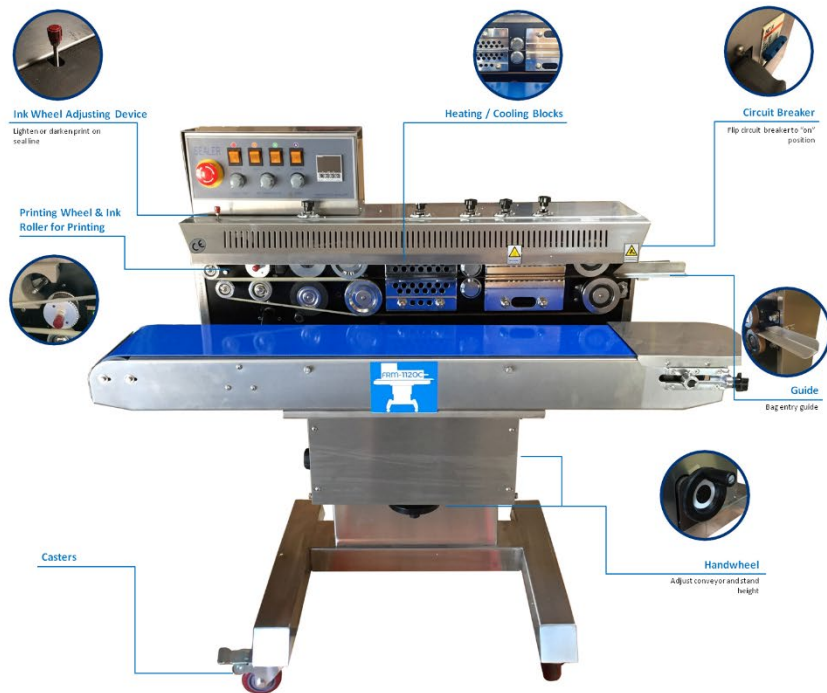


**Figure 1. FRM-1120C** (1) Pedestal, (2) Lock Handle, (3) Slide Block for Bracket, (4) Guide Belt, (5) Conveyor Belt, (6) Conveyor Table, (7) Silicone Wheel, (8) Guiding Wheel (small), (9) Printing Wheel, (10) Solid Ink Roller, (11) Ink Roller Heat Block, (12) Housing Case (13) Embossing Wheel (14) Control Panel (15) Driving Wheel, (16) Cooling Block, (17) Adjusting Knob, (18) Pressing Wheel, (19) Heating Block, (20) Sealing Belt, (21) Driven Wheel, (22) Cam Shaft, (23) Guide, (24) Work Table, (25) Adjusting Knob for Conveyor, (26) Lifting Hand Wheel of Conveyor Table, (27) Lifting Hand Wheel of Complete Unit, (28) Casters

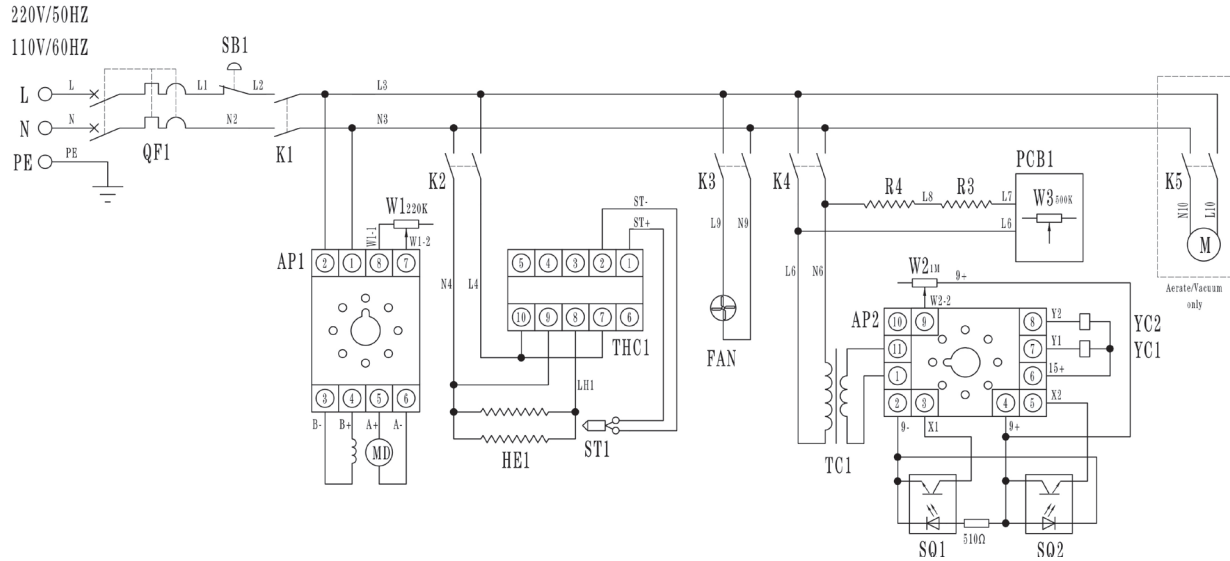


**Figure 2. FRS-1120W Band Sealer** (29) Hot Stamp Imprinter

## Getting to Know your Band Sealer



## Electrical Circuit Diagram



**Figure 3. Electrical Circuit Diagram.** (QF1) High Rupture Switch, (SB1) Emergency Stop Switch, (K1) Switch/Power, (K2) Switch/Heat, (K3) Switch/Fan, (K4) Switch/Printer, (K5) Switch/Aerating-Vacuum (W1) Speed-Regulating Potentiometer; (W2) Coding Position Potentiometer, (W3) Temperature-Regulating Potentiometer; (HE1) Heating Element of Sealing, (R3/R4) Heating Element of Ink Roller; (MD), Speed adjusting Motor; (M) Aerating/Vacuum, (FAN) Fan, (TC1) Transformer, (YC1) Electromagnetic Clutch, (YC2) Electromagnetic Brake, (SQ1) Groove Sensor, (SQ2) Photoelectric Sensor, (THC1) Temperature Controller, (ST1) Thermocouple, (AP1) Speed Adjusting PC Board, (AP2) Main Control PC Board, (PCB1) Temperature Adjusting PC Board

# Installation

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## Important

Read this manual carefully, and make it available to everyone connected with the supervision, maintenance, or operation of this machine. Additional copies are available at your request. Be very careful when operating, adjusting, or servicing this equipment. If in doubt, stop and obtain qualified help before proceeding.

## Installation

Place the band sealer in the desired location with the required electrical power source available. (See power requirements.) Make certain that proper electrical wiring is provided to guard against low voltage. If the voltage is too low, the equipment will not function properly.

Finding the proper location is a most important function of the initial set-up. One must take several factors into consideration:

- ❖ Adequate power source
  - ❖ Relationship to source of product
  - ❖ Relationship to band sealer
  - ❖ Relationship to any conveyors necessary to transport finished product
  - ❖ Convenience of operator
1. Your new FRM-1120C band sealer comes packaged in a heavy duty crate to protect it. If your machine does not arrive in this condition, write on shipping paperwork that outside of box is damaged. Concealed damage may have occurred.
  2. Remove the nails.



**Figure 4.** FRM-1120C Crate

3. Remove the protective plastic covering the machine.
4. Remove bolts holding machine to crate.



**Figure 5.** Bolts locking FRM-1120C to crate.

5. Carefully check the contents against the spare parts list in the toolbox (see Spare Parts List on page 54). Once you have determined that all of the parts have arrived in good order set up can proceed. If any parts are missing or appear to be damaged, please notify your distributor or Sealer Sales AND your freight company at once.

# Operating your Band Sealer

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## Operation Set-up

1. Our machines are equipped with a three-prong grounded plug. Make sure the plug is well-connected in the socket to ensure safe operation.
2. Make sure the circuit breaker is in the “ON” position. (Levers pointing up)
3. First time operation. Allow the machine to pre-heat by running at a low temperature for a few minutes. This would apply if the machine has not been in operation for a long time. The machine can sometimes be damp from storage or shipment and running at a low temperature will dry out any residual moisture.
4. Adjust the conveyor position forwards or backwards. Loosen the two screws at the bottom of the conveyor table. Move out the conveyor table to the suitable position, then fasten the screws. Refer to **Figure 6**.

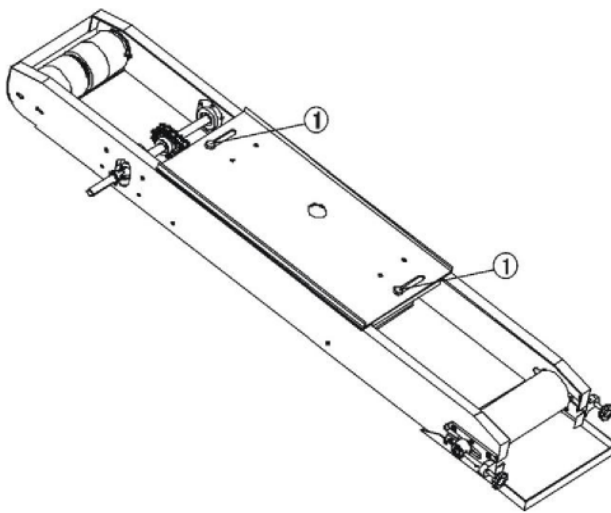


Figure 6.

5. Adjust the guide to adjust seal width and position of seal line on your material.

## Operation



Figure 7. Control Panel of FRM-1120C

1. Our machines are equipped with a three-prong grounded plug. Make sure the plug is well-connected in the socket to ensure safe operation.
2. Make sure the circuit breaker is in the “ON” position. (Levers pointing up)
3. Turn Power, Heat (Seal), Fan, and Printer switches to the “On” position. Belts and conveyor will begin to move simultaneously.
4. Adjust the conveyor speed.
5. Adjust the temperature controller to the temperature desired to seal your material. Temperature settings will vary based on bag material and thickness. If you are unsure what temperature setting to use, we recommend starting at a low temperature (150°C) and gradually increase to a temperature that will seal your material. We highly discourage sealing material at a temperature above 200°C. **Please note: Temperature will be in Celsius, not Fahrenheit.** The temperature controller cannot be displayed in Fahrenheit.






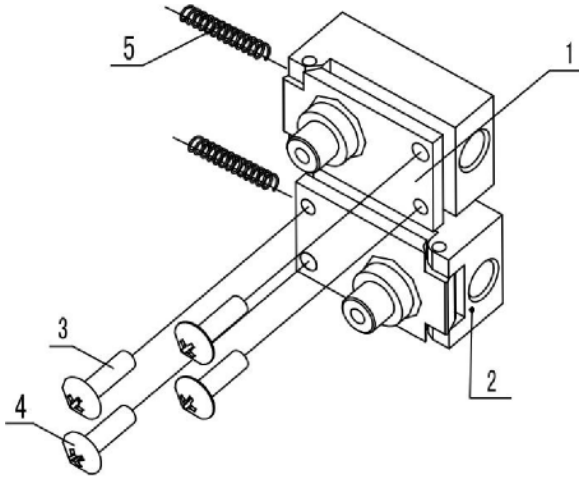
The PV value is the actual temperature and the SV value is the desired temperature setting. The SV value can be viewed by pressing the  button.





Figure 8. FRM-1120C Temperature Controller

- a. To set the temperature, press the  button. The SV temperature will be displayed. The SP light will be on to show the SV temperature.
  - b. Press the  and  button to change temperature setting.
  - c. Press the  button to save the temperature settings.
  - d. Wait until the PV temperature matches the SV temperature which should take approximately 5-10 minutes.
  - e. Check our YouTube channel (<https://www.youtube.com/user/sealersales>) for a video demo.
  - f. **Please note:** Temperature will be in **Celsius**, not Fahrenheit. Do not attempt to make additional adjustments to the temperature controller besides the temperature. The temperature controller CANNOT be displayed in Fahrenheit and is ALWAYS in Celsius. **Please do not set the temperature controller above 200°C.** Please contact your local distributor if you need assistance.
6. Adjust the pressure knob (**Figure 34 , Item #71**) on your band sealer depending on the thickness of your bag material.
  7. Place material on the guide (**Figure 36, Item #28**) and allow the band sealer to pull your material through. Make sure your material is flat on the guide. While the material is moving through the band sealer, do not push or pull the material as this will cause irregular sealing.
  8. If the sealing belt is running off the guide wheels, make adjustments to the screws that are found on the driven wheel seat (**Figure 9, Item #1 & 2**)



**Figure 9.** (1) Driven Wheel Seat (Adjusting Block), (2) Driven Wheel Seat (Adjusting Block), (3)/(4) Adjusting Screws, (5) Springs

9. Emergency Stop – Press the emergency stop to turn off the machine. In order to restart the machine, you must release the emergency stop by turning the knob 120° clockwise.
10. To shut down, turn off the heater switch and allow the temperature of the machine to drop before turning off the power and fan switches. *Following this shut down procedure will significantly prolong the life of machine and sealing belts.*

## Sealing Optimization

1. Sealing performance can be adjusted with the sealing temperature and sealing speed. The higher the speed the less exposure the material to heating blocks and therefore a higher temperature will be required to seal the material.
2. Try a variety of different sealing temperatures and conveyor speeds to get the optimal seal for your material.

## Printing Operation - FRM-1120C

FRM-1120C is equipped with a dry ink coding feature capable of printing characters at the seal line. Ink dries instantly upon contact with packaging materials and produces clear and legible letters/numbers. Standard font size is 18PT which allows for two-line printing up to 20 characters per line. Optional print wheel which allows for 40 characters per line is available to be purchased separately. In addition, we also carry 10.5PT font size which allows for three-line printing can also be purchased separately. Ask your distributor for more details. Check our YouTube channel (<https://www.youtube.com/user/sealersales>) for a video demo.



Figure 10. Standard font size - 18PT

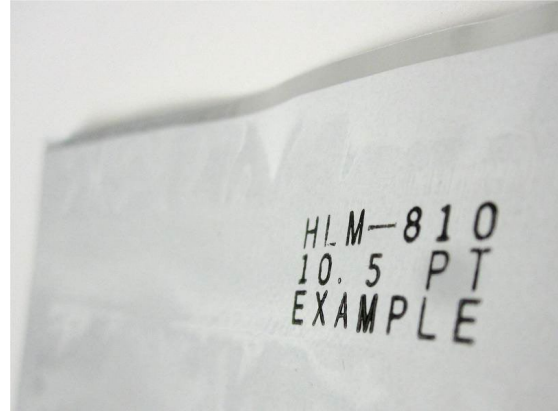
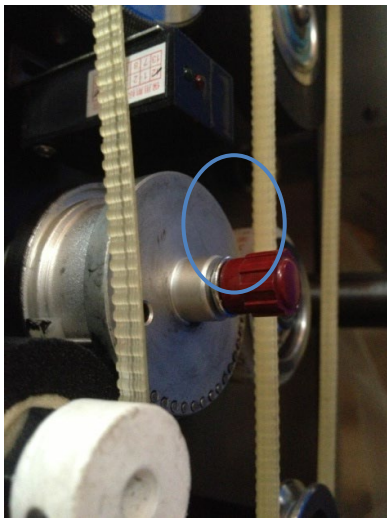
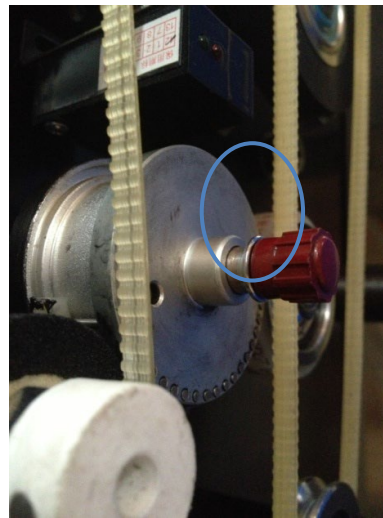


Figure 11. Optional 10.5PT font size available for purchase

1. **Removing Print Wheel.** To remove the printing wheel from the base, push the red handle in and turn clockwise until you feel the handle unlock. (See [Figure 12](#) and [Figure 13](#) for locked and unlocked positions). You may need to turn the wheel a few times until the red handle unlocks and pops out of its locked position.



**Figure 12.** Locked Handle Position



**Figure 13.** Unlocked Handle Position

2. **Installing Types/Characters on Print Wheel.** Place selected characters in the grooves of the printing wheel. Be sure to insert the characters from right to left to ensure actual imprint prints correctly on your packaging material. Once completed, insert the silicone pin at the top of the printing wheel to hold the characters in place.

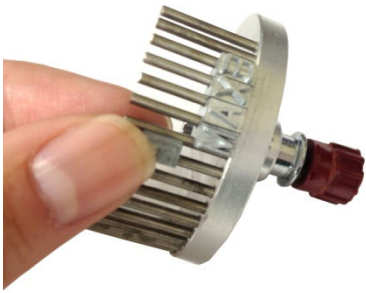


Figure 14. Place characters from right to left.



Figure 15. Place silicone pin to lock characters in place.

3. **Installing the Print Wheel.** To insert the spring-loaded print wheel into the print wheel base, ensure that the pin on the printing wheel is aligned with the notch of the print wheel base. Gently insert the print wheel into the base. Lock the print wheel by pushing the red handle in until you feel the handle lock into place.



Figure 16. Ensure two holes and pins line up with the base

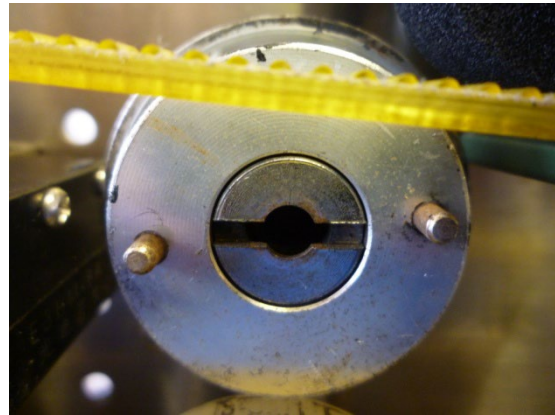


Figure 17. Ensure two holes and pins line up with the base

4. **Install Ink Roller into the Ink Roller Holder.** Remove the metal ring found on the ink roller holder using an allen wrench. Place the ink roller onto the ink roller holder and place the metal ring back on the ink roller holder to hold the ink roller in place. Please note that for 30mm wide ink rollers, the metal ring will not be used.



Figure 18. Remove metal wring found on the ink roller holder



Figure 19. Ink roller installed on ink roller holder

5. **Insert Ink Roller in the Ink Wheel Heating Block.** When inserting the ink roller, ensure the ink roller lines up with the type on the printing wheel. If the ink roller is pushed in too far, the printing wheel will not print correctly. *Note: Do not allow the ink roller to heat continuously when machine is not in use as heating block may melt the ink roller.*

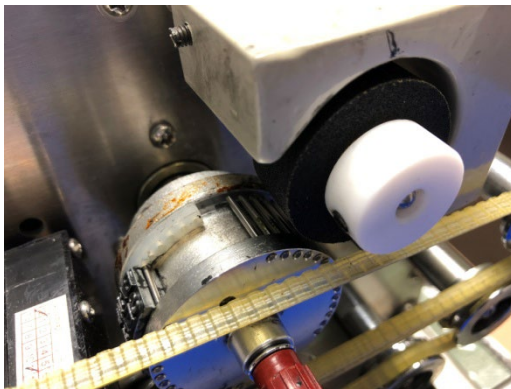


Figure 20. Correct Ink Roller Position

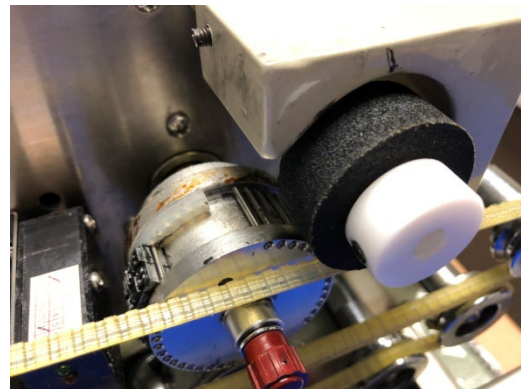
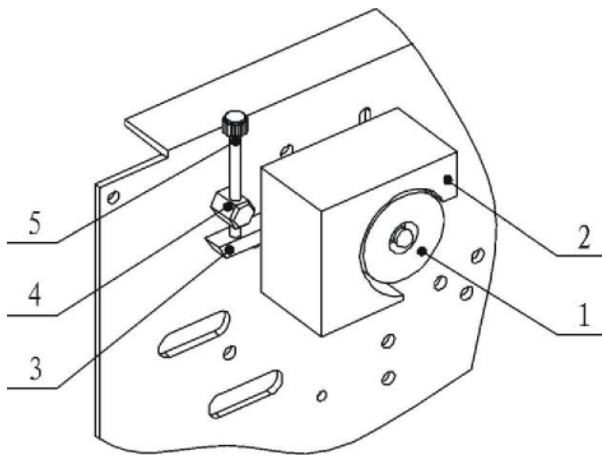


Figure 21. Incorrect Ink Roller Position

Test the ink roller position relative to the printing wheel. Place your finger under the photoelectric sensor. The sensor light will turn green and allow the printing wheel to rotate.

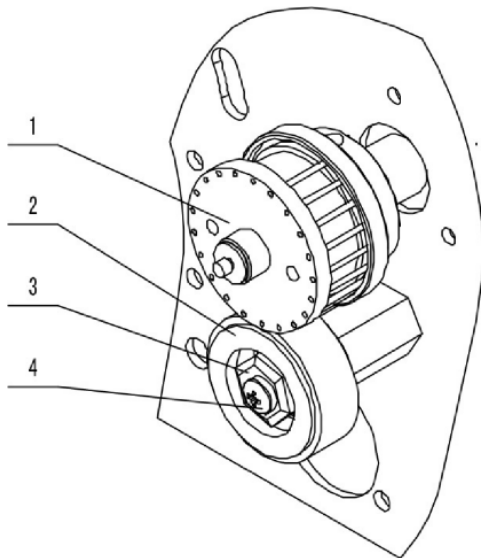
6. **Make Adjustments to Ink Wheel Adjusting Device.** As the print wheel rotates, check that the printing wheel makes contact with the ink roller. Make adjustments using the ink wheel adjusting device (Figure 22, Item #5) if necessary. Turning the adjusting screw clockwise will move the ink

roller away from the print wheel and turning the adjusting screw counterclockwise will move the ink roller closer to the print wheel.



**Figure 22.** (1) Ink Roller, (2) Ink Roller Heating Block, (3) Swing Pole, (4) Adjusting Strut, (5) Ink Wheel Adjusting Device

7. **Make Adjustments Between Printing Wheel and Silicone Wheel.** The typesets/characters on the printwheel should only touch the silicone wheel during the printing process. The characters should not touch the silicone wheel at any other time. If the band sealer is used to seal relatively thicker materials, the screw (Figure 23, Item #4) should be loosened. Rotate the eccentric sleeve (Figure 23, Item #3) to ensure the characters/typesets slightly touch the silicone wheel's surface. Refasten the screw after making adjustments.



**Figure 23.** (1) Printing Wheel, (2) Silicone Wheel, (3) Eccentric Sleeve, (4) Screw

8. **Setting Printing Temperature.** We recommend setting the ink temperature on the higher end. Allow 5-10 minutes for the ink heating block and ink roller to reach the correct temperature. *Note:*



*If band sealer is not in use right away, do not leave ink roller in the unit while temperature is on. This may result in the ink roller melting and producing messy print.*

9. **Adjust Printing Position.** The coding seat knob determines printing position on your material. For example, if you want to print on the left side of your bag, turn the coding seat to its lowest setting (or counterclockwise). If you want to print on the right side of the bag, turn the coding seat to a higher setting (or clockwise).

## Printing Optimization

1. Print quality will be determined by the degree of ink melting, distance between the ink roller and printing wheel and distance between the silicone wheel and printing wheel.
2. Over time, decrease the gap between the ink roller and printing wheel.
3. A newer ink roller will require a lower temperature vs. an older ink roller. Make adjustments to ink temperature as necessary.
4. Ensure there is adequate pressure on the silicone wheel (**Part #BS-57A**) by the printing wheel. We suggest using factory default settings before making any adjustments. Adjustments may be needed based on material thickness.
5. If the printing wheel rotates and there is no thermoplastic material running through the band sealer, excess ink will rub off on the silicone wheel. Clean the silicone wheel with a shop cloth and silicone spray to remove any excess ink.
6. *Remove the ink roller from unit until sealer is ready for use. If ink roller is left in the machine while not in use, this may result in melting of the ink roller and messy print. To clean, wipe down belts, silicone wheel, and other parts with silicone spray and cloth.*



## Printing Operation - FRS-1120W

FRS-112W is equipped with a hot stamp ribbon printer. The printer works much like an analog printing press. Types are loaded into the imprinter then heated. An inked printing ribbon sits between the type and material to be printed. The heated type presses onto the ribbon, melting the ink onto the material. A spring biased dancer assembly having a idler roller maintains a tension on the inked print ribbon as the inked print ribbon is transferred from a supply reel to a rewind reel. To change the code of the hot stamp, types can be easily replaced.



Figure 24. Type Example - FRS-1120W

1. Determining the correct position for printing on your bag will require some trial and error. Adjust the Speed, Coarse Tuning, and Fine Tuning knobs to determine the optimal printing location on your bag.



Each number dial turn moves the print approximately 1" – 1½" to the right

Each number dial turn moves the print approximately 1/8" to the right

Figure 25. FRS-1120W Control Panel

2. To install the hot stamp ribbon, web the imprinter per diagram below (Figure 26). Be sure that the dull side (pigment) of the tape faces away from printing head and toward the base of the imprinter. To web the ribbon through the ribbon press wheel, pull the handle upwards to release the ribbon press wheel. Lock the ribbon to the collect wheel by using a piece of scotch tape to adhere the ribbon to the collect wheel.

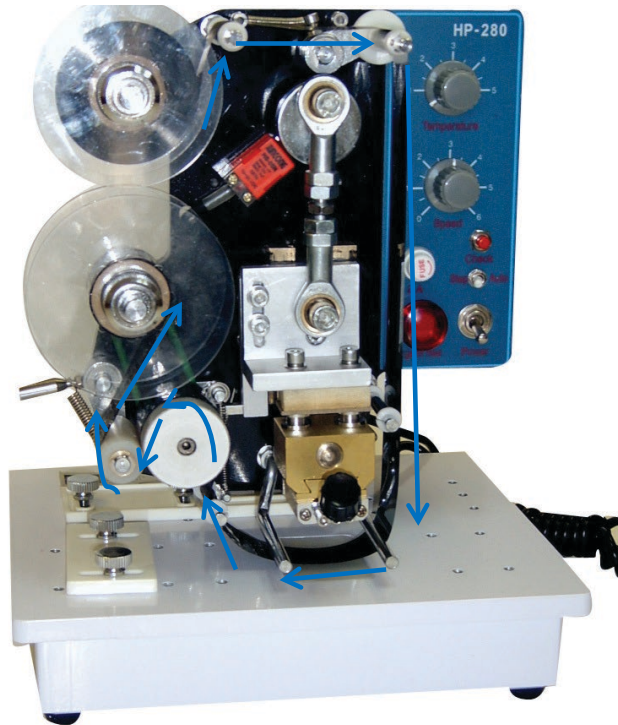


Figure 26. Ribbon Webbing Guide

3. Insert the printing head/type holder in the printing block. To lock the printing head, press the handle on the printing head inward and turn clockwise about 90 degrees. When locked, you should not be able to pull the printing head out of the printing block.
4. If temperature is left on while imprinter is not in use, we suggest turning the ribbon collect wheel a few turns so that ribbon exposed to the heat of the printing block is moved into the ribbon collect wheel. This will prevent ribbon breakage.

## Imprinter Adjustments

Best results in hot stamp imprinting depends on correct temperature, pressure, and stroke speed. Different materials may require adjusting any of these, as follows:

1. **Temperature Adjustment.** Turn the temperature knob to the appropriate temperature for the material to be printed. Turning the knob clockwise will cause the temperature to rise and turning the temperature counterclockwise will cause the temperature to lower. Wait approximately 15-20 minutes for imprinter to reach set temperature.
2. **Pressure Adjustment.** Normal printing pressures vary with the printing material. Pressure should be kept just high enough to obtain good results. Too much pressure causes excessive wear on type and silicone rubber pad. If pressure is too high, the ribbon may break and printed materials may be melted through. If pressure is too low, the printed characters will be illegible.

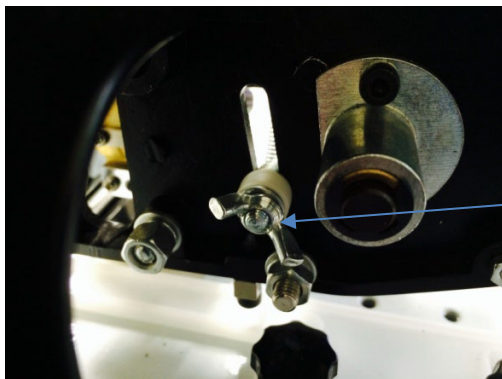
The connection pole can be adjusted up or down to accommodate different types of material and varying degrees of print darkness. To adjust the length of the connection pole, release either of the two nuts located on the connection pole. Turning the nuts clockwise will cause the connection pole to lengthen. Turning the nuts counterclockwise will cause the connection pole to shorten.



Adjust either of the two nuts located on the connection pole.

**Figure 27.** To adjust the length of the connection pole, release either of the two nuts located on the connection pole. Turning the nuts clockwise will cause the connection pole to lengthen. Turning the nuts counterclockwise will cause the connection pole to shorten.

3. **Ribbon Step Distance Adjustment.** The step distance is the amount of tape pulled through by each printing stroke. If the step distance is higher, more ribbon will be consumed during print. This distance is controlled by the bolt located at the back of the machine. Loosen the butterfly-shaped nut found on the bolt. Moving the bolt upwards will reduce the step distance and moving the bolt downwards will increase the step distance. Once the optimal step distance is acquired, tighten the butterfly-shaped nut. The tape should advance just enough to present a new surface on each impression.

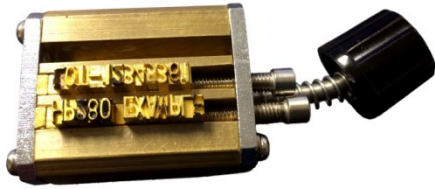


Loosen butterfly-shaped nut and adjust the bolt up or down.

**Figure 28.** Ribbon Step Distance Adjustment. Loosen the butterfly-shaped nut found on the bolt. Moving the bolt upwards will reduce the step distance and moving the bolt downwards will increase the step distance.

## Changing Type

Typesets are easily changed but *please use caution as the printing head/typeset holder will be extremely hot when taken out of the imprinter.* Using an allen wrench, loosen the set screws (Part# HP-280-58) to release the typesets. Insert new types into the printing head/typeset holder and tighten set screw to ensure types do not fall out when inserted into the printing block. Additional types may be ordered as needed. Please ask your distributor for more details.



**Figure 29.** Printing Head / Typeset Holder with typesets

# Maintenance

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The following maintenance procedures should be followed to ensure the longevity of your FRM-1120C band sealer.

## Inspection and Cleaning

1. Inspect your machine daily.
2. Check if there is any foreign matter or dirt adhering to the band sealer.
3. To clean your band sealer, wipe down your sealer with silicone spray and a shop cloth. Do not apply silicone directly to your sealer. Definitely DO NOT wash down your machine with water.

## Sealing and Drive Belts

1. Check and replace the belts as necessary. Both the sealing and drive belts are consumable items. Replace sealing belts when there are burn marks or if the belts become hard and brittle. Replace drive belts when the belts break or become badly cracked.
2. To change out the belts, make sure the machine is turned off.
3. Remove the safety cover.
4. Remove the two drive belts.
5. To remove the sealing belts, push on the adjustment blocks (**Figure 34, Item #28/34**) and the sealing belts should easily slip off.
6. Put new sealing and/or drive belts back on the machine. Test the machine, making adjustments as necessary.
7. Replace the safety cover.
8. Check our YouTube channel (<https://www.youtube.com/user/sealersales>) for a video demo.

## Turbocase Maintenance

1. Remove dust and clean motor at regular intervals. Avoid contact with alcohol, gasoline and benzene chemicals.
2. The turbocase should be oiled as needed with 50g 20# oil by:
  - a. Remove the back cover.
  - b. Locate the turbocase and unscrew the cap. Replenish any depleted gear oil with 50g 20# oil.
3. The motor brush (**Part #BS-29A**) is designed to be used 2,500 hours continuously. Replace carbon brush at regular intervals.

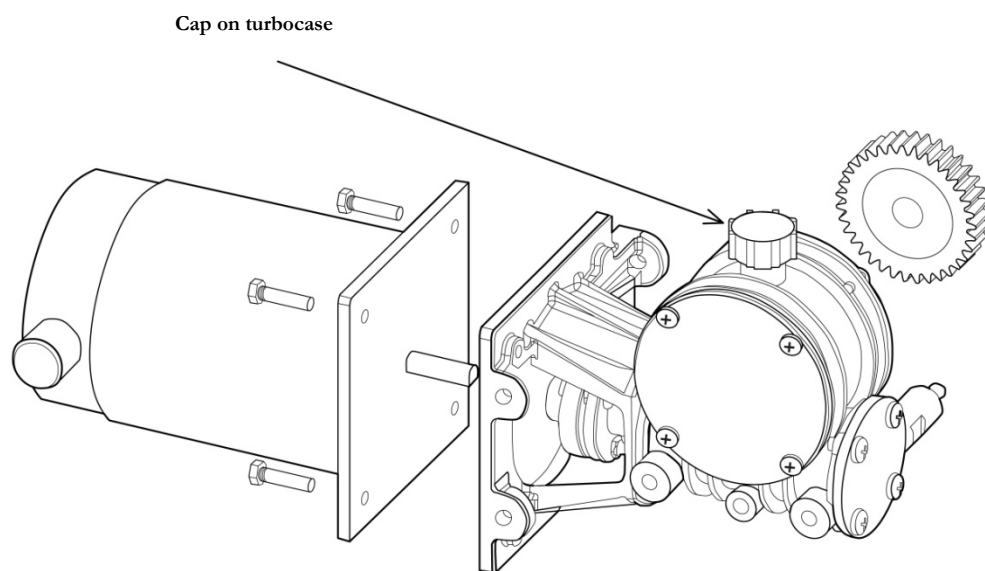


Figure 30. Turbocase cap

## Printing Maintenance

FRM-1120C band sealers are equipped with an ink temperature potentiometer which is attached to a PC Board. This part controls the temperature that is transmitted to both the ink heating block as well as the printing wheel. The part is located behind the ink temperature knob. (Figure 42, Item #12) You should change the ink temperature potentiometer w/ PC Board when both ink heating block and printing wheel on your band sealer are not achieving optimal heat temperatures.

1. Turn off and unplug your band sealer.
2. Remove ink temperature knob from potentiometer and remove the washer that holds the ink temperature potentiometer on the panel.



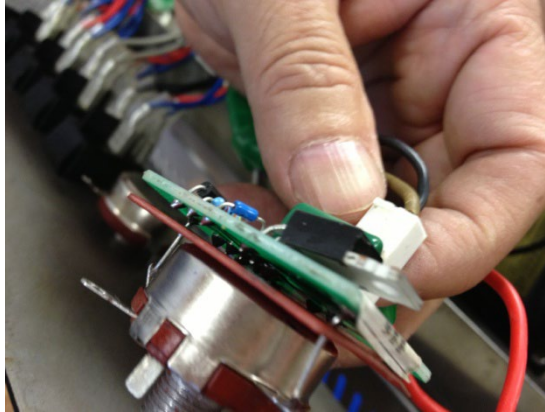
**Figure 31.** Remove Ink Temperature Knob



**Figure 32.** Remove Washer Holding Ink Temperature Potentiometer

3. Remove the band sealer display panel. There should be six screws to remove.
4. Unplug the ink temperature potentiometer and plug in a new ink temperature potentiometer. Make sure the part is plugged in properly and tight.





**Figure 33.** Unplug Ink Temperature Potentiometer w/ PC Board and Replace with a New Ink Temperature Potentiometer w/ PC Board



# FRM-1120C Parts Diagram

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To order spare parts, please use diagram and part #s below:

**Figure 34** – Spare Parts Diagram Overview

**Figure 36** – Heating / Cooling Blocks and Dry Ink Coding

**Figure 38** – Gears

**Figure 42** – Conveyor

**Figure 42**– Control Box

**Figure 44** – Sealer Rack

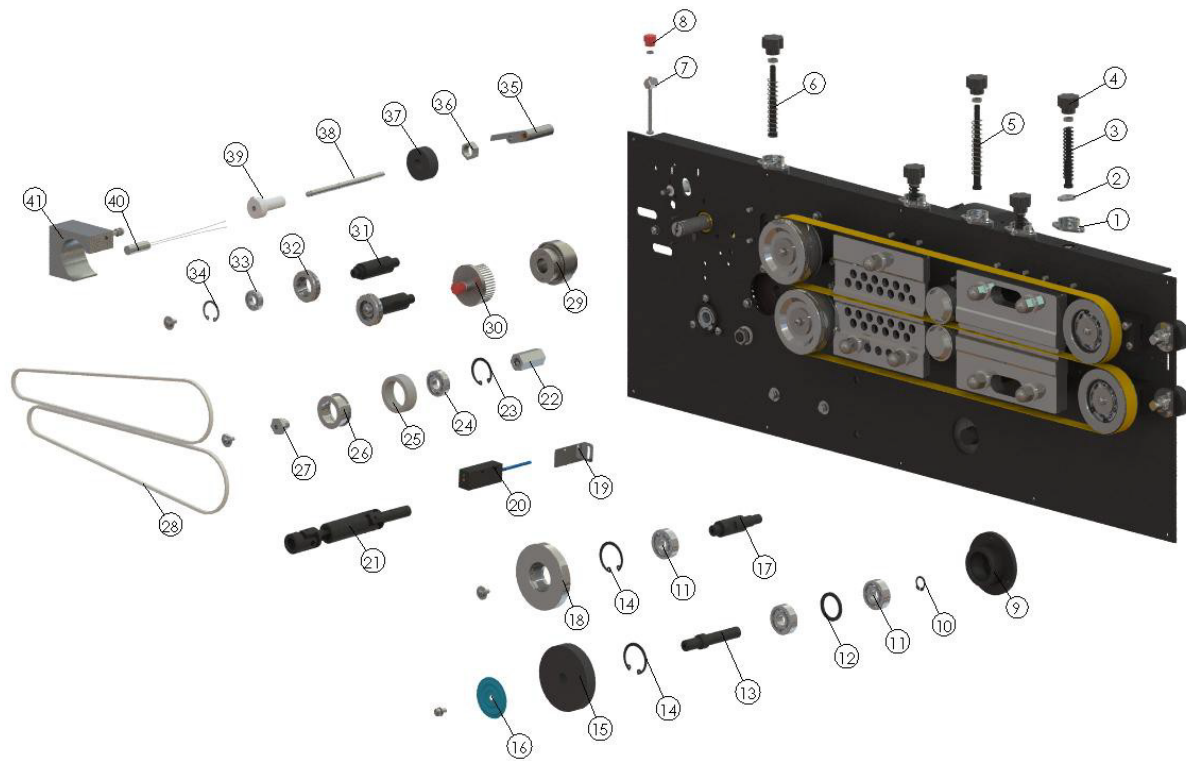


Figure 34. FRM-1120C Spare Parts Diagram Overview

Figure 35. FRM-120C Spare Parts Diagram Overview Parts List

| Item | Part #            | Quantity | Description                                       | Reference      | Comments             |
|------|-------------------|----------|---|----------------|----------------------|
| 1    | FRM-1120C-28D     | 5        | Adjusting seat for slide block                    | 11511010203    |                      |
| 2    |                   | 5        | Leaf shaped washer                                | 11511010204    |                      |
| 3    | FRM-1120C-28A     | 1        | Adjusting screw for slide block (Length: 65mm)    | 11511010205.65 | Includes #1, 2, 3, 4 |
| 3    | FRM-112C-28-73-1  |          | Spring $\phi 12 \times 22 \times 55.7$            |                |                      |
| 4    |                   | 5        | Flower shaped knob                                |                |                      |
| 5    | FRM-1120C-28C     | 1        | Adjusting screw for slide block (Length: 92mm)    | 11511010206    | Includes #1, 2, 4, 5 |
| 5    | FRM-112C-28-73-2  |          | Spring $\phi 11 \times 0.8 \times 45.2$           | 11511070201    |                      |
| 6    | FRM-1120C-28B     | 1        | Adjusting screw for slide block (Length: 78mm)    | 11511010205.78 | Includes #1, 2, 4, 6 |
| 6    | FRM-112C-28-73-2  |          | Spring $\phi 11 \times 0.8 \times 45.2$           |                |                      |
| 7    | BS-62             | 1        | Ink wheel adjusting device                        |                | Includes #7, 8       |
| 8    | BS-62             | 1        | Ink wheel adjusting device                        |                | Includes #7, 8       |
| 9    | FRM-1120C-6-56    | 1        | Bearing seat                                      | 11511010303    |                      |
| 10   | Circlip-12mm      | 1        | Circlip $\phi 12$ mm                              | 9746036400012  |                      |
| 11   | Bearing_6201RS    | 3        | Bearing 6201RS $\phi 12 \times \phi 32 \times 10$ | 9105200602011  |                      |
| 12   | FRM-1120C-6-55    | 1        | Spacing ring of bearing                           | 11511010304    |                      |
| 13   | FRM-1120C-2-16    | 1        | Silicone wheel shaft                              |                |                      |
| 14   | Circlip-32mm      | 2        | Circlip $\phi 32$ mm                              | 9746016400032  |                      |
| 15   | FRM-1120C-2       | 1        | Rubber wheel                                      | 11511010301    |                      |
| 16   | CBS-880-2-33      | 1        | Silicone wheel cover                              | 11111030018    |                      |
| 17   | FRM-1120C-3A-10   | 1        | Embossing wheel shaft                             |                |                      |
| 18   | FRM-1120C-3A      | 1        | Embossing wheel, meshed                           |                | Includes #11, 14, 18 |
| 19   | BS-60-18          | 1        | Support for photoelectric sensor                  | 11511070223    |                      |
| 20   | BS-60_Gen2.0      | 1        | Photoelectric sensor                              | 9213203103001  |                      |
| 21   | FRM-1120C-40A     | 1        | Universal joint assembly                          | A115110107     |                      |
|      | FRM-1120C-41      | 1        |   |                |                      |
| 22   | FRM-1120C-57-12   | 1        | Printing rubber wheel shaft                       | 11511070216    |                      |
| 23   | Circlip-28mm      | 1        | Circlip $\phi 28$ mm                              | 9746016400028  |                      |
| 24   | Bearing_6001Z     | 3        | Bearing 6001Z $\phi 12 \times \phi 28 \times 8$   | 9105200601012  |                      |
| 25   | BS-57A            | 1        | Silicone ring                                     | 9410202112001  |                      |
| 26   | BS-57             | 1        | Silicone ring complete                            |                | Includes #25, 26     |
| 27   | BS-57B            | 1        | Eccentric sleeve                                  | 11511070215    |                      |
| 28   | FRM-1120C-26      | 2        | Drive belt 678mm                                  | 9425100020678  |                      |
| 29   | BS-48B            | 1        | Base of print wheel                               | A115110701     |                      |
| 30   | BS-48A            | 1        | Print wheel                                       | A115110702     |                      |
| 31   | FRM-1120C-6b      | 2        | Small pulley shaft                                | 11511010101    |                      |
| 32   | FRM-1120C-6a      | 2        | Small driving wheel                               | 11511010102    | Includes #32, 33, 34 |
| 33   | Bearing_6900Z     | 2        | Bearing 6900Z $\phi 10 \times \phi 22 \times 6$   | 9105200619002  |                      |
| 34   | Circlip-22mm      | 2        | Circlip $\phi 22$ mm                              | 9746016400022  |                      |
| 35   | BS-62E            | 1        | Swing pole of ink roller                          | 11511070202    |                      |
| 36   | BS-58             | 1        | Ink roller holder stop                            | 11511070222    | Includes #36, 39     |
| 37   | INKROLLER-30-BLK  | 1        | Black ink roller, 30mm                            |                |                      |
|      | INKROLLER-15-BLK  | 1        | Black ink roller, 15mm                            |                |                      |
| 37   | BS-48-6-FRM-1120C | 1        | Ink roller shaft, 6-3/8"                          | 11511070204-2  |                      |
| 38   | BS-58             | 1        | Ink roller holder                                 | 11511070206    | Includes #36, 39     |
| 39   | BS-61             | 1        | Heating tube, each                                | 9240110100304  |                      |
| 40   | FRM-1120C-47      | 1        | Ink wheel heating block                           | 11511070210-D1 |                      |

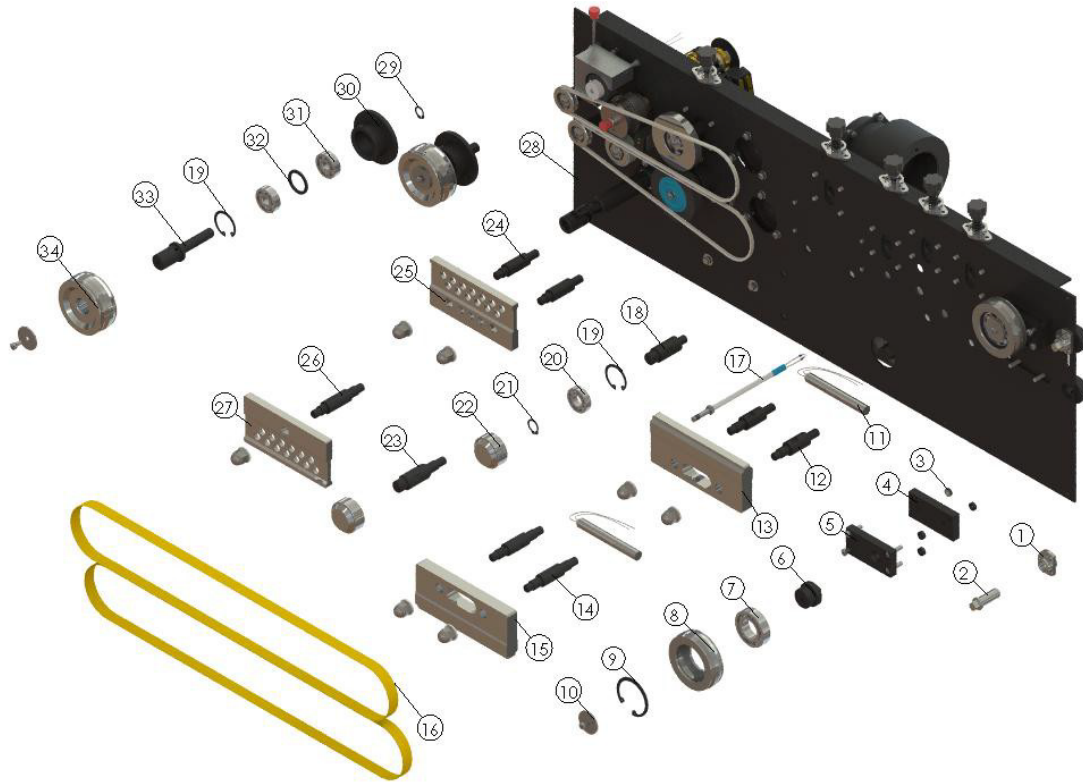


Figure 36. FRM-1120C Heating / Cooling Blocks and Dry Ink Coding

Figure 37. FRM-1120C Heating / Cooling Blocks and Dry Ink Coding Parts List

| Item  | Part #                                   | Quantity | Description  | Reference                 | Comments            |
|-------|--|----------|--|---------------------------|---------------------|
| 1     |  | 2        | Cam shaft seat                                     | 11511011105               |                     |
| 2     | FRM-1120C-13-36                          | 2        | Cam shaft  | 11511011104               |                     |
| 3     | FRM-1120C-13-41                          | 8        | Spacing ring of pressing plate                     | 11511011108.00            |                     |
| 4     | FRM-1120C-13                             | 2        | Adjustment block assembly                          |                           | Includes #4, 5      |
| 5     | FRM-1120C-13                             | 2        | Adjustment block assembly                          |                           | Includes #4, 5      |
| 6     | FRM-1120C-12a                            | 2        | Driven wheel shaft                                 |                           |                     |
| 7     | Bearing_6005RS                           | 2        | Bearing 6005RS $\phi 25 \times \phi 47 \times 12$  | 9105200601052             |                     |
| 8     | FRM-1120C-12                             | 2        | Driven wheel                                       |                           | Includes #7, 8      |
| 9     | Circlip-47mm                             | 2        | Circlip $\phi 47\text{mm}$                         | 9746016400047             |                     |
| 10    | Washer-M5x28                             | 4        | Washer $\phi 5 \times \phi 28 \times 2$            | 11511010403               |                     |
| 11    | BS-9B                                    | 2        | Heaters, pair                                      | 9240112123005             |                     |
| 12    | FRM-1120C-9-26                           | 2        | Lower heating block shaft                          | 11511011001               |                     |
| 13    | FRM-1120C-9A-SS                          | 1        | Heating blocks, pair                               | 11511011002 / 11511010901 | Includes #13, 15    |
| 14    | FRM-1120C-9-24                           | 2        | Upper heating block shaft                          | 11511010902               |                     |
| 15    | FRM-1120C-9A-SS                          | 1        | Heating blocks, pair                               | 11511011002 / 11511010901 | Includes #13, 15    |
| 16    | FRM-1120C-10                             | 2        | Sealing belt 1120mm x 15mm                         | 9430113112015             |                     |
| 17    | FRM-1120C-34                             | 1        | Thermocouple                                       | 9241100021000             |                     |
| 18    | FRM-1120C-21-27                          | 1        | Pressing wheel with lower shaft & bearing assembly |                           | Includes #18-22     |
| 19    | Circlip-32mm                             | 4        | Circlip $\phi 32\text{mm}$                         | 9746016400032             |                     |
| 20    | Bearing_6002Z                            | 2        | Bearing 6002Z $\phi 15 \times \phi 32 \times 9$    | 9105200601022             |                     |
| 21    |  | 2        | Circlip $\phi 15\text{mm}$                         | 9746036400015             |                     |
| 22    | FRM-1120C-21-27 or<br>FRM-1120C-21-22-26 | 2        | Sealing pressing wheel                             |                           |                     |
| 23    | FRM-1120C-21-22-26                       | 1        | Pressing wheel with upper shaft & bearing assembly |                           | Includes #19-22, 23 |
| 24    | FRM-1120C-8-22                           | 2        | Lower cooling block shaft                          | 11511010602               |                     |
| 25    | FRM-1120C-8-SS                           | 1        | Cooling blocks, pair                               | 11511010601 / 11511010503 | Includes #25, 27    |
| 26    | FRM-1120C-8-18                           | 1        | Upper cooling block shaft                          | 11511010502               |                     |
| 27    | FRM-1120C-8-SS                           | 1        | Cooling blocks, pair                               | 11511010601 / 11511010503 | Includes #25, 27    |
| 28    |  | 1        | Bottom board                                       | 11511011304               |                     |
| 29    |  | 2        | Circlip $\phi 12\text{mm}$                         | 9746036400012             |                     |
| 30-33 | FRM-1120C-6-50-56                        |          | Driving wheel shaft & bearing seat complete        |                           | Includes #19, 29-33 |
| 30    | FRM-1120C-6-56                           | 2        | Bearing seat                                       | 11511010303               |                     |
| 31    | Bearing_6201RS                           | 4        | Bearing 6201RS $\phi 12 \times \phi 32 \times 10$  | 9105200602012             |                     |
| 32    | FRM-1120C-6-55                           | 2        | Spacing ring of bearing                            | 11511010304               |                     |
| 33    | FRM-1120C-6-53                           | 2        | Driving wheel shaft                                | 11511010402               |                     |
| 34    | FRM-1120C-6                              | 2        | Driving wheel                                      | 11511010401               |                     |

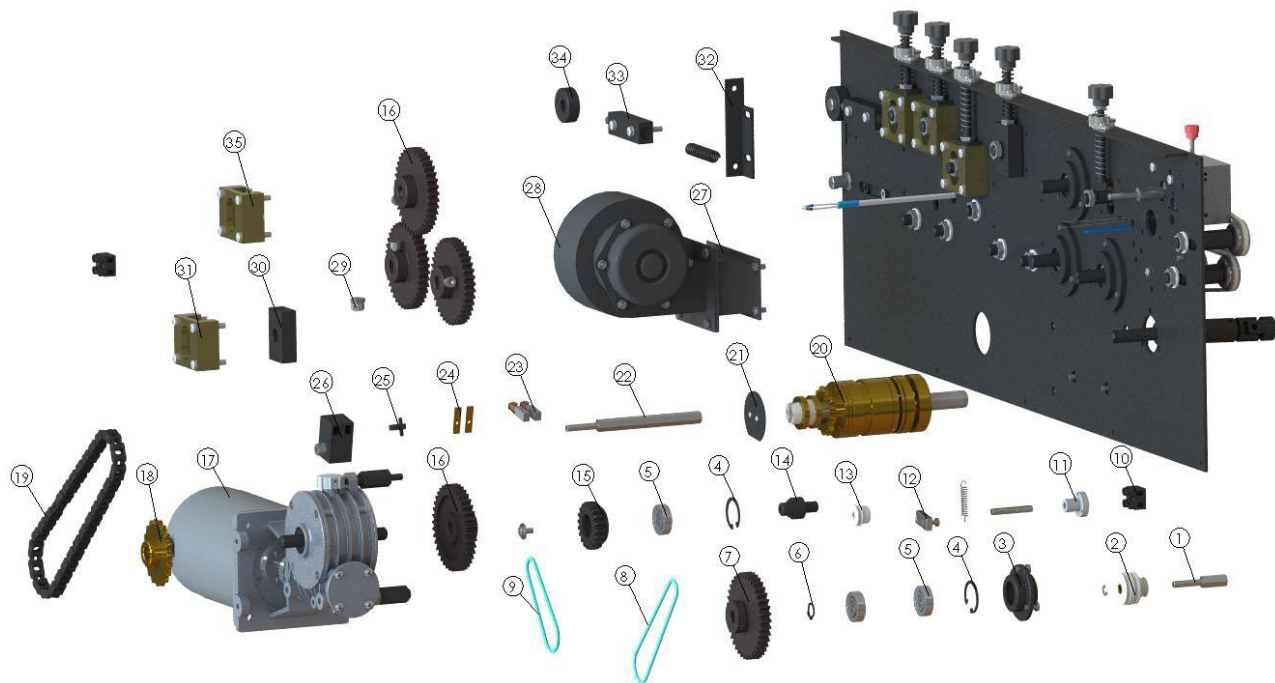


Figure 38. FRM-1120C Gears

Figure 39. FRM-1120C Gears Parts List

| Item | Part #              | Quantity | Description                                     | Reference        | Comments         |
|------|---------------------|----------|---|------------------|------------------|
| 1    | BS-54B-35           | 1        | Middle pulley shaft                             | 11511070218      |                  |
| 2    | BS-54B              | 1        | Middle pulley wheel                             | 11511070217      |                  |
| 3    | FRM-1120C-40A-1     | 1        | Connecting shaft bearing seat                   | 11311030026.00   |                  |
| 4    | Circlip-28mm        | 2        | Circlip $\phi 28\text{mm}$                      | 9746016400028    |                  |
| 5    | Bearing_6001Z       | 4        | Bearing 6001Z $\phi 12 \times \phi 28 \times 8$ | 9105200601012    |                  |
| 6    | Circlip-12mm        | 1        | Circlip $\phi 12\text{mm}$                      | 9746036400012.00 |                  |
| 7    | FRM-1120C-35C       | 1        | Wheel gear (with groove)                        | 11511010305C     |                  |
| 8    | BS-54B              | 1        | O-Ring $\phi 80 \times 3.1$                     | 9412120080031    |                  |
| 9    | BS-53               | 1        | O-Ring $\phi 50 \times 3.1$                     | 9412120050031    |                  |
| 10   | BS-33A              | 2        | Connection station 4PIN                         | 9201401110002    |                  |
| 11   |                     | 1        | Ink wheel pendulum shaft seat                   | 11511070203      |                  |
| 12   | BS-62H              | 1        | Pull rod for ink roller                         | 11511070209      |                  |
| 13   |                     | 1        | Ink roller shaft pulley                         | 11511070205-2    |                  |
| 14   |                     | 1        | Intermediate shaft                              | 11511011202      |                  |
| 15   | FRM-1120C-35-68     | 1        | Medium gear                                     | 11511011201      |                  |
| 16   | FRM-1120C-35b       | 4        | Wheel gear (without groove)                     | 11511010305      |                  |
| 17   | FRM-1120C-29        | 1        | Motor   | A115110607-25    |                  |
| 17   | FRM-1120C-30_gen1.0 | 1        | Turbocase, gen 1.0                              |                  |                  |
| 17   | FRM-1120C-30_gen2.0 | 1        | Turbocase, gen 2.0                              |                  |                  |
| 18   | FRM-1120C-35-61     | 1        | Driving sprocket                                | 11311050001-19   |                  |
| 19   | FRM-1120C-38-56     | 1        | Chain 56 links (06B-1 x 56L)                    | 9104101106056    |                  |
| 20   | BS-139-FRM-1120C    | 1        | Electromagenetic clutch                         | A115110708       |                  |
| 21   | BS-140              | 1        | Anti-dazzling screen                            | 11511070118      |                  |
| 22   | BS-64B              | 1        | Support for carbon brush                        | 11511070124      |                  |
| 23   | BS-64               | 2        | Carbon brush printer 19mm x 7mm x 5mm           | 9210200360820    |                  |
| 24   | BS-64C              | 2        | Pressing plate of carbon brush                  | 11511070120      |                  |
| 25   |                     | 1        | Slot coupler assembly                           | 9310121113140    |                  |
| 26   | BS-64A              | 1        | Carbon brush holder                             | 9210200200001    |                  |
| 27   | FRM-1120C-32        | 1        | Fan   |                  | Includes #27, 28 |
| 28   | FRM-1120C-32        | 1        | Fan   |                  | Includes #27, 28 |
| 29   | FRM-1120C-28-66     | 5        | Spring seat for slide block                     | 11511010207      |                  |
| 30   | FRM-1120C-28-65     | 5        | Slide block                                     | 11511010208      |                  |
| 31   | FRM-1120C-28-49     | 1        | Single slide block seat                         | 11511010209A     |                  |
| 32   | FRM-1120C-13-46     | 1        | Adjusting block seat                            | 11511011110      |                  |
| 33   | FRM-1120C-13-40     | 2        | Adjusting pressing plate                        | 11511011107      |                  |
| 34   | FRM-1120C-13-38     | 2        | Cam protruding wheel                            | 11511011106      |                  |
| 35   |                     | 4        | Single slide block seat                         | 11511010209      |                  |

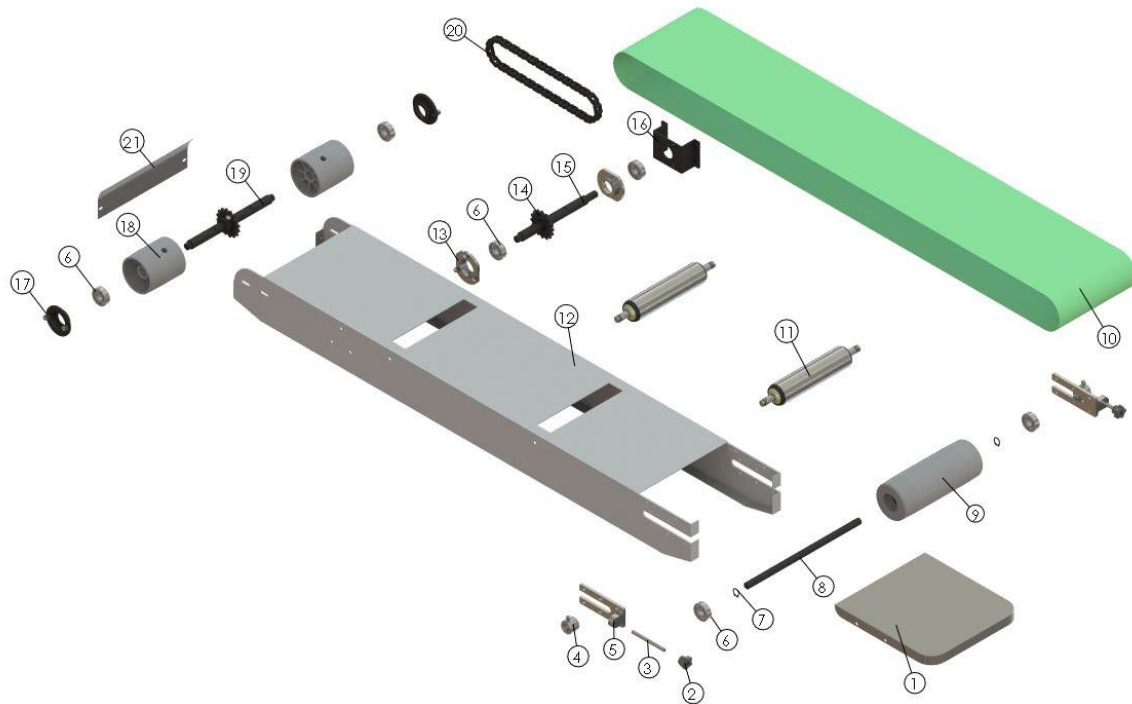


Figure 40. FRM-1120C Conveyor

Figure 41. FRM-1120C Conveyor Parts List

| Item | Part #             | Quantity | Description                                       | Reference     | Comments             |
|------|--------------------|----------|---|---------------|----------------------|
| 1    | FRM-1120C-15       | 1        | Working table                                     | 11511030002   |                      |
| 2    | FRM-1120LD-16      | 2        | Adjusting knob, screw and loop of conveyor        |               | Includes #2, 3, 4    |
| 3    | FRM-1120LD-16      | 2        | Adjusting knob, screw and loop of conveyor        |               | Includes #2, 3, 4    |
| 4    | FRM-1120LD-16      | 2        | Adjusting knob, screw and loop of conveyor        |               | Includes #2, 3, 4    |
| 5    | FRM-1120LD-16-15   | 2        | Adjusting seat of conveyor table                  | 11511030404   |                      |
| 6    | FRM-1120LD-36      | 6        | Bearing 6201RS $\phi 12 \times \phi 32 \times 10$ |               | Includes #6, 7, 8, 9 |
| 7    | FRM-1120LD-36      | 2        | Conveyor roller/ driven (right)                   |               | Includes #6, 7, 8, 9 |
| 8    | FRM-1120LD-36      | 1        | Conveyor roller/ driven (right)                   |               | Includes #6, 7, 8, 9 |
| 9    | FRM-1120LD-36      | 1        | Conveyor roller/ driven (right)                   |               | Includes #6, 7, 8, 9 |
| 10   | FRM-1120C-1        | 1        | Conveyor belt - 2080 x 175 x2                     | 9422112208173 |                      |
| 11   | FRM-1120C-36-14-17 | 2        | Intermediate roller                               | A115110304    |                      |
| 12   |                    | 1        | Conveyor table                                    | 11511030001   |                      |
| 13   | FRM-1120C-41       | 2        | Conveyor middle post with gear                    |               | Includes #6, 13-16   |
| 14   | FRM-1120C-41       | 2        | Conveyor middle post with gear                    |               |                      |
| 15   | FRM-1120C-41       | 1        | Conveyor middle post with gear                    |               |                      |
| 16   | FRM-1120C-41       | 1        | Conveyor middle post with gear                    |               |                      |
| 17   | FRM-1120C-37       | 2        | Conveyor roller / driving (left)                  |               | Includes #5, 17-19   |
| 18   | FRM-1120C-37       | 2        | Conveyor roller / driving (left)                  |               | Includes #5, 17-19   |
| 19   | FRM-1120C-37       | 1        | Conveyor roller / driving (left)                  |               | Includes #5, 17-19   |
| 20   | FRM-1120C-38-58    | 1        | Conveyor chain 58 links (06B-1 x 58L)             | 9104101106058 |                      |
| 21   | FRM-1120C-1-9      | 1        | Outfeed plate                                     | 11511030003   |                      |



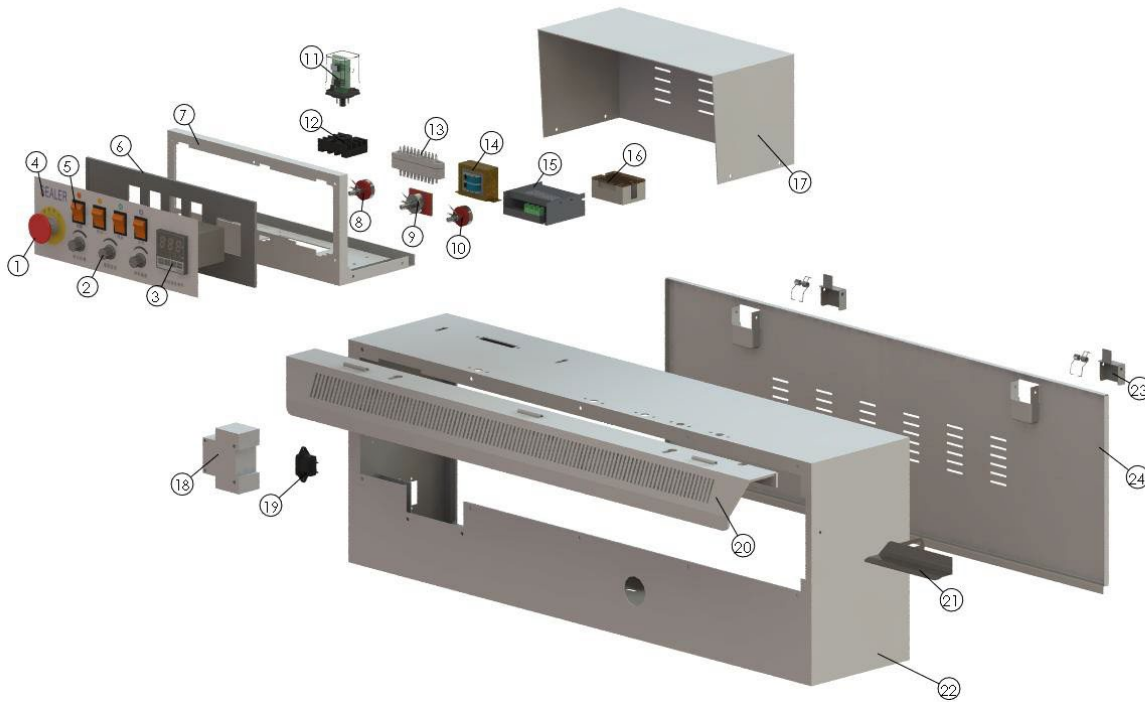


Figure 42. FRM-1120C Controller Box

Figure 43. FRM-1120C Controller Box Parts List

| Item | Part #                 | Quantity | Description                               | Reference      | Comments         |
|------|------------------------|----------|---|----------------|------------------|
| 1    | BS-22-A_Gen3.0         | 1        | Emergency stop                            | 9212232220640  |                  |
| 2    | BS-25A                 | 3        | Knob                                      | 9210200100004  |                  |
| 3    | TMC-E5CSL-QTC-FRM-1120 | 1        | Temperature controller                    |                |                  |
| 4    | FRM-1120LD-83          | 1        | PVC plastic panel                         | 9160101113012  |                  |
| 5    | BS-22_LARGE            | 4        | Switch                                    | 9212240130395  |                  |
| 6    |                        | 1        | Plastic panel                             | 9460102112112  |                  |
| 7    | FRM-1120LD-89A-Omron   | 1        | Control box complete                      |                | Includes #1 - 17 |
| 8    | BS-51                  | 1        | Seat coding potentiometer - 1M            | 9300112530010  |                  |
| 9    | BS-50A                 | 1        | Ink temperature potentiometer w/ PC Board | 9310121113130  |                  |
| 10   | BS-25                  | 1        | Speed potentiometer                       | 9300112520100  |                  |
| 11   | BS-52C                 | 1        | Main PC Board                             | 9310121113010  |                  |
| 12   | BS-45B                 | 1        | 11 PIN seat                               | 9210110110042  |                  |
| 13   | FRM-1120C-56           | 1        | Male connector for control box            | 9201211200002  |                  |
| 14   | BS-66A                 | 1        | Transformer                               | 9217103000105  |                  |
| 15   | FRM-1010-31            | 1        | Speed PC Board                            | 9310121115015  |                  |
| 16   | BS-52A                 | 1        | Speed PC Board                            |                |                  |
| 16   | R-JG3NA                | 1        | Relay                                     | 9215301102252  |                  |
| 17   | FRM-1120LD-89A-Omron   | 1        | Control box cover                         |                | Includes #1 - 17 |
| 18   | BS-27                  | 1        | Circuit breaker                           | 9212711602005  |                  |
| 19   | BS-14                  | 1        | Socket for power cord                     | 9201111031002  |                  |
| 20   | FRM-1120C-7            | 1        | Safety cover                              | 11511020005    |                  |
| 21   | FRM-1120C-44           | 1        | Guide                                     | 11511020101    |                  |
| 22   |                        | 1        | Chassis                                   | 11511020001    |                  |
| 23   |                        | 2        | Door latch                                | 11511020013-81 |                  |
| 24   |                        | 1        | Case back cover                           | 11511020004    |                  |

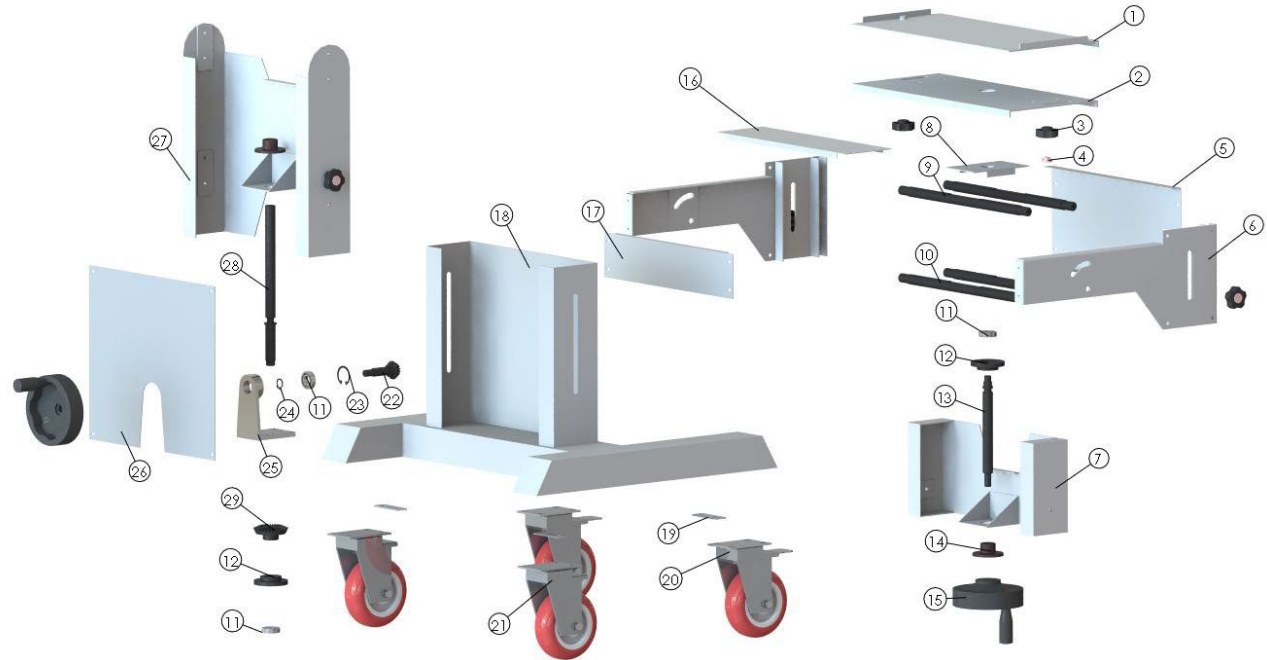


Figure 44. FRM-1120C Sealer Rack

Figure 45. FRM-1120C Rack Parts List

| Item | Part #          | Quantity | Description                                     | Reference      | Comments       |
|------|-----------------|----------|---|----------------|----------------|
| 1    | FRM-1120C-20-18 | 1        | Conveyor plate connecting plate                 | 11511050010    |                |
| 2    | FRM-1120C-20-17 | 1        | Bracket slider connecting plate                 | 11511050009    |                |
| 3    | BS-5_Gen3.0     | 6        | Pressure knob                                   | 9450101111004  | Includes #3, 4 |
| 4    | BS-5_Gen3.0     | 6        | Pressure knob                                   | 9450101111003  | Includes #3, 4 |
| 5    |                 | 1        | Bracket front cover                             | 11511050002    |                |
| 6    |                 | 2        | Bracket   | 11511050003    |                |
| 7    |                 | 1        | Carriage slider                                 | 11511050004    |                |
| 8    |                 | 1        | Support plate of bracket                        | 11511050008    |                |
| 9    |                 | 2        | Bracket strut                                   | 11511050001    |                |
| 10   |                 | 2        | Bracket strut                                   | 11511050001-D2 |                |
| 11   | Bearing_6002Z   | 3        | Bearing 6002Z $\phi 15 \times \phi 32 \times 9$ | 9105200601022  |                |
| 12   | FRM-1120C-95-3  | 2        | Lifting screw bearing housing                   | 11511040007    |                |
| 13   | FRM-1120C-95-23 | 1        | Bracket screw                                   | 11511050006    |                |
| 14   | FRM-1120C-95-24 | 2        | Lifting bracket nut                             | 11511040004    |                |
| 15   | FRM-1120C-90    | 2        | Handwheel                                       | 9100303112100  |                |
| 16   |                 | 1        | Bracket cover                                   | 11511050011    |                |
| 17   |                 | 1        | Bracket back cover                              | 11511050012    |                |
| 18   |                 | 1        | Base  | 11511040001    |                |
| 19   |                 | 4        | Packing support                                 | 11510000099    |                |
| 20   | FRM-1120C-92B   | 2        | Castors (w/ brake)                              | 9400102410403  |                |
| 21   | FRM-1120C-92A   | 2        | Castors (w/o brake)                             | 9400102400403  |                |
| 22   |                 | 1        | Handle bevel gear                               | 11511040009    |                |
| 23   | Circlip-32mm    | 1        | Circlip $\phi 32\text{mm}$                      | 9746016400032  |                |
| 24   | Circlip-15mm    | 1        | Circlip $\phi 15\text{mm}$                      | 9746036400015  |                |
| 25   |                 | 1        | Bevel gear seat                                 | 11511040005    |                |
| 26   |                 | 1        | Base back cover                                 | 11511040006    |                |
| 27   |                 | 1        | Lift slider                                     | 11511040002    |                |
| 28   |                 | 1        | Lifting screw                                   | 11511040003    |                |
| 29   | FRM-1120C-95-5  | 1        | Bevel gear                                      | 11511040008    |                |

# FRS-1120W Parts Diagram

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To order spare parts, please use diagram and part #s below:

**Figure 46.** FRS-1120W Spare Parts Overview Diagram

**Figure 48.** FRS-1120W Heating / Cooling Blocks Parts Diagram

**Figure 50.** FRS-1120W Motor and Gears Parts Diagram

**Figure 52.** FRS-1120W Conveyor Parts Diagram

**Figure 54.** FRS-1120W Control Box Diagram

**Figure 56.** FRS-1120W Sealer Rack Parts Diagram

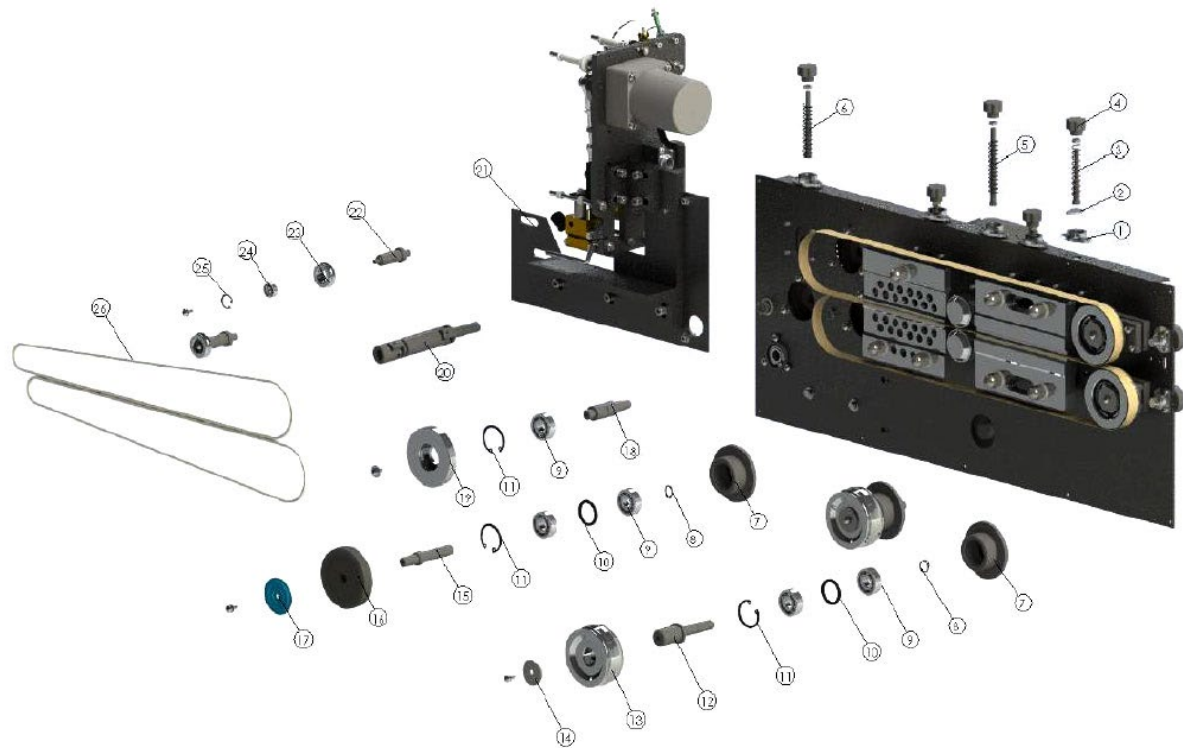


Figure 46. FRS-1120W Spare Parts Overview Diagram

Figure 47. FRS-1120W Spare Parts Overview Parts List

| Item | Part #                | Quantity | Description  | Reference      | Comments         |
|------|-----------------------|----------|--|----------------|------------------|
| 1    | FRM-1120C-28a, b or c | 5        | Adjusting Assembly for FRM-1120C, FRS-1120W        | 11511010203    |                  |
| 2    | FRM-1120C-28a, b or c | 5        | Adjusting Assembly for FRM-1120C, FRS-1120W        | 11511010204    |                  |
| 3    | FRM-1120C-28a, b or c | 3        | Adjusting Assembly for FRM-1120C, FRS-1120W        | 11511010205.65 |                  |
| 4    | FRM-1120C-28a         | 5        | Adjusting Assembly for FRM-1120C, FRS-1120W - 65mm | 9100411120625  | Includes #1-4    |
| 5    | FRM-1120C-28c         | 1        | Adjusting Assembly for FRM-1120C, FRS-1120W - 92mm | 11511010205.92 | Includes #1-3, 5 |
| 6    | FRM-1120C-28b         | 1        | Adjusting Assembly for FRM-1120C, FRS-1120W - 78mm | 11511010205.78 | Includes #1-3, 6 |
| 7    | FRM-1120C-6-56        | 3        | Bearing Seat                                       | 11511010303    |                  |
| 8    |                       | 3        | E-clip 12mm  | 9746036400012  |                  |
| 9    | Bearing_6201Z         | 7        | Bearing 6201 Z (12 x 32 x 10)                      | 9105200602011  |                  |
| 10   | FRM-1120C-6-55        | 3        | Spacing Ring of Bearing                            | 11511010304    |                  |
| 11   |                       | 4        | E-Clip 32mm  | 9746016400032  |                  |
| 12   | FRM-1120C-6-53        | 2        | Driving Wheel Shaft                                | 11511010402    |                  |
| 13   | FRM-1120C-6           | 2        | Driving Wheel, Big                                 | 11511010401    |                  |
| 14   | Washer-M5x28          | 2        | Washer M5 x 28 x 2                                 | 11511010403    |                  |
| 15   |                       | 1        | Rubber Wheel Shaft                                 | 11511010302    |                  |
| 16   | FRM-1120C-2           | 1        | Rubber Wheel                                       | 11511010301    |                  |
| 17   | CBS-880-2-33          | 1        | Silicone Wheel Cover                               | 11111030018    |                  |
| 18   | FRM-1120C-3A-10       | 1        | Embossing Wheel Shaft                              | 11511010201    |                  |
| 19   | FRM-1120C-3A          | 1        | Embossing Wheel, Meshed                            | 11511010202    |                  |
| 20   | FRM-1120C-40A         | 1        | Drive Shaft Connector, Gimbel Assembly             | A115110107     |                  |
| 21   | FRS-1120W-HP-241G     | 1        | Imprinter for FRS-1120W                            | A21312105      |                  |
|      | FRS-1120W-48A         | 1        | Print Head for FRS-1120W                           |                |                  |
| 22   | FRS-1120W-6B          | 2        | Small Pulley Shaft                                 | 11513010101    |                  |
| 23   |                       | 2        | Driving Wheel, Small                               | 11311030001    |                  |
| 24   | Bearing_606ZZ         | 2        | Bearing 606-ZZ (17 x 6 x 6)                        | 9105200600062  |                  |
| 25   | Circlip-17mm          | 2        | E-Clip 17mm  | 9746016400017  |                  |
| 26   | FRS-1120W-26          | 2        | Drive Belt (#830mm)                                | 9425100020830  |                  |

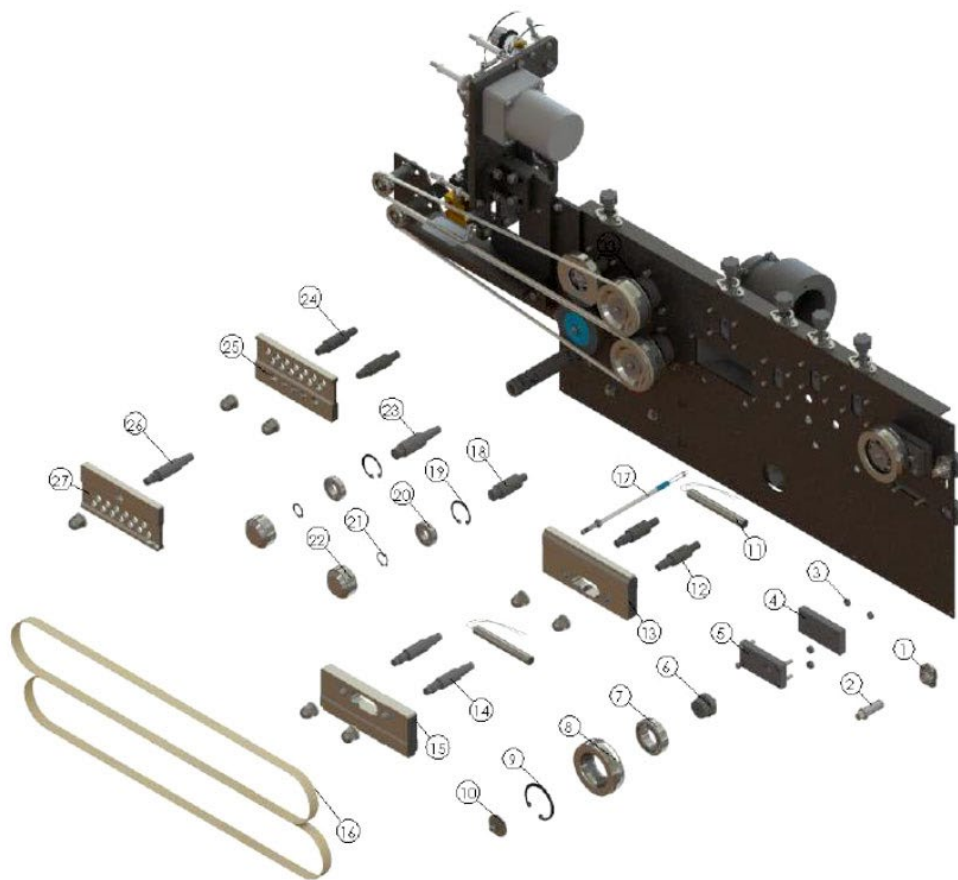


Figure 48. FRS-1120W Heating / Cooling Blocks Parts Diagram

Figure 49. FRS-1120W Heating / Cooling Blocks Parts List

| Item # | Part #             | Quantity | Description                     | Reference     | Comments                         |
|--------|--------------------|----------|---------------------------------|---------------|----------------------------------|
| 1      |                    | 2        | Cam Shaft Seat                  | 11511011105   |                                  |
| 2      | FRM-1120C-13-36    | 2        | Cam Shaft                       | 11511011104   |                                  |
| 3      | FRM-1120C-13-41    | 8        | Spacing Ring of Pressing Plate  | 11511011108   |                                  |
| 4      | FRM-1120C-13       | 2        | Adjustment Block Assembly       | 11511011111   | Includes #4, 5                   |
| 5      | FRM-1120C-13       | 2        | Adjustment Block Assembly       | 11511011112   | Includes #4, 5                   |
| 6      |                    | 2        | Driven Wheel Shaft              | 11511011102   |                                  |
| 7      | FRM-1120C-12       | 2        | Bearing 6005-2RS (25 x 47x x12) | 9105200601052 | Includes #7-9                    |
| 8      | FRM-1120C-12       | 2        | Driven Wheel                    | 11511011101   | Includes #7-9                    |
| 9      |                    | 2        | E-Clip 47mm                     | 9746016400047 | Includes #7-9                    |
| 10     | Washer-M5x28       | 2        | Washer M5 x 28 x 2              | 11511010403   |                                  |
| 11     | BS-9B              | 2        | Heater                          |               | sold as a pair                   |
| 12     | FRM-1120C-9-26     | 2        | Lower Heating Block Shaft       | 11511011001   |                                  |
| 13     | FRM-1120C-9A-SS    | 1        | Heating Block                   | 11511011002   | Includes #13, 15 - sold as a set |
| 14     | FRM-1120C-9-24     | 2        | Upper Heating Block Shaft       | 11511010902   |                                  |
| 15     | FRM-1120C-9A-SS    | 1        | Heating Block                   | 11511010901   | Includes #13, 15 - sold as a set |
| 16     | FRM-1120C-10       | 2        | Sealing Belt (#1120mm)          | 9430113112015 |                                  |
| 17     | FRM-1120C-34       | 1        | Thermocouple                    | 9241100021000 |                                  |
| 18     | FRM-1120C-21-27    | 1        | Lower Pressing Wheel Shaft      | 11511010801   | Includes #18-22                  |
| 19     |                    | 2        | E-Clip 32mm                     | 9746016400032 | Includes #18-22                  |
| 20     |                    | 2        | Pressing Wheel                  | 9105200601022 | Includes #18-22                  |
| 21     |                    | 2        | E-Clip 15mm                     | 9746036400015 |                                  |
| 22     |                    | 2        | Bearing 6002 ZZ (15 x 32 x 9)   | 11511010702   |                                  |
| 23     | FRM-1120C-21-22-26 | 1        | Upper Pressing Wheel Shaft      | 11511010701   | Includes #18-21, 23              |
| 24     | FRM-1120C-8-22     | 2        | Lower Cooling Block Shaft       | 11511010602   |                                  |
| 25     | FRM-1120C-8-SS     | 1        | Cooling Block                   | 11511010601   | Includes #25, 27 - sold as set   |
| 26     | FRM-1120C-8-18     | 1        | Upper Cooling Block Shaft       | 11511010502   |                                  |
| 27     | FRM-1120C-8-SS     | 1        | Cooling Block                   | 11511010503   | Includes #25, 27 - sold as set   |

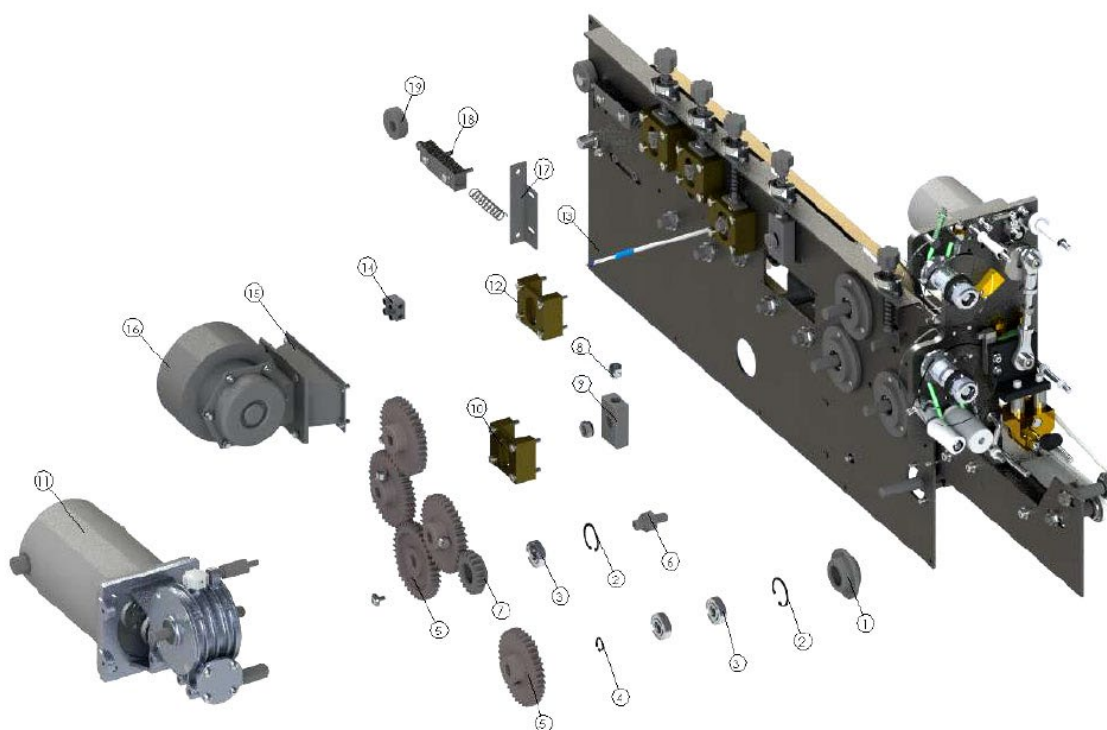


Figure 50. FRS-1120W Motor and Gears Parts Diagram

| Item # | Part #          | Quantity | Description                   | Reference     | Comments          |
|--------|-----------------|----------|-------------------------------|---------------|-------------------|
| 1      | HL-M810-40C     | 1        | Connecting Shaft Bearing Seat | 11311030026   | Includes #1, 2, 3 |
| 2      | HL-M810-40C     | 2        | E-Clip 28mm                   | 9746016400028 | Includes #1, 2, 3 |
| 3      | HL-M810-40C     | 3        | Bearing 6001 ZZ (12 x 28 x 8) | 9105200601012 | Includes #1, 2, 3 |
| 4      |                 | 1        | E-Clip 12mm                   | 9746036400012 |                   |
| 5      | FRM-1120C-35b   |          | Wheel Gear (with out groove)  | 11511010305   |                   |
|        | FRM-1120C-35c   |          | Wheel Gear (with groove)      | 11511010305C  |                   |
| 6      |                 | 1        | Wheel Shaft                   | 11511011202   |                   |
| 7      | FRM-1120C-35-68 | 1        | Medium Gear                   | 11511011201   |                   |
| 8      |                 | 5        | Slide Spring Seat             | 11511010207   |                   |
| 9      | FRM01129C-28-66 | 5        | Spring Seat for Slide Block   | 11511010208   |                   |
| 10     |                 | 1        | Slide Block Seat              | 11511010209A  |                   |
| 11     | FRM-1120C-29    | 1        | Motor                         |               |                   |
|        | FRM-1120C-30    |          | Turbocase                     |               |                   |
| 12     | FRM-1120C-28-49 | 4        | Slide Block Seat              | 11511010209   |                   |
| 13     |                 | 1        | Bottom Plate                  | 11513011303   |                   |
| 14     | BS-33A          | 1        | Connection Station (4P)       | 9201401110002 |                   |
| 15     | FRM-1120C-32    | 1        | Fan                           | 11511020011   | Includes #15, 16  |
| 16     | FRM-1120C-32    | 1        | Fan                           | 9230121000765 | Includes #15, 16  |
| 17     | FRM-1120C-13-46 | 1        | Adjusting Block Seat          | 11511011110   |                   |
| 18     | FRM-1120C-13-40 | 2        | Adjusting Pressing Plate      | 11511011107   |                   |
| 19     | FRM-1120C-13-38 | 2        | Cam / Protruding Wheel        | 11511011106   |                   |



Figure 51. FRS-1120W Motor and Gear Parts List

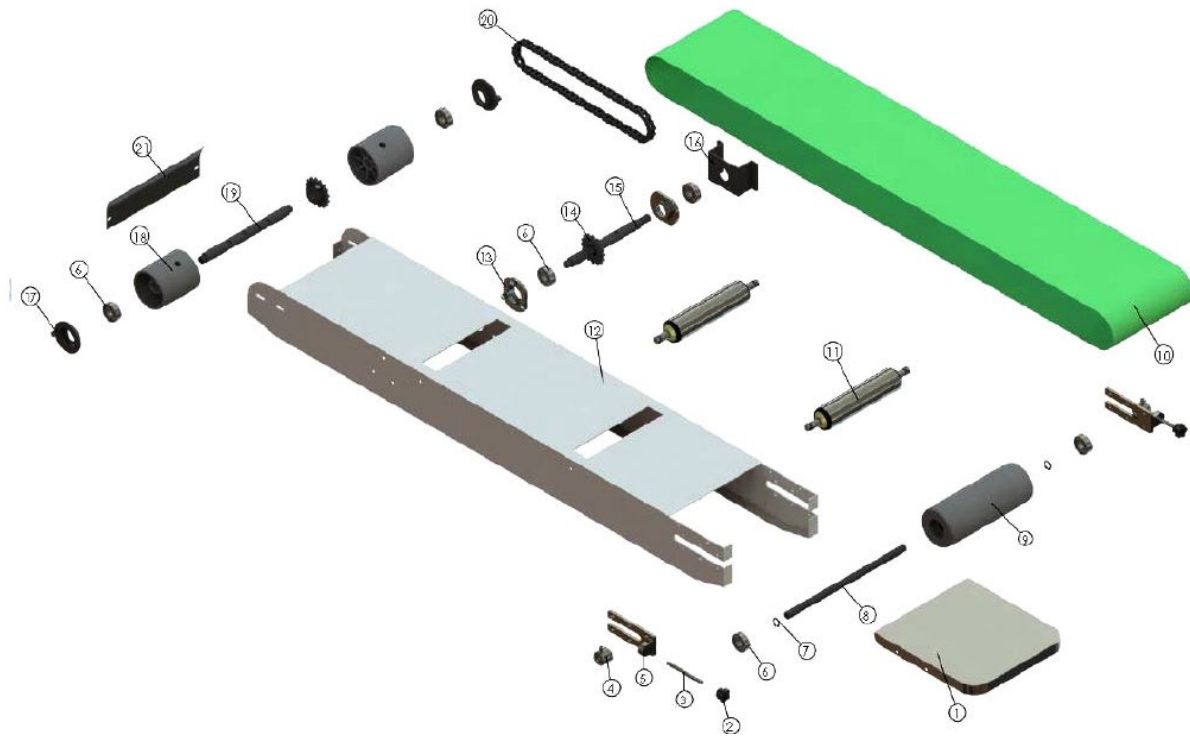


Figure 52. FRS-1120W Conveyor Parts Diagram

| Item # | Part #           | Quantity | Description                    | Reference      | Comments            |
|--------|------------------|----------|--------------------------------|----------------|---------------------|
| 1      | FRM-1120C-15     | 1        | Working Table                  | 11511030002    |                     |
| 2      | FRM-1120LD-16    | 2        | Adjusting Knob                 | 9100402140632  | Includes #2, 3, 4   |
| 3      | FRM-1120LD-16    | 2        | Adjusting Screw                | 11511030403.01 | Includes #2, 3, 4   |
| 4      | FRM-1120LD-16    | 2        | Adjusting Loop                 | 11511030403    | Includes #2, 3, 4   |
| 5      | FRM-1120LD-16-15 | 2        | Adjusting Seat                 | 11511030404    |                     |
| 6      | FRM-1120C-36     | 6        | Bearing 6201-2RS               | 9105200602012  | Includes #6-9       |
| 7      | FRM-1120C-36     | 2        | E-Clip 12mm                    | 9746036400012  | Includes #6-9       |
| 8      | FRM-1120C-36     | 1        | Conveyor Roller Shaft, Right   | 11511030402    | Includes #6-9       |
| 9      | FRM-1120C-36     | 1        | Conveyor Roller, Right         | 11511030401    | Includes #6-9       |
| 10     |                  | 1        | Conveyor Belt 2080 x 175 x 2   | 9422112208173  |                     |
| 11     |                  | 2        | Intermediate Roller Shaft      | A115110304     |                     |
| 12     |                  | 1        | Conveyor                       | 11513030001    |                     |
| 13     | FRM-1120C-41     | 2        | Middle Post                    | 11111010014    | Includes #6, #13-16 |
| 14     | FRM-1120C-41     | 2        | Gear                           | 11511030104    | Includes #6, #13-16 |
| 15     | FRM-1120C-41     | 1        | Shaft                          | 11511030201    | Includes #6, #13-16 |
| 16     | FRM-1120C-41     | 1        | Conveyor Middle Post with Gear | 11511030203    | Includes #6, #13-16 |
| 17     | FRM-1120C-37     | 2        | Front Roller Bearing           | 11511030102    | Includes #6, #17-19 |
| 18     | FRM-1120C-37     | 2        | Conveyor Roller, Left          | 11511030103    | Includes #6, #17-19 |
| 19     | FRM-1120C-37     | 1        | Shaft                          | 11511030101    | Includes #6, #17-19 |
| 20     |                  | 1        | Chain (06B-1 x 69L)            | 9104101106069  |                     |
| 21     | FRM-1120C-1-9    | 1        | Outfeed Plate                  | 11511030003    |                     |

Figure 53. FRS-1120W Conveyor Parts List

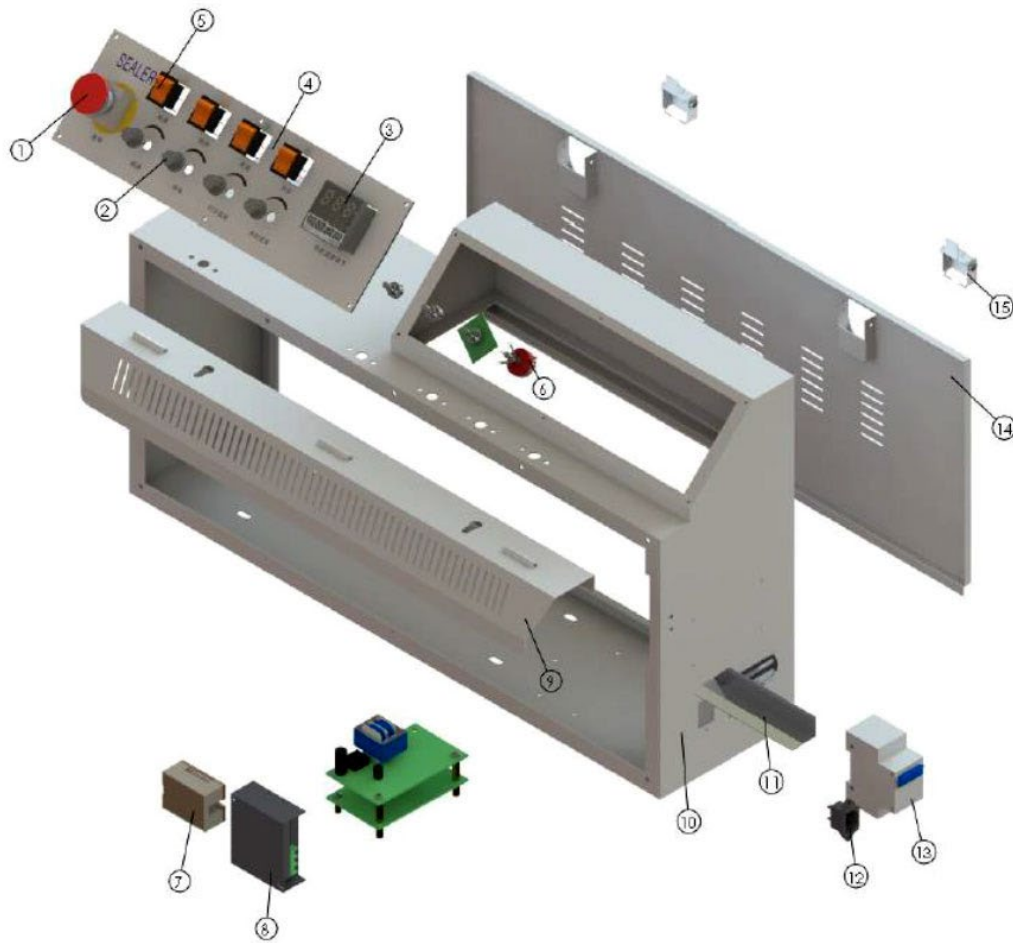


Figure 54. FRS-1120W Control Box Diagram

| Item # | Part #        | Quantity | Description                    | Reference     | Comments |
|--------|---------------|----------|--------------------------------|---------------|----------|
| 1      | BS-22A_G      | 1        | Emergency Stop, Green / Green  | 9212232220640 |          |
|        | BS-22A_O      | 1        | Emergency Stop, Orange / Green |               |          |
| 2      | BS-25A        | 4        | Knob                           | 9210200100004 |          |
| 3      | TMC-E5CSL-QTC | 1        | Temperature Controller         | 9241131305325 |          |
| 4      |               | 1        | Font Panel Plate               | 9160103115412 |          |
| 5      | BS-22-LARGE   | 4        | Switch, Large                  | 9212240130395 |          |
| 6      | BS-25A        | 1        | Speed Potentiometer            | 9300112520100 |          |
| 7      | Relay-JG3NA   | 1        | Relay JG3NA-2255B              | 9215301102252 |          |
| 8      | FRM-1010-31   | 1        | Speed PC Board                 | 9310121115015 |          |
| 9      |               | 1        | Guard                          | 11513020005   |          |
| 10     |               | 1        | Body                           | 11513020001   |          |
| 11     | FRM-1120C-44  | 1        | Sealing Width Adjusting Guide  | 11511020101   |          |
| 12     | BS-14         | 1        | Socket for Power Cord          | 9201111031002 |          |
| 13     | BS-27         | 1        | Circuit Breaker                | 9212711602005 |          |
| 14     |               | 1        | Back Cover                     | 11513020004   |          |
| 15     |               | 2        | Door Latch                     | 1151102001381 |          |

Figure 55. FRS-1120W Control Box Parts List

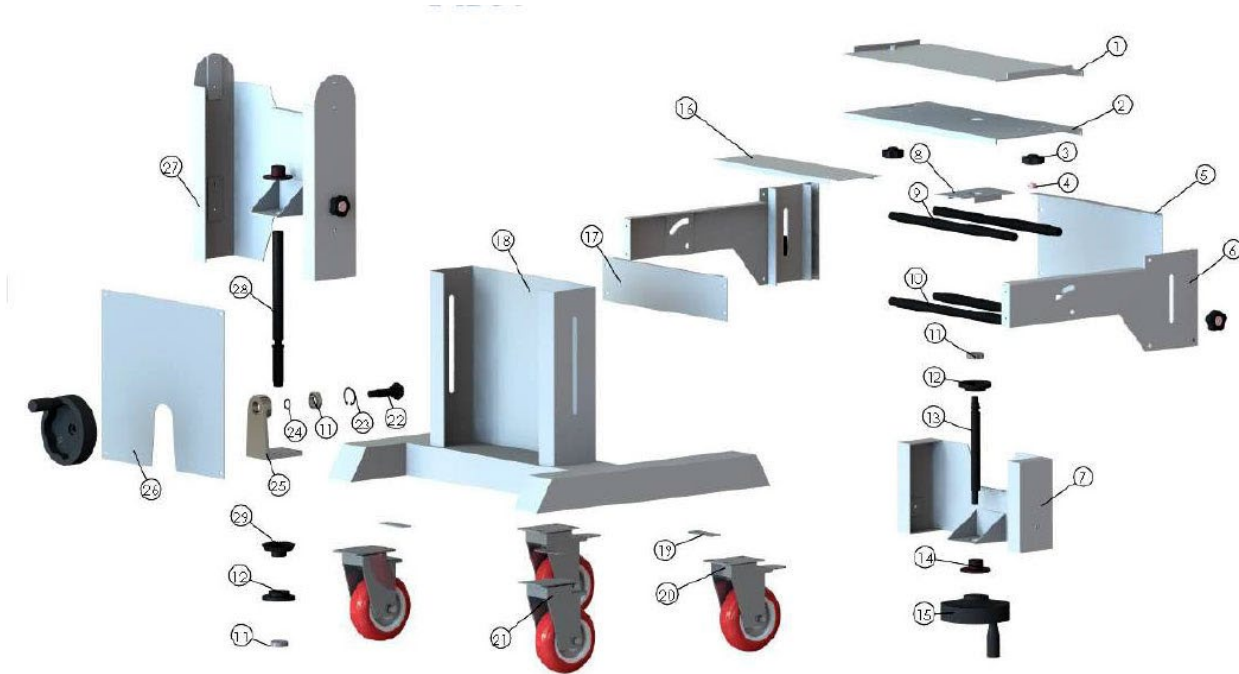


Figure 56. FRS-1120W Sealer Rack Parts Diagram

| Item | Part #        | Quantity | Description                     | Reference      | Comments                  |
|------|---------------|----------|---------------------------------|----------------|---------------------------|
| 1    |               | 1        | Conveyor Connecting Plate       | 11511050010    | Compatible with FRM-1120C |
| 2    |               | 1        | Bracket Slider Connecting Plate | 11511050009    | Compatible with FRM-1120C |
| 3    | BS-5_Gen2.0   | 6        | Pressure Adjusting Knob         | 9450101111004  | Includes #3, 4            |
| 4    | BS-5_Gen2.0   | 6        | Pressure Adjusting Knob         | 9450101111003  | Includes #3, 4            |
| 5    |               | 1        | Bracket Front Cover             | 11511050002    | Compatible with FRM-1120C |
| 6    |               | 2        | Side Bracket                    | 11511050003    | Compatible with FRM-1120C |
| 7    |               | 1        | Mid Bracket Slider              | 11511050004    | Compatible with FRM-1120C |
| 8    |               | 1        | Bracket Support                 | 11511050008    | Compatible with FRM-1120C |
| 9    |               | 2        | Upper Bracket Shafts            | 11511050001    | Compatible with FRM-1120C |
| 10   |               | 2        | Lower Bracket Shafts            | 11511050001-D2 | Compatible with FRM-1120C |
| 11   | Bearing_6002Z | 3        | Bearing 6002 ZZ (15 x 32 x 9)   | 9105200601022  |                           |
| 12   |               | 2        | Lifting Bracket Bearing Housing | 11511040007    | Compatible with FRM-1120C |
| 13   |               | 1        | Lifting Bracket Shaft           | 11511050006    | Compatible with FRM-1120C |
| 14   |               | 2        | Lifting Bracket Nut             | 11511040004    |                           |
| 15   | FRM-1120C-90  | 2        | Handwheel                       | 9100303112100  |                           |
| 16   |               | 1        | Top Bracket Cover               | 11511050011    | Compatible with FRM-1120C |
| 17   |               | 1        | Back Bracket Cover              | 11511050012    | Compatible with FRM-1120C |
| 18   |               | 1        | Base                            | 11511040001    | Compatible with FRM-1120C |
| 19   |               | 4        | Caster Support                  | 11510000099    |                           |
| 20   | FRM-1120C-92B | 2        | Castors With Brake              | 9400102410403  |                           |
| 21   | FRM-1120C-92A | 2        | Castors Without Brake           | 9400102400403  |                           |
| 22   |               | 1        | Handle Bevel Gear               | 11511040009    | Compatible with FRM-1120C |
| 23   |               | 1        | E-clip 32mm                     | 9746016400032  |                           |
| 24   |               | 1        | E-clip 15mm                     | 9746036400015  |                           |
| 25   |               | 1        | Bevel Gear                      | 1151140005     | Compatible with FRM-1120C |
| 26   |               | 1        | Base Back Cover                 | 11511040006    | Compatible with FRM-1120C |
| 27   |               | 1        | Lifting Slider                  | 11511040002    | Compatible with FRM-1120C |
| 28   |               | 1        | Lifting Slider Shaft            | 11511040003    | Compatible with FRM-1120C |
| 29   |               | 1        | Bevel Gear                      | 11511040008    |                           |

Figure 57. FRS-1120W Sealer Rack Parts List

# Troubleshooting

## Changing Emergency Stop

*\*Always unplug the unit from the power source when making adjustments.\*\**

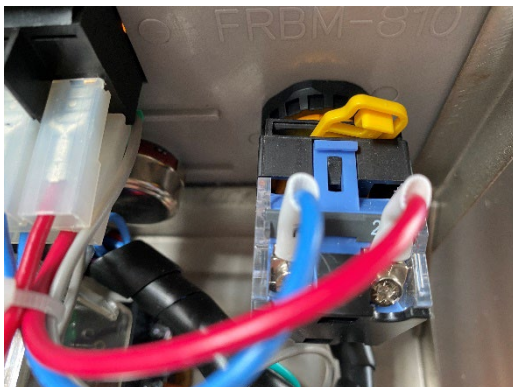
Problem: The emergency stop (Part #BS-22A\_Gen3.0) needs to be replaced



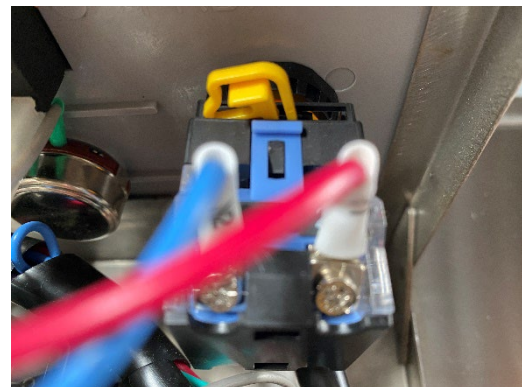
For our smaller band sealers (CBS-880, FR-770, HL-M810, FRM-1010 units), remove the control panel plate from the band sealer. Place the control panel on top of the band sealer for better viewing.

For our larger band sealers (FRM-1120C, FRS-1120W, HL-M1120LD units), remove the control box cover to access the back of the control panel.

1. To remove Gen 3.0 emergency stop, click the yellow tab in release position.



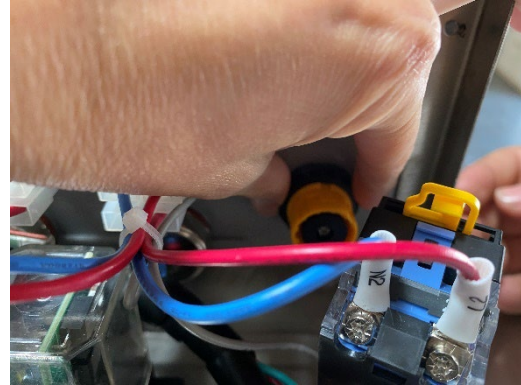
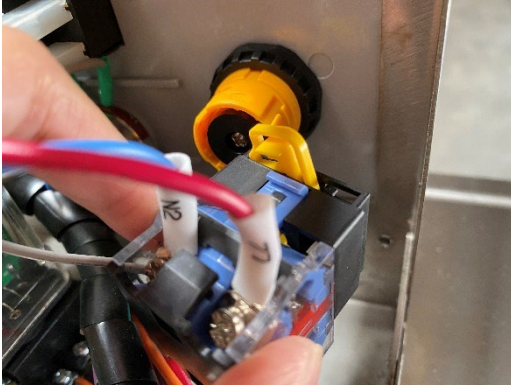
Locked position



Release Position



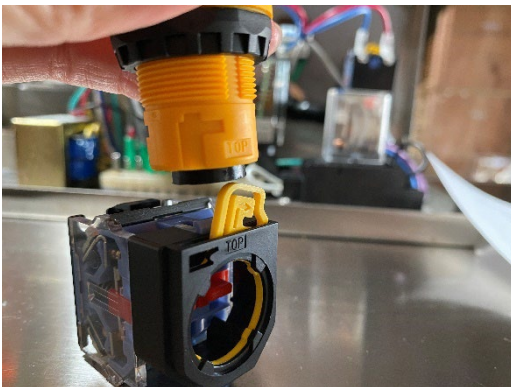
2. Remove the contact block from the push button. The push button can be removed by loosening the black nut.



3. Make note of the wiring on the emergency stop and reconnect the new emergency stop. Blue wires connect to 11 and 12 and the red wires connect to 21 and 22








4. Connect the contact block to the push button. Match the two pieces where they are labeled top. Push the yellow tab into the locked position.

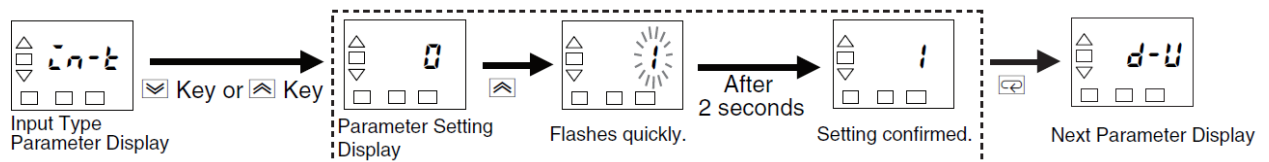




## Unable to Set Temperature Controller



If operator is unable to set the temperature or is finding the temperature settings inaccurate, we suggest resetting the temperature controller to the default settings. Please follow the following steps:

- ❖ Hold the  for at least three seconds.
- ❖ Press the  or  key at the display for the parameter for which the setting is to be changed.  
The parameter setting display will appear. Use the  or  key to change the setting. Example: Changing the Input Type from 0 to 1 is below:



- ❖ Enter  to move on to the next parameter display.
- ❖ To save the settings, hold  again for more than three seconds. The temperature controller will automatically restart and save the settings.
- ❖ **Please note:** This temperature controller can only be set to Celsius. If you try and change the temperature unit to F, the temperature controller will not function properly.

| Sheet 1: Initial menu |                             |           |
|-----------------------|-----------------------------|-----------|
| data                  | note                        | Set value |
| In-t                  | Input type                  | 0         |
| d-U                   | Temperature unit            | ℓ         |
| EntL                  | Control mode PID or ON/OFF  | PId       |
| CP                    | Control cycle               | 3         |
| orEu                  | Forward / reverse operation | or-r      |

Figure 58. Default Setting Parameters

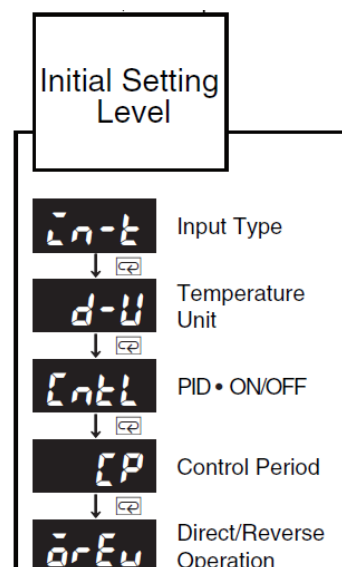


Figure 59. Parameter Displays

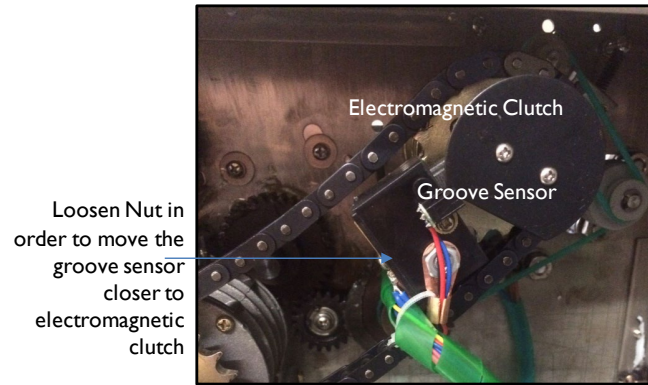
## Printing Wheel Adjustments

Problem: Print wheel on the band sealer rotates more than once.

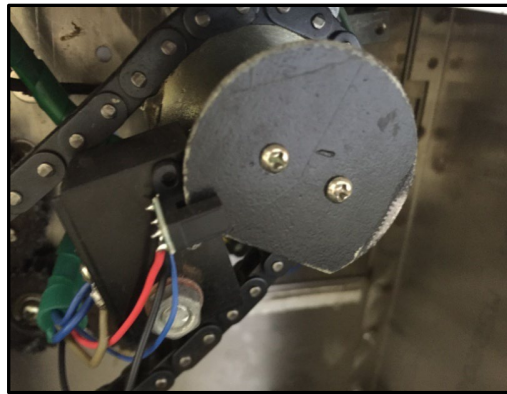
Possible Cause: Electromagnetic clutch on the back of the unit and groove sensor are not aligned properly. The flat panel of the electromagnetic clutch signals the groove sensor to stop the print wheel rotation.

1. We suggest the following steps:
2. Loosen the nut as shown in [Figure 60](#). This will allow the carbon brush holder and groove sensor some movement.
3. Push the groove sensor closer to the electromagnetic clutch
4. Re-tighten the nut





**Figure 60.** Incorrect position of groove sensor and electromagnetic clutch



**Figure 61.** Correct position of groove sensor and electromagnetic clutch

| Problem  | Possible Causes   | Solution  |
|--|---|---|
| Sealing belt is off tracking.                          | Driving wheel shaft is not parallel to driven wheel shaft   | Adjust two adjusting screws on the adjusting block seat (Part# FRM-1120C-13)  |
| Sealing belts are tearing                              | <ol style="list-style-type: none"> <li>1. Too much tension on sealing belt</li> <li>2. Sealing belt is off tracking</li> <li>3. Creases on the sealing belt</li> <li>4. Residual film or other debris attached to the sealing belt</li> </ol> | <ol style="list-style-type: none"> <li>1. Adjust the vertical adjusting screw on driven wheel seal to decrease tension on sealing belt</li> <li>2. see above</li> <li>3. When installing belt, make sure no creases are found on belt</li> <li>4. Clean surface of belt with cloth</li> </ol> |
| Seal is crumpled and film sticks to sealing belts      | <ol style="list-style-type: none"> <li>1. Temperature is too high</li> <li>2. Guide belt is not correctly in place</li> <li>3. Plastic melted on the sealing belt</li> </ol>  | <ol style="list-style-type: none"> <li>1. Reduce temperature</li> <li>2. Adjust guide belt</li> <li>3. Clean or replace sealing belt</li> </ol> <p>If any plastic melts on the sealing belt, your bags will stick to the melted plastic</p>   |
| Embossing is not clear                                 | <ol style="list-style-type: none"> <li>1. Embossing roller is worn out</li> <li>2. Pressure spring on embossing roller needs to be tightened</li> </ol>   | <ol style="list-style-type: none"> <li>1. Replace embossing roller</li> <li>2. Adjust the embossing roller spring (Part# FRM-1120C-28B)</li> </ol>  |
| Material will not pass through sealing blocks          | Clearance between heating blocks or cooling blocks may be too small   | Adjust the clearance between blocks by adjusting the springs and stopping flakes found above the blocks   |
| Conveyor belt is off tracking                          | Driving roller shaft is not parallel to the driven roller shaft   | Adjust using the conveyor belt adjustment (Part# FRM-1120C-16)  |
| Conveyor and sealing belt are not moving at same speed | Not enough tension on conveyor belt   | <ol style="list-style-type: none"> <li>1. Tighten the chain of driving roller shaft (front shaft) and middle shaft. (Parts # FRM-1120C-37 and FRM-1120C-41)</li> <li>2. Tighten the conveyor belt</li> </ol>  |
| Temperature doesn't rise or cannot be controlled       | <ol style="list-style-type: none"> <li>1. Heat switch is damaged</li> <li>2. Heater (BS-9B) is damaged</li> <li>3. Temperature Controller</li> <li>4. Coupling</li> </ol>   | <p>Replace:</p> <ol style="list-style-type: none"> <li>1. Heat switch (BS-22-Large)</li> <li>2. Heater (BS-9B)</li> <li>3. Temperature Controller</li> <li>4. Thermocouple (FR-1120C-34)</li> </ol>   |

| Problem   | Possible Causes  | Solution  |
|---|--|---|
| Printing wheel does not rotate                                  | <ol style="list-style-type: none"> <li>1. Sensor is blocked</li> <li>2. Sensor is not clean and eye is blocked by dust</li> </ol>  | <ol style="list-style-type: none"> <li>1. Make sure sensor is not blocked</li> <li>2. Clean sensor</li> <li>3. Replace PCB (BS-52C)</li> </ol>  |
| Printing wheel does not stop rotating                           | <ol style="list-style-type: none"> <li>1. Sensor (groove) is damaged or dirty</li> <li>2. Photoelectric sensor is damaged or dirty</li> <li>3. Main control PC Board is damaged</li> </ol>   | <ol style="list-style-type: none"> <li>1. Replace or correct position of the groove sensor or clean its surface (BS-65)</li> <li>2. Replace or clean photoelectric sensor (BS-60)</li> <li>3. Replace PC Board (BS-52C)</li> </ol>  |
| No heat on the ink heating block                                | <ol style="list-style-type: none"> <li>1. Heating element in heating block is damaged</li> <li>2. Heating PCB is damaged</li> <li>3. Potentiometer w/ PC Board (BS-50A) is damaged</li> <li>4. Carbon brush is not in place</li> <li>5. Carbon brush is damaged</li> </ol> | <ol style="list-style-type: none"> <li>1. Replace element (BS-48C) in heating block</li> <li>2. Replace PCB (BS-50A)</li> <li>3. Replace potentiometer with PC Board (BS-50A)</li> <li>4. Adjust and tighten nut on carbon brush seat</li> <li>5. Replace carbon brush</li> </ol> |
| Temperature of heating block for ink roller cannot be regulated | Relay for temperature control PCB is damaged   | Check and replace temperature control PCB (BS-50A)  |
| Printing position cannot be regulated                           | <ol style="list-style-type: none"> <li>1. Tighten screw on printing wheel</li> <li>2. Coding seat potentiometer may be damaged</li> </ol>  | <ol style="list-style-type: none"> <li>1. Tighten screw on printing wheel.</li> <li>2. Replace coding seat potentiometer (BS-51)</li> </ol>   |
| Motor runs at a high speed and cannot be regulated              | Speed controller has malfunctioned   | Replace the speed controller (BS-52A)   |
| Power, heater, and or fan switches do not light up              | <ol style="list-style-type: none"> <li>1. No AC Voltage</li> <li>2. Open Fuse</li> <li>3. Lamp is damaged</li> </ol>   | <p>Check power source / power cord</p> <p>Connect the power</p> <p>Replace the fuse</p> <p>Replace the lamp</p>   |

| Problem              | Possible Causes   | Solution  |
|----------------------|---|---|
| Machine does not run | <ol style="list-style-type: none"> <li>1. Board for speed regulation is abnormal</li> <li>2. Doesn't connect well</li> <li>3. Brushes in the motor are too short because of friction</li> </ol> | <ol style="list-style-type: none"> <li>1. Replace the speed board (BS-52A)</li> <li>2. Tighten the connecting screws</li> <li>3. Replace motor brushes (BS-29A)</li> </ol> <p>If the temperature controller works and the power lamp illuminates but the motor does not move, start off by checking the motor and turbocase connection. Remove the back of the machine and you will see bushing where the motor connects to the gear box. Ensure the bushing is not broken. There is also a set screw that connects the bushing to the gear box / motor shafts. Ensure that these are tight so that when the motor turns, the turbocase turns as well.</p> <p>If the turbocase is noisy before it stopped working, the gear box could be broken inside. Lack of oil could cause this.</p> <p>If the lamp illuminates and the motor does not turn, the motor speed controller may need to be replaced.</p> |

# Spare Parts List

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Included with your band sealer are the following parts. Please note that spare parts included with your band sealer are subject to change without notice.

- ❖ Typeset Box which includes numbers (0-9), Letters – EXP, MFD, silicone pins (Part# BS-59), tweezers, and allen wrench
- ❖ Power Cord (Part# PWC-CBS)
- ❖ PTFE Sealing Belts (Part# FRM-1120C-10)
- ❖ Drive Belts (Part# FRM-1120C-26)
- ❖ Speed Adjusting PC Board (Part# BS-52A)
- ❖ Central Circuit PC Board (Part# BS-52C)
- ❖ Ink Temperature Potentiometer with Heat PC Board (Part# BS-50A)
- ❖ O-Rings (Part#s BS-53 and BS-54)
- ❖ Silicone Ring (Part#BS-57A)
- ❖ Ink Roller Holder (Part# BS-58)
- ❖ Ink Rollers, 15mm (Part# IT-IR-15-BLK)
- ❖ Groove (Trough) Sensor (BS#BS-65)
- ❖ Carbon Brush for Printer (BS#64)
- ❖ Philips Screwdriver
- ❖ Flat Screwdriver
- ❖ Allen Wrench (3mm and 5mm)
- ❖ Wrench

# Quality Control Testing

Our band sealers are manufactured in a facility which is certified in accordance with ISO 9001:2008. In addition, we quality test all of our band sealers in our facility following a rigorous and exacting standards to ensure that the product you purchased is a high quality reliable machine.

| ✓ Steps | Description  |
|---------|--|
|         | Inspect all wiring on the unit, nothing is loosely attached.<br>Make sure all wires are connected correctly.                                 |
|         | Make sure all connections are tight and properly mounted. (Ex: PC Board, Relay)  |
|         | Check parts to ensure they are in proper working order (ex: wheels, belts, knobs, etc)   |
|         | CBS-880 only - Attach the conveyor to the body via the drive shaft (Part #40). Detach after testing.   |
|         | Turn on machine - start, seal, fan, printer<br>Check all knobs to make sure they start and end in the correct position                       |
|         | Make adjustments as necessary if there is any unusual noise. Noise should be under 80db.   |
|         | Check fan - There should be air coming out of the cooling blocks   |
|         | Check motor - motor brushes should be held in tightly  |
|         | Check conveyor belt to make sure the belt is running smoothly and evenly   |
|         | Run machine for at least 20 minutes - after the seal temperature has been reached, seal bag sample to ensure good quality seal               |
|         | <b><u>Band Sealers w/ Printing Option:</u></b><br>Printing - make sure ink heating block, ink printing wheel are at optimal heat temperature |
|         | Sensor and Coding Seat - test the sensor and coding seat are working properly; make adjustments as necessary                                 |
|         | Clean machine  |
|         | Enter serial # of the unit in the manual   |
|         | Repackage sealer w/ QC form, sealed bag / printed sample and manual.   |
|         |  |

Date:  
Technician:

