RPM
Getting Started

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Health care, Human care, Happy care

Introduction

Thank you for selecting RPM as your new solution for repacking oral solid medications. This machine, rather integrated with hospital system or standalone, is designed to quickly and easily repack medication with barcodes, lot number, brand name, generic name and any other information that will benefit both the pharmacy and patients.

This guide is to help users to get familiar with some of the parts consisted in RPM as well as easily get set up to repack oral solid medication.

Safe Handling Information

The RPM is designed to be used as a stationary unit. It is very important that you handle this machine carefully to avoid hardware and electrical damage.

Please read the following warnings before attempting to install, use, or move the RPM

## Care and Handling of Your HP Personal Media Drive

> ⚠ **WARNING: The warnings for the care and handling of the RPM are listed below**

- Do not move the machine while it is operating to avoid hardware and electrical damage. You can safely move the machine only when you have properly disconnected and powered off the machine

- Do not use the machine in a hot and humid atmosphere to prevent machine and stored medication from overheating. **It is recommended to keep the room temperature under 24ºC.**

- Do not block airflow around the machine while the machine is turned on. **It is recommended to keep the back of the machine at least 0.5 meter away from its facing wall**

- Do not stack anything on top of the machine; this can overheat and damage the machine

- Do not set any liquids or drinks on the machine. Liquids can damage the internal electronics

- Do not use the machine without proper cleaning. Pill dusts can decrease machine's performance and potentially damage the machine. **Please refer to RPM Cleaning Guide to properly clean the machine.**

RPM Components

RPM components are listed below:

A   RPM

B   Tool Kit

C   Cartridges

D   Packing Paper

E   Print Ribbon

F   Power Cable

G   Ethernet Cable

Health care, Human care, Happy care
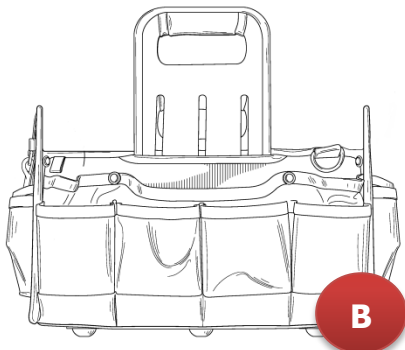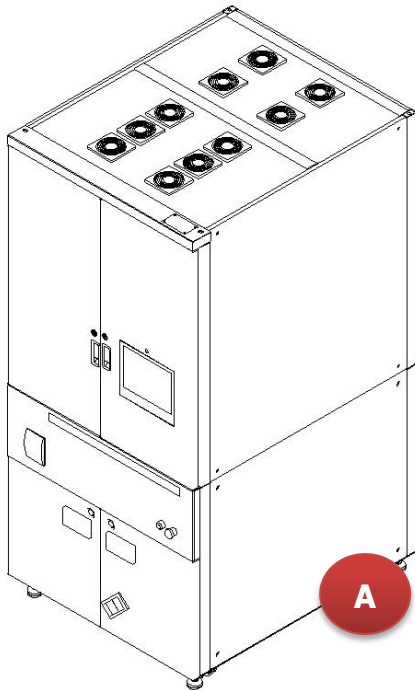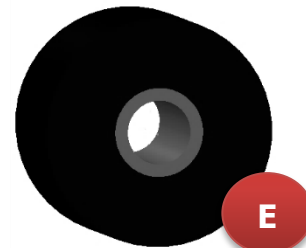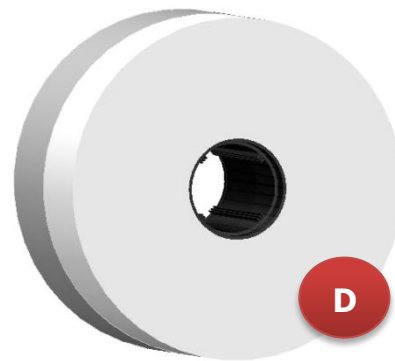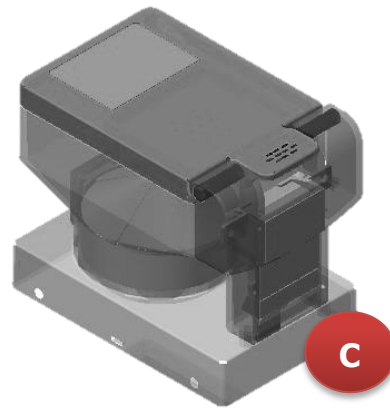
Machine Specification

	RPM-A432	RPM-A360	RPM-A288
Fixed Cartridges	360	300	240
Flexible Cartridges	72	60	48
Dimension (w x h x d) (m)	95 x 204 x 115	95 x 188 x 115	95 x 172 x 115
Weight			

Power On
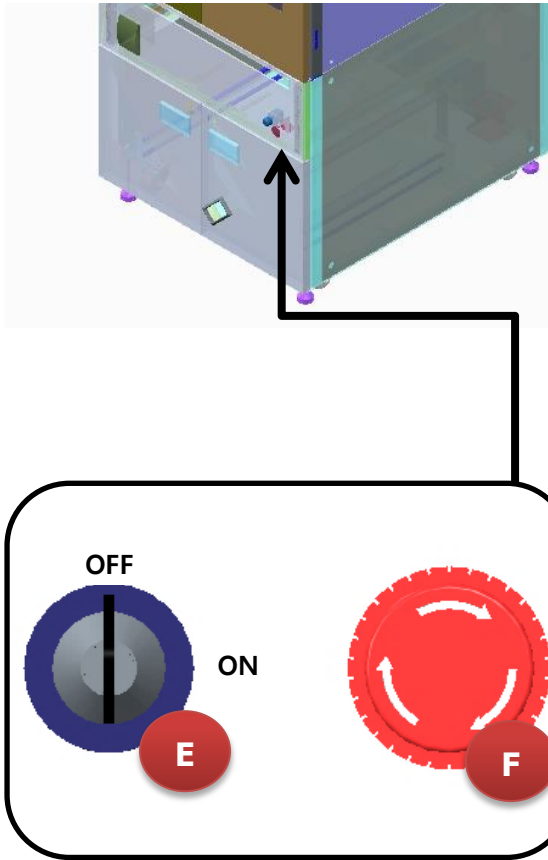
Below is a diagram of the lower back of the machine
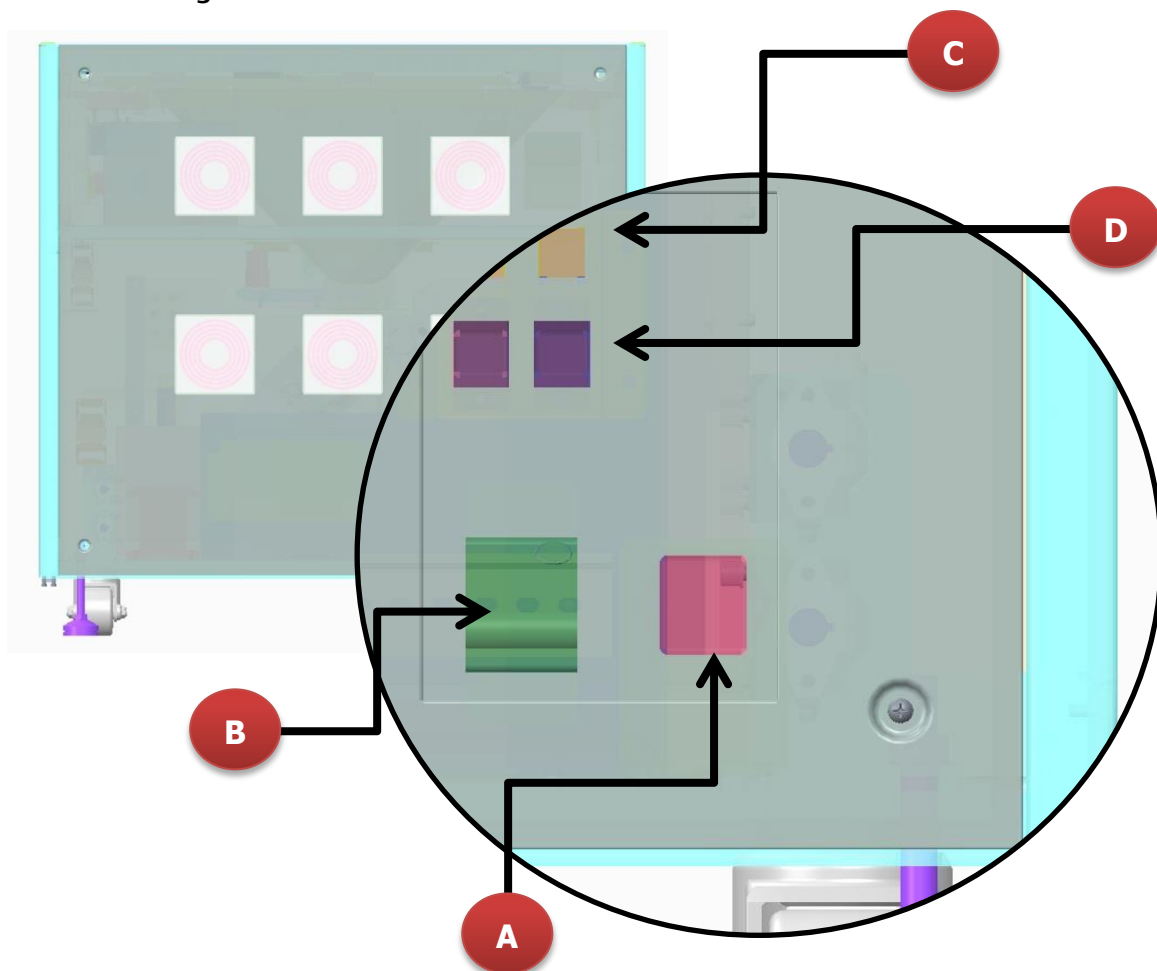
A   Power Plug

B   Circuit Breaker

C   Ethernet Ports

D   USB Port

Below is the diagram of the lower front of the machine

E   Key Switch

F   Emergency Button

Steps to turn the RPM on are listed below:

1. Plug the power cable into the machine **(A)** and then to the power outlet.

NOTE: Uninterrupted power supply (UPS) battery is strongly recommended

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2. Plug the Ethernet cable into the machine **(C)** and then to the hospital network source.
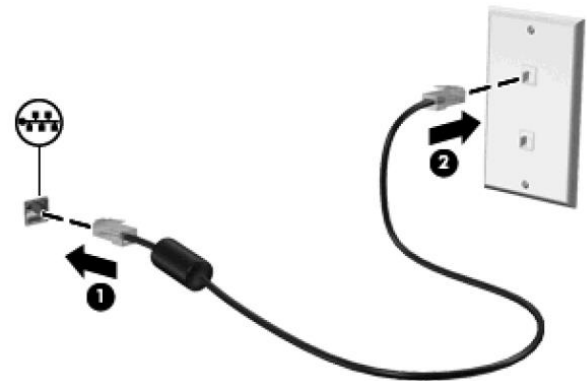
3. Double check to make sure the circuit breaker **(B)** is up and emergency button **(F)** is out.

NOTE: If the circuit breaker is down, pull both levers up until they click

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NOTE: If the emergency button is pushed in, twist the switch clockwise to pull it out

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4. Turn the key **(E)** to turn on the machine

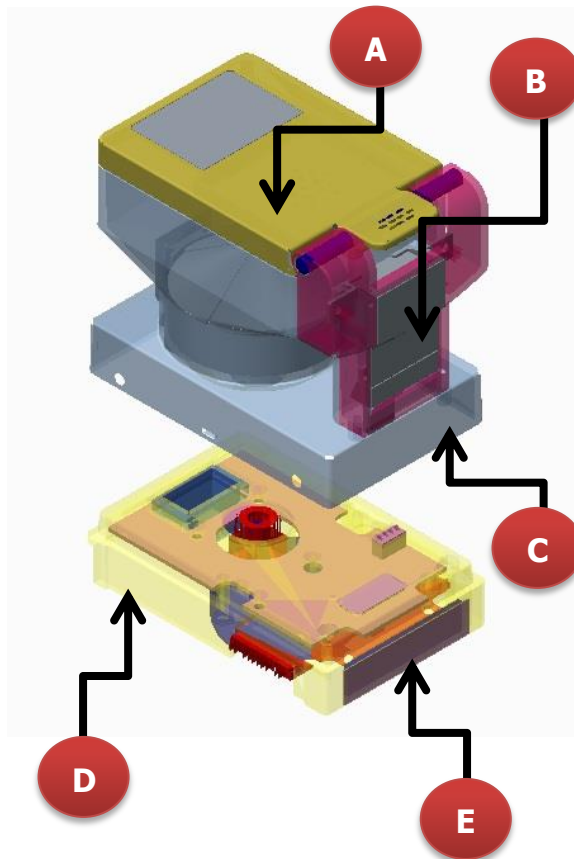# Getting Started with Cartridges

Cartridges are the main dispensing device for the RPM. They hold the medication and when needed, operate and dispense correct amount of pill to the bottom unit.

Cartridges are calibrated for specific sized drug. Therefore, it is recommended that the cartridge gets recalibrated if the manufacturer for that drug is switched.

A	Cartridge
B	Cartridge Number
C	Medication Name
D	Cartridge Base
E	Base Number

Installing Cartridges

All cartridges **(A)** are assigned to a number. If the cartridge number is below 500, find the cartridge base **(D)** with the same number and install it.

If the cartridge number is above 500, find an empty flexible cartridge base and install it.

NOTE: **Please refer to the RPMS manual to assign the medication with its cartridge on the software**

NOTE: **Install the back first for easier installation. Do the reverse process to remove**

Refilling Cartridges

Pour the medication into the canister. Then using the RPMS software, update the system with the refilled medication information such as refilled quantity, lot number, and expiration date.

NOTE: **Please refer to the RPMS manual to update the quantity, lot number, and expiration date of the drug filled**

Depending on the size of the medication, one cartridge can hold from minimum of 250 to maximum of 500.

NOTE: **It is recommended not to completely fill the canister to prevent from cartridge drum to jam.**

Getting Started with MDC

MDC (Manual Dispensing Cell) is an alternative method for dispensing medication. It is ideal for medications that are short-term and that are used rarely.

MDC is located in the middle unit of RPM, just above the switch key and emergency button. Unlike cartridges, MDC requires users to fill the tray when needed.

NOTE: Please refer to the RPMS manual to assign medication to MDC and change configuration of MDC

Tray consists of 90 cells and it is removable. One cell represents one package, so if dispensing in multi-dose format, all the medication that are needed in one package will go into one cell.

If an order contains both medications from canisters and from MDC, the machine will direct user to fill the cell with just the MDC medications. Then, RPM will automatically operate both canister and MDC to repack desired order.

Dispensing with MDC

Steps on using the MDC are listed below:

1. Press MDC open on the touch display **(D)** to open the device

2. Fill the cells **(B)** as directed on the screen

NOTE: User can either take out the tray to fill it, or fill it in front of the machine

3. Close MDC by pressing MDC close on the touch display. Proceed by pressing resume

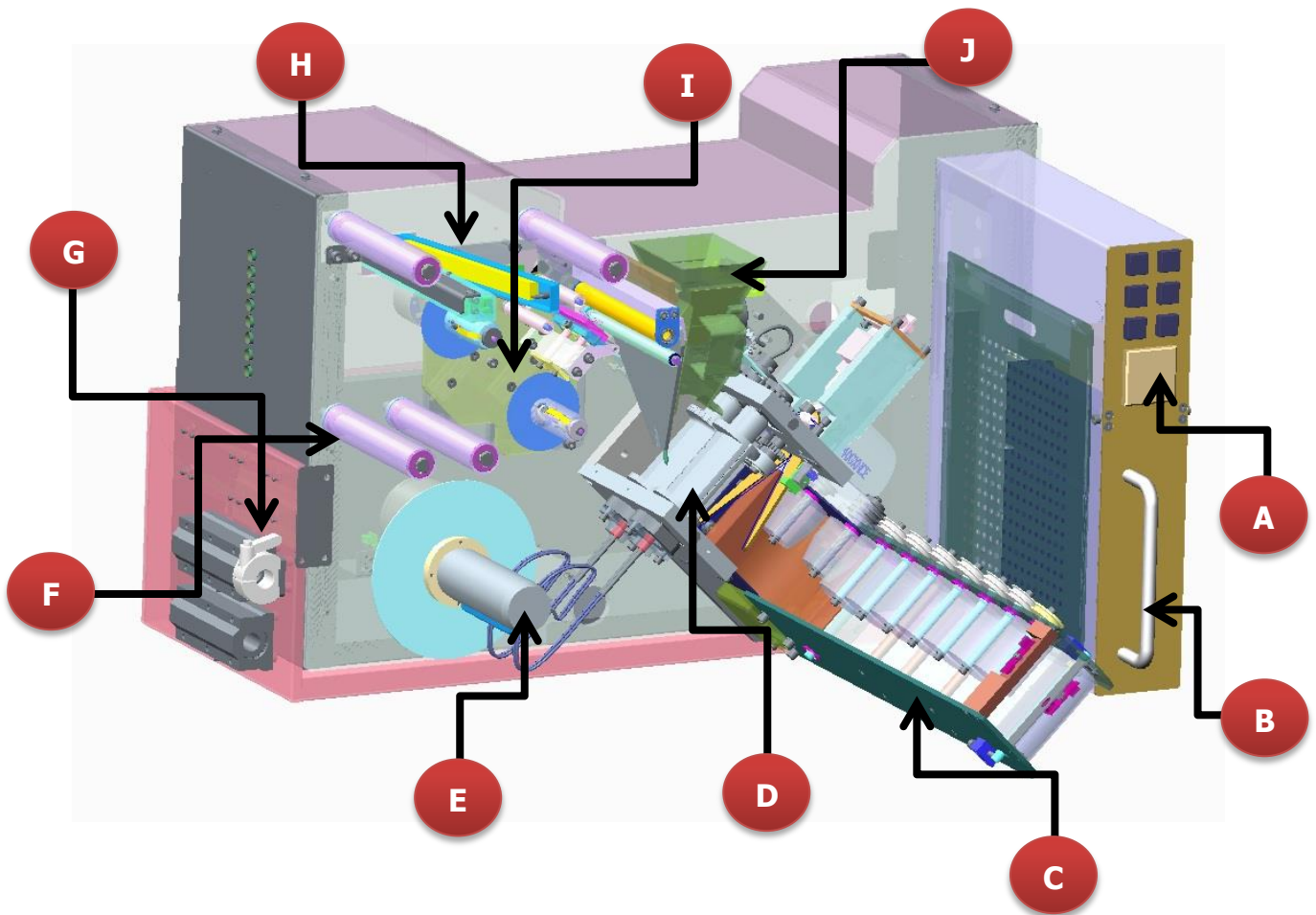**NOTE: MDC does not have a repel mechanism. Do not push MDC in.**
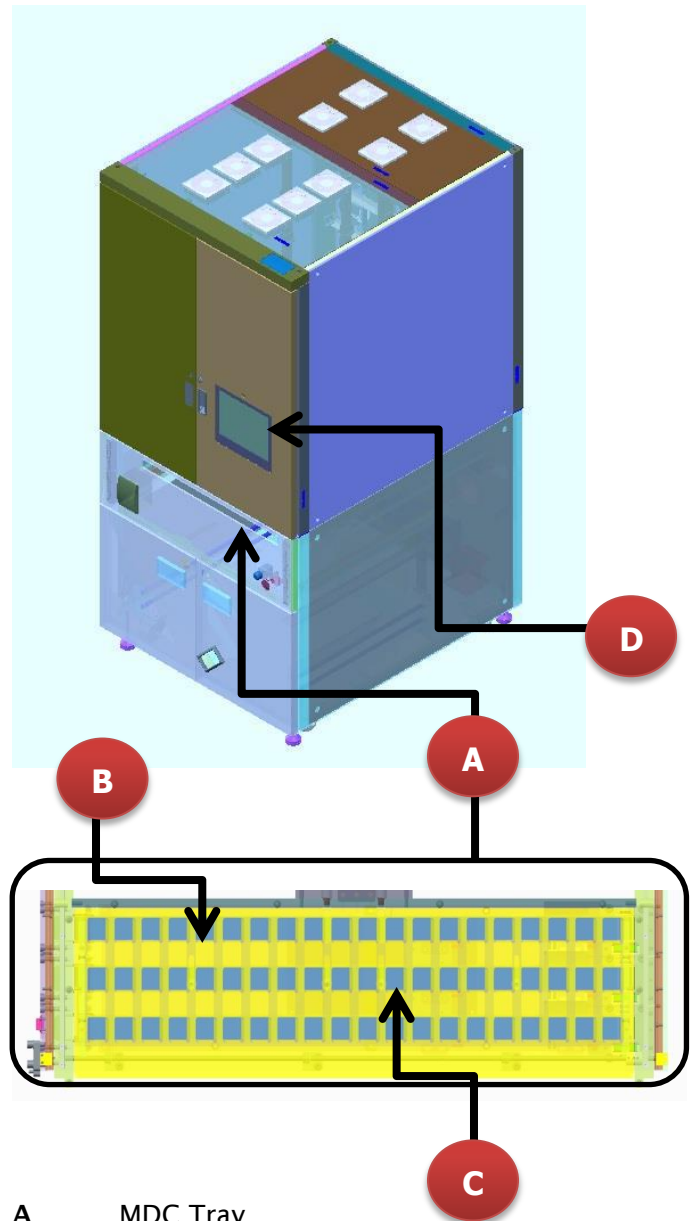
A	MDC Tray
B	MDC Tray
C	Cell (x90)
D	Touch Display

Getting Started with Lower Unit

Lower unit is solely responsible for receiving the dispensed medications, print their medication information, and repack them. The repacked items will be delivered to the lower door by conveyor.

Key Parts of Lower Unit

A	Control Box		**F**	Paper Guide Rollers
B	Pull-Out Handle		**G**	Lower Unit Lock
C	Conveyor		**H**	V Sealer
D	Sealer		**I**	Print Assembly
E	Paper Mount		**J**	Last Shutter

Installing Paper

Steps to turn the RPM on are listed below

1. Pull the lower unit out by using the pull-out handle **(B)**

**NOTE: Do not use the conveyor (C) to pull the unit out**

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2. Remove the empty barrel from the paper mount **(E)**

NOTE: Make sure the barrel does not leave its magnets on the paper mount.

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3. Lock the lower unit by using lower unit lock for easier operation **(G)**

**4.** Feed the old paper through the v sealer **(H)**
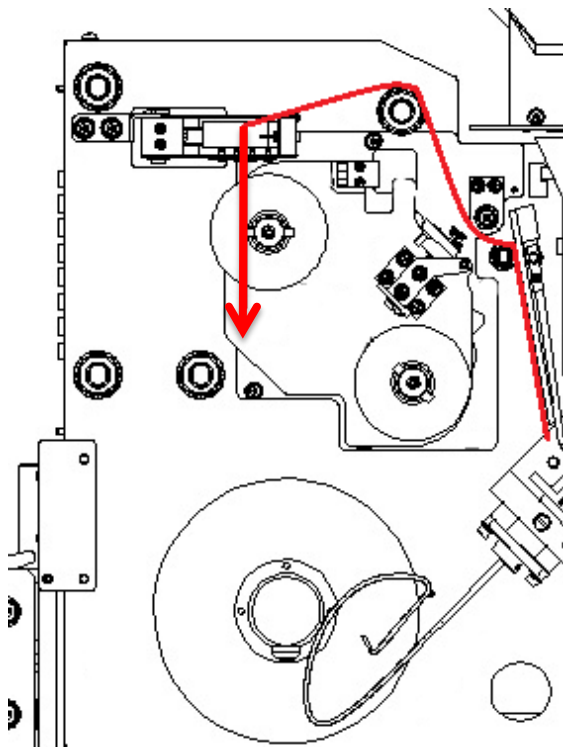
5. Insert the new roll to the paper mount then feed the paper around the paper guide rollers **(F)** and through the v sealer
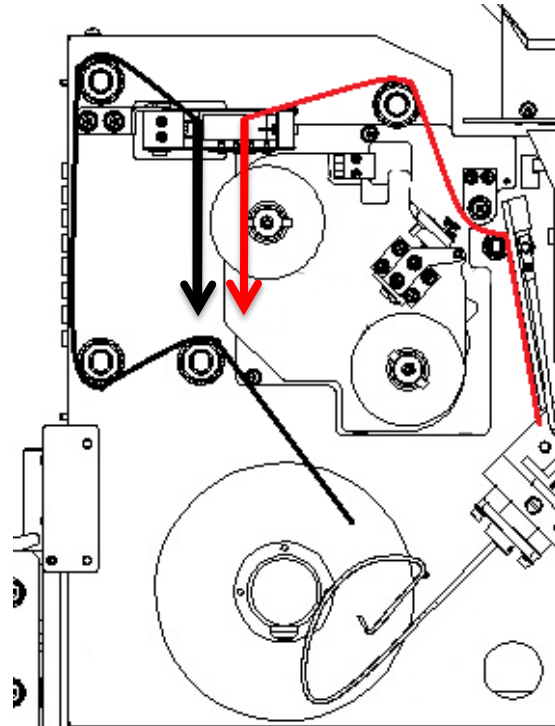
6. Close and hold the v sealer for 5 seconds to attach the two pieces together. While holding, remove the excess by pulling towards the right.

7. Once attached, press forward button on the control box **(A)** until the connected parts are out of the machine
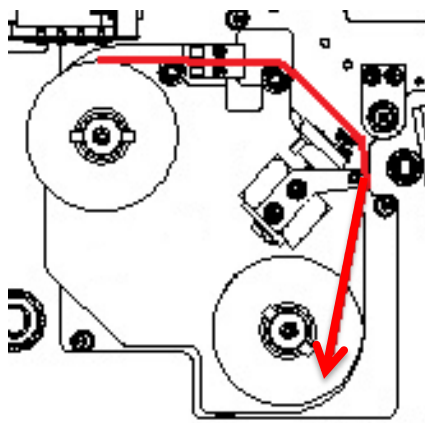
Key Parts of Print Assembly
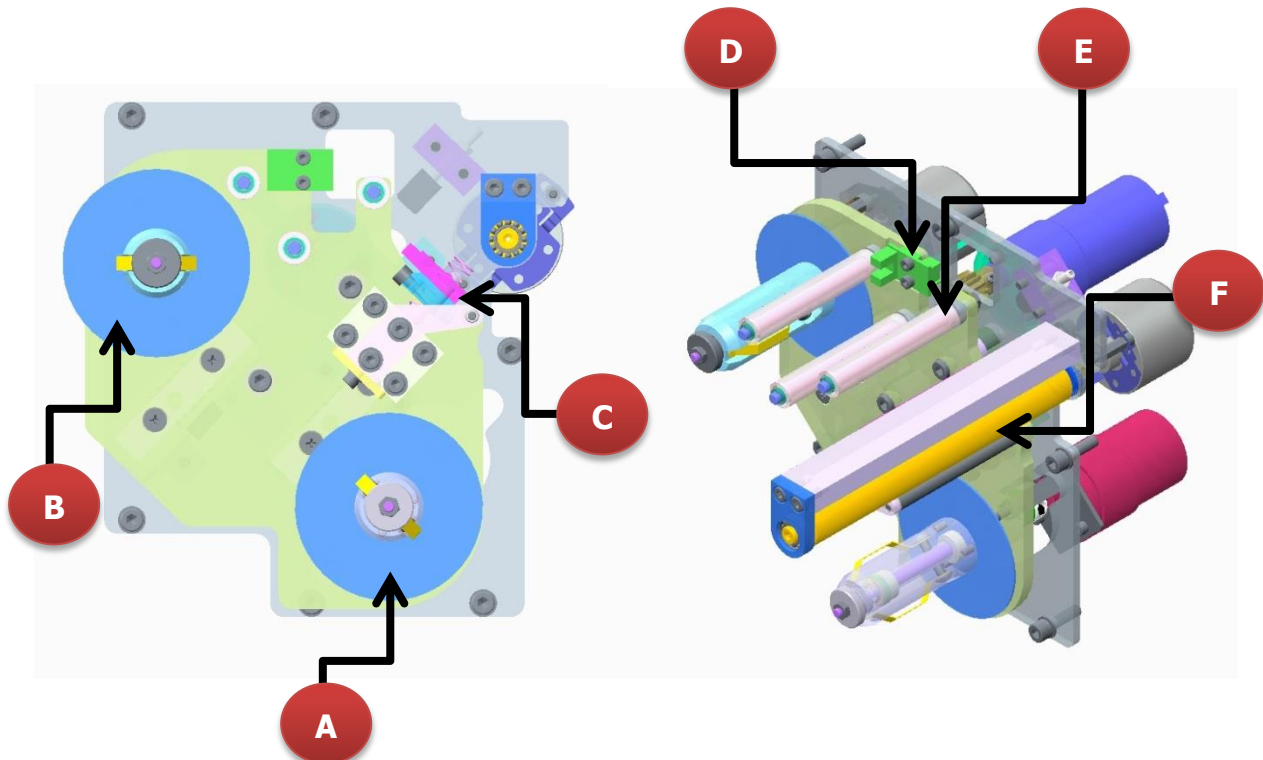
A	Driving Shaft		**D**	Ribbon sensor
B	Following shaft		**E**	Ribbon Rollers
C	Print Head Assembly		**F**	Rubber Roller

Installing Print Ribbon

1. Trash the used roll on the driving shaft **(A)** but save the empty cardboard on the following shaft **(B)**

2. Install the saved cardboard to the driving shaft

3. Install a new print ribbon. Feed the ribbon over two ribbon rollers and print head assembly **(C).** Use the adhesive at the very beginning of the ribbon to connect it to the empty cardboard on the driving shaft

NOTE: Make sure that the ribbon goes through the ribbon sensor

4. Turn the driving shaft to pull the ribbon until the clear part of the ribbon is rolled up and sensor senses the ribbon. The ribbon sensor will turn off the green LED light

Product description

Features
- ◆ **Contactless protocols**

    - ✓ **ISO/IEC 14443 Type A and B**

    - ✓ **ISO/IEC 15693**

    - ✓ **ISO/IEC 18092**

- ◆ **Contactless transmission of data and RF energy**

- ◆ **Peer-to-peer communication**

- ◆ **NFC card reader/write**

- ◆ **RF Baud rates up to 26kbps**

- ◆ **Programmable receiver sensitivity**

- ◆ **Carrier frequency: 13.56MHz**

- ◆ **RF Field detection**

- ◆ **Single ended external antenna connection**

- ◆ **Power supply voltage : 2.7V to 3.3V**

- ◆ **Operating temperature range : -20℃ to 85℃**

Notice

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two condition: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation

FCC WARNING
Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines in Supplement C to OET65. This equipment has very low levels or RF energy that are deemed to comply without testing of specific absorption ratio (SAR)

Note)
Portable equipment: Equipment for which the spaces between human body and antenna are used within 20cm.
Mobile equipment: Equipment used at position in which the spaces between human body and antenna exceeded 20cm.