



# PharmaCap™ Manual Capsule Filler User Manual



We don't just sell machines—we provide service.

# **Copyright Notice**

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## **Important Safety Information**

## READ THIS BEFORE OPERATING MACHINE

#### Intended Use

The intended use of this machine is to fill empty capsules with dry raw materials.

Potential misuse of this machine includes:

- Using any capsules that deviate from the standard two-piece design.
- Using softgel capsules.
- Spreading powder over the capsule bodies with the machine's cleaning brush instead of the formulation scraper.
- Using powders that could explode under pressure.
- · Using wet or damp material.

## **General Hazards**

- Keep out of reach of children.
- Keep fingers away from all moving parts.
- Inspect the manual capsule filler before use.
- During operation, cleaning, and maintenance, keep fingers away from the Tamping Plate when pulling it down.
- Use this manual capsule filler only for its intended use as described in this manual.
- Do not modify the machine in any way.

## **Personal Protection**

For personal protection while operating the PharmaCap™ Capsule Filler, abide by these actions:

- Avoid wearing loose jewelry to prevent entanglement.
- Contain long hair to prevent entanglement.
- Wear safety goggles.
- Wear disposable latex/rubber gloves.
- Wear a hairnet (food grade products only).
- Wear a beard net if needed (food grade products only).

## **Important Safety Information**

## READ THIS BEFORE OPERATING MACHINE

## **Symbols**





This signals potential risk for personal injury.

This signals potential risk for damage to the machine or other parts.

## Modes for Stopping

In the case of an emergency, immediately stop operating and remove yourself from the PharmaCap<sup>™</sup> Capsule Filler.

## Prop. 65 Statement for CA Residents

Based on LFA's current level of knowledge of our machines, PharmaCap<sup>™</sup> Capsule Fillers do not require a Proposition 65 warning label.

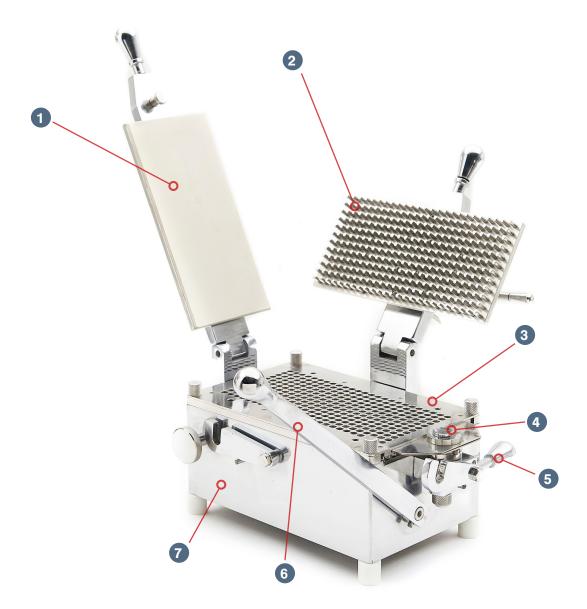
## Warning for Explosive Material

This machine is not explosion proof. LFA recommends that you test your materials' explosivity before running them through this machine. If your materials are indeed explosive, do not use them with this machine.

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# **PharmaCap<sup>™</sup> Capsule Filler Parts List**



- 1. Cap Locking Plate
- 2. Tamping Plate
- 3. Capsule Body Plate
- 4. Eccentric Pin

- 5. Eccentric Pin Handle
- 6. Large Lever
- 7. Base

## **Preface**



The PharmaCap<sup>™</sup> is a compact and lightweight desktop capsule filler that is one of the fastest on the market. With its mechanical tamping system to ensure consistent capsule weights, the PharmaCap<sup>™</sup> is not only easy to operate and service but is also made from stainless steel, ensuring durability and hygiene. With its speed at producing capsules and ability to quickly change between different capsule sizes, the PharmaCap<sup>™</sup> is a versatile and affordable option for a capsule filler.

The purpose of this document is to support your understanding of the PharmaCap™ Capsule Filler components, features, functions, and design. With this manual, you will be able to successfully operate and maintain your PharmaCap™ Capsule Filler.

The user manual's content includes:

- Important safety information
- PharmaCap<sup>™</sup> installation instructions
- Description of the PharmaCap<sup>™</sup> s operation
- PharmaCap<sup>™</sup> maintenance information
- Appendix with supplemental information

## **Training**

Machine training can be beneficial for its successful operation and your personal safety. There are several methods to prepare you for working with your capsule filler.

## **In-Person Training**

LFA offers training at our UK, USA, and Taiwan facilities for all our customers and their teams. For more information, go to <a href="https://www.lfacapsulefillers.com/services">https://www.lfacapsulefillers.com/services</a>

## Training via Video Chat/Phone

Using an online video chat system, an LFA technician can interact face-to-face with you and assist with your understanding of the machine. Or, if you prefer, LFA can provide training via phone for all customers who call the office. To set up a training, call or email your local LFA office:

UK Phone

+44 01869 250234

**Email** 

support.uk@lfamachines.com

USA Phone

(682) 312-0034

**Email** 

support.usa@lfamachines.com

**Taiwan** 

**Phone** 

+886 422031790

**Email** 

support.asia@lfamachines.com

## LFA Articles

LFA writes informative articles about our machines, which includes instructions, procedures, and guides. To access the articles, go to <a href="https://www.lfacapsulefillers.com/articles">https://www.lfacapsulefillers.com/articles</a>

## LFA Videos

LFA has created several videos involving our machines. To access the videos, go to <a href="https://www.joutube.com/user/TabletPilPress">https://www.joutube.com/user/TabletPilPress</a>

## Installation

### **Tools and Materials Needed**

Before you install and operate the PharmaCap<sup>™</sup> Capsule Filler, it is best to have the following tools and materials on hand for general operation and maintenance:

- · Set of metric Allen keys with ball ends
- Set of metric wrenches
- Vise grip/pliers
- Rubber mallet
- Scoop/spoon for powder
- Lubricant (NSF approved for food grade products)
- Long wire pipe cleaner
- Toothbrush
- Cleaner (e.g. Member's Mark Commercial Lemon Fresh Disinfectant)
- Sanitizer (e.g. Member's Mark Commercial Sanitizer)
- Clean cloths
- Bagless vacuum
- Safety goggles
- Disposable latex/rubber gloves
- Hairnet and/or beard net (food grade products only)
- Sterile shoe covers (food grade products only)



## The Appropriate Workstation for the Machine

Find a clean, stable, and level workspace that supports the PharmaCap™s 40 kg (approximately 88 lbs) weight.

#### **Environmental Conditions**

It is important that the environment in which you operate and store the PharmaCap™ Capsule Filler has the appropriate temperature and relative humidity levels. These two environmental factors can potentially cause the machine to rust and/or cause the capsules to have a lower quality. The table below shows the acceptable temperature and relative humidity levels:

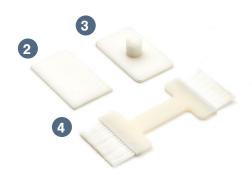
| Machine                               | Tempe | erature | Humidity  |
|---------------------------------------|-------|---------|-----------|
| PharmaCap <sup>™</sup> Manual Capsule | °C    | °F      | 45-55% RH |
| Filler                                | 18-24 | 64-75   |           |

## The shipment will contain the following:

## 1. The PharmaCap<sup>™</sup> Capsule Filler



- 2. Formulation Scraper
- 3. Tamping Tool
- 4. Cleaning Brush



- 5. Powder Guard
- 6. 2 Capsule Holding Trays



#### PharmaCap™ Capsule Filler Process

The basic mechanism of the PharmaCap<sup>™</sup> involves separating the capsules, filling the capsules with powder, and sealing the capsules.

#### **Sorting the Capsules**

The capsules are inserted into the holding tray and placed on the machine. After the front knob is turned clockwise, the capsule bodies are secured by pulling forward the eccentric pin handle. Once the knob is turned counterclockwise, the capsule caps are lifted from the tops of the capsule bodies when the long lever is pulled down, and the capsule bodies fall into the filling position.



#### Filling the Capsules with Powder

The powder guard is put on the machine and is filled with powder. The formulation scraper ensures that the powder covers all of the capsule bodies. The powder is then compacted by the tamping plate, and the excess powder is redistributed over the capsule bodies by the formulation scraper. This process is repeated until the capsule bodies are full with powder.



#### **Sealing the Capsules**

Once the tray with the capsule caps is back on the machine, the cap locking plate is lowered and secured into place. After that the knob is turned clockwise and the large lever is pulled down, which seals the capsules. Then, the cap locking plate is lifted and the front knob is turned counterclockwise. Once the lever is pulled down again, the holding tray can be removed along with the filled capsules.



#### How to Create Capsules with the PharmaCap™ Capsule Filler

To watch a video on this process, go to <a href="https://www.lfacapsulefillers.com/using-your-pharmacap-capsule-filler">https://www.lfacapsulefillers.com/using-your-pharmacap-capsule-filler</a>

#### **Tools and Materials Needed**

- Raw ingredients
- Empty capsules (purchase at https://www.lfacapsulefillers.com/products/empty-capsules)
- PharmaCap<sup>™</sup> Capsule Filler and accessories
- Scoop/spoon for powder
- Safety goggles
- Disposable latex/rubber gloves (for food grade products and to protect hands from grease)
- Hairnet and/or beard net (food grade products only)
- Sterile shoe covers (food grade products only)

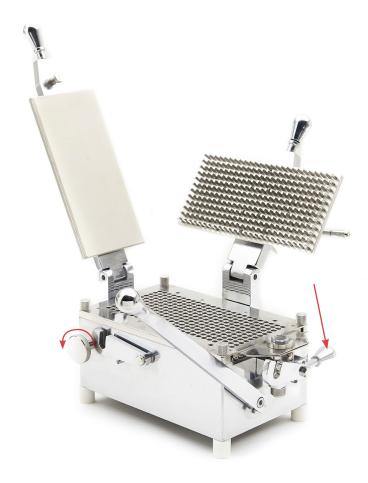


**WARNING:** For personal protection while operating the PharmaCap<sup>™</sup> Capsule Filler, contain long hair and do not wear loose jewelry.

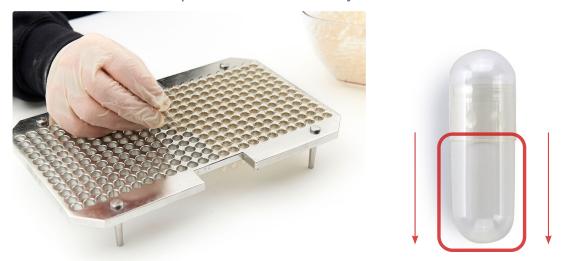
#### **Instructions**

Note: Wear latex/rubber gloves (and appropriate food grade attire if applicable) during this process.

1. Ensure that the eccentric pin handle is forward and that the front knob is turned counterclockwise.



- 2. Insert empty unseparated capsules into the holding tray.
  - 2.1 Note: Ensure that the capsules are inserted body-side down.



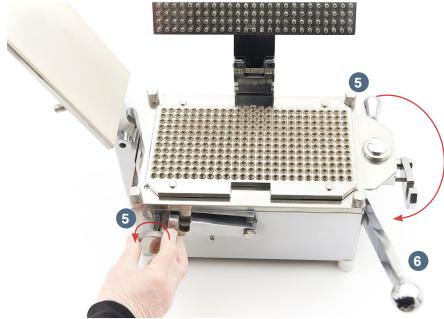
3. Gently press down on the capsules with the tamping tool.



4. Place the holding tray with the empty capsules onto the Pharma $Cap^{^{\text{TM}}}$  and turn the front knob clockwise.



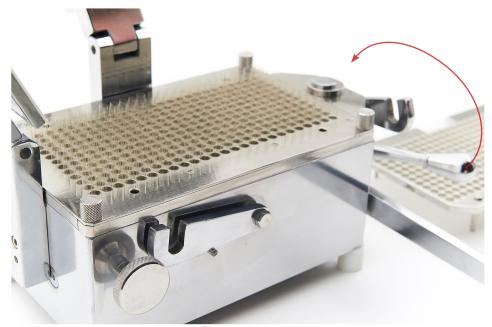
- 5. Pull the eccentric pin handle towards you to secure the capsule bodies and turn the front knob counterclockwise.
- 6. Push down the large lever to lift the capsule caps off the capsule bodies.



- 7. Remove the holding tray with the caps and set aside.
  - 7.1 Note: Ensure to remember the direction of the holding tray. It is important that the separated caps are later sealed with their original bodies.



8. Push back the eccentric pin handle to release the capsule bodies into the PharmaCap™.



- 9. Run the tamping tool over the PharmaCap<sup>™</sup> to ensure that the capsule bodies are fully inserted and flush with the sliding sheet top section.
- 10. Place the powder guard onto the PharmaCap™.



11. Scoop powder onto the PharmaCap™ with a spoon.



12. Use the formulation scraper to spread the powder evenly over the capsule bodies inside the PharmaCap<sup>™</sup> and push the excess powder towards the right reservoir.

12.1 Note: Do not use the cleaning brush provided with the machine to spread the powder as it may cause weight variation in the capsules.



13. Carefully lift up the powder guard from the PharmaCap<sup>™</sup>.



14. Lower the tamping plate carefully and lock it.



**WARNING:** Keep fingers out of the way when lowering the tamping plate.





15. Rotate the handle clockwise to its limit.



16. Loosen the handle by turning it counterclockwise and unlock and raise the tamping plate.



17. Place the powder guard back onto the PharmaCap<sup>™</sup> and redistribute the excess powder with the formulation scraper into the capsule bodies.



- 18. Repeat steps 14-16 until the capsule body is full with powder.
- 19. Place the holding tray with the capsule caps back onto the PharmaCap<sup>™</sup> and over the filled capsule bodies.
  - 19.1 Note: Ensure that the separated caps are aligned with their original bodies.



- 20. Lower the cap locking plate onto the holding tray and lock it into place.
- 21. Turn the front knob clockwise.



22. Push down the lever 2-3 times to apply sufficient pressure to seal the capsules.



23. Raise the cap locking plate and turn the front knob counterclockwise.



- 24. Push down the lever again to raise the holding tray with the sealed capsules.
- 25. Lift up and remove the holding tray from the PharmaCap™.



26. Push out the filled capsules from the holding tray.



## Settings and Adjustment

The PharmaCap™ Capsule Filler's Tooling sizes can be easily changed.

#### Capsule Size Changes for #00, #0, #1, & #2 (Size L) OR #3 & #4 (Size M)

If you want to change size of a capsule, it is necessary to change the Tooling.

Note: The PharmaCap<sup>™</sup> size ranges of #00-#2 (size L) and #3-#4 (size M) use two different bases. Therefore, it is only possible to change sizes within each range (e.g. from #00 to #0; from #3 to #4).

#### **Tools and Materials Needed**

- Metric set of Allen keys with ball ends
- Disposable latex/rubber gloves (for food grade products and to protect hands from grease)
- Hairnet and/or beard net (food grade products only)
- Sterile shoe covers (food grade products only)



**WARNING:** For personal protection while adjusting the PharmaCap<sup>™</sup> Capsule Filler, contain long hair and do not wear loose jewelry.



**WARNING:** Keep fingers out of the way when lowering the tamping plate.

#### **Instructions**

Note: Wear latex/rubber gloves (and appropriate food grade attire if applicable) during this process.

#### **Remove the Tooling**

1. Remove the four bolts on the sliding sheet top section by hand.



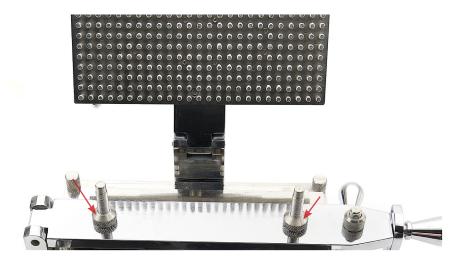
2. Loosen the set screw and nut from the eccentric pin handle.



3. Remove the eccentric pin handle and eccentric pin from the machine.



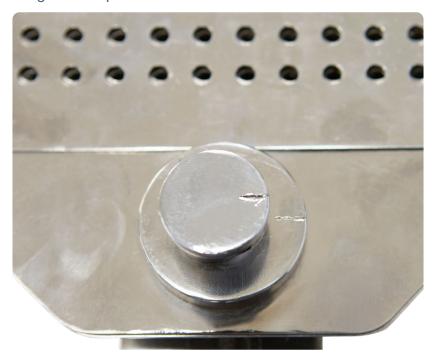
- 4. Remove the sliding sheet top section from the machine.
- 5. Lower the cap locking plate.
- 6. Loosen the nuts of the cap locking plate by hand until the two spacers disengage from the handle.



7. Remove the two spacers.

#### **Replace the Tooling**

- 8. Insert the new spacers onto the cap locking plate handle bolts.
- 9. Retighten the cap locking plate nuts by hand.
- 10. Insert the eccentric pin into the new sliding sheet top section.
  - 10.1 Note: Ensure that the mark on the eccentric pin is in the same direction of the mark on the new sliding sheet top section.



- 11. Place the new sliding sheet top section with the eccentric pin into the PharmaCap™ base.
- 12. Insert the eccentric pin handle back onto the eccentric pin and secure it with the set screw and nut.
- 13. Resecure the four bolts on the new sliding sheet top section by hand.



## **Maintenance**

To ensure that the PharmaCap<sup>™</sup> Capsule Filler will have a long operational life, maintenance is essential. This section includes methods for troubleshooting solutions and how often to grease and clean your machine to keep its performance optimal.

## **General Maintenance Prescriptions**

- Use the maintenance checklist (found in the Appendix) before, during, and after machine operation.
- Make sure all grease points are maintained and regularly lubricated.
- · Use an appropriate amount of lubricant.
- After cleaning the machine, make sure that the parts are dried and oiled.

#### Lubrication

Regularly greasing your machine is vital to prolonging its operational life. Parts that are not greased properly can make the capsule filler seize up and cause major problems later. LFA recommends maintaining a lubrication schedule for your PharmaCap™ Capsule Filler, which can be found in this section.

#### **Tools and Materials Needed**

- NLGI Grade 1 grease
- NLGI Grade 2 grease
- Mineral oil
- Disposable latex/rubber gloves (for food grade products and to protect hands from grease)
- Hairnet and/or beard net (food grade products only)
- Sterile shoe covers (food grade products only)



**WARNING:** For personal protection while maintaining the PharmaCap<sup>™</sup> Capsule Filler, contain long hair and do not wear loose jewelry.



WARNING: Keep fingers out of the way when lowering the tamping plate.

#### Instructions

Note: Wear latex/rubber gloves (and appropriate food grade attire if applicable) during this process.

1. Apply mineral oil to the hinges of the tamping plate, eccentric pin handle, large lever, and cap locking plate.



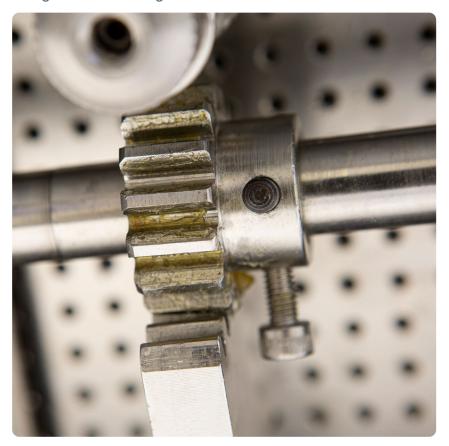
2. Apply mineral oil to the handle threads on top of the tamping plate.



3. Apply NLGI grade 2 grease onto the eccentric pin.



4. Apply NLGI Grade 1 grease to the cogs underneath the machine.



#### **Lubrication Schedule**

LFA recommends the following PharmaCap™ Capsule Filler parts to be lubricated according to the following frequency:

| Part                    | Location  | Image | Frequency                          | Type of Lubricant |
|-------------------------|---|-------|------------------------------------|-------------------|
| Tamping Plate<br>Handle | The handle threads on top of the tamping plate that locks it into place                 |       | After cleaning                     | Mineral oil       |
| Eccentric Pin<br>Handle | Handle on the side that is pulled to separate capsule caps and bodies in the PharmaCap™ |       | After cleaning                     | Mineral oil       |
| Large Lever             | The point at which the side large lever hinges on the PharmaCap™                        |       | Every 100 hours/once per week      | Mineral oil       |
| Eccentric Pin           | Pin near the large<br>lever that goes<br>through the top<br>section                     |       | Every 2-3 months or after cleaning | NLGI Grade 2      |
| Cogs                    | Underneath the<br>PharmaCap™  |       | Every 2-3 months or after cleaning | NLGI Grade 1      |

## Cleaning

After the PharmaCap™ Capsule Filler's operation, powder may accumulate in the tamping pin plate and other parts of the machine. It is important to clean the PharmaCap™ Capsule Filler thoroughly to prevent rusting and cross contamination.

LFA recommends that the machine be cleaned after each operation.

#### **Tools and Materials Needed**

- Bagless vacuum
- · Set of metric wrenches
- Set of metric Allen keys
- Vise grips or pliers
- Long wire pipe cleaner
- Toothbrush
- Cleaner (e.g. Member's Mark Commercial Lemon Fresh Disinfectant)
- Sanitizer (e.g. Member's Mark Commercial Sanitizer)
- Potable water and clean cloths
- Disposable latex/rubber gloves
- Hairnet and/or beard net (food grade products only)
- Sterile shoe covers (food grade products only)



**CAUTION:** Because the PharmaCap<sup>™</sup>'s main base is made from cast iron with chrome plating, it is not recommended to wash it with water.



#### Instructions

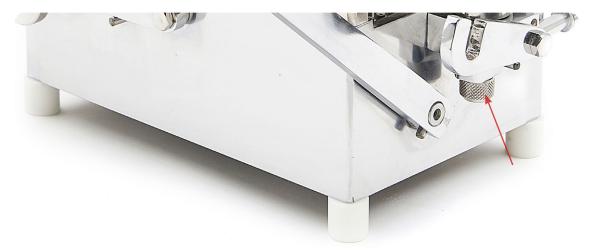
Note: Wear safety goggles and latex/rubber gloves (and appropriate food grade attire if applicable) during this process.

#### Clean the PharmaCap™ Capsule Filler and Accessories

- 1. Remove all residual material from the PharmaCap™s exterior with the cleaning brush and a bagless vacuum.
- 2. Remove the four bolts on the sliding sheet top section by hand.



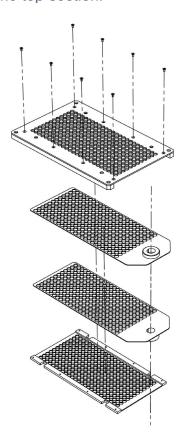
3. Loosen the set screw and nut from the eccentric pin handle.



4. Remove the eccentric pin handle and eccentric pin from the machine.



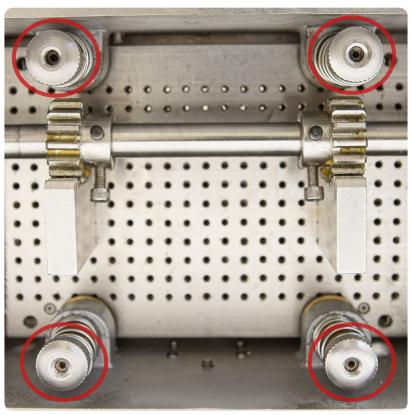
- 5. Remove the sliding sheet top section from the machine.
- 6. Pull out the sliding sheets from the top section.



- 7. Use a wire pipe cleaner and/or toothbrush to clean difficult-to-remove debris on the capsule body plate.
- 8. Remove the four set screws on the capsule body plate.



- 9. Carefully turn over the machine to access the capsule body plate.
  - 9.1 Note: Ensure to account for the machine's weight to prevent personal injury.
- 10. Remove the knurled screws and springs by hand.
  - 10.1 Note: If the knurled screws and springs are difficult to remove, use a vise grip or pliers.

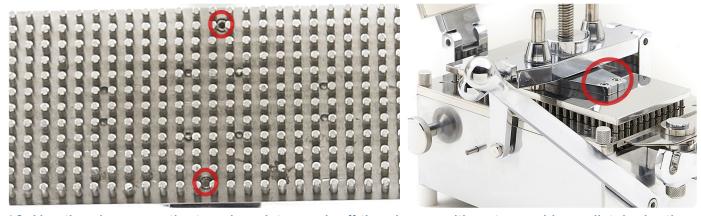


- 11. Push out the capsule body plate from the machine's base.
  - 11.1 Note: If the capsule body plate is difficult to remove, use a rubber mallet to push it out of the machine's base.
- 12. Use the cleaner on the capsule body plate, wash off the cleaner with water, and immediately dry the capsule body plate with a clean cloth.
- 13. Sanitize the capsule body plate with a clean cloth and reassemble it to the machine.

14. Use a wire pipe cleaner and/or toothbrush to clean difficult-to-remove debris on the tamping plate.



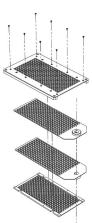
15. Remove the screws on the tamping plate from the handle with an Allen key and take off the tamping plate.



- 16. Use the cleaner on the tamping plate, wash off the cleaner with water, and immediately dry the tamping plate with a clean cloth.
- 17. Sanitize the tamping plate with a clean cloth and reassemble it to the machine.
- 18. Use the cleaner on the cap locking plate, wash off the cleaner with water, and immediately dry the cap locking plate with a clean cloth.
- 19. Sanitize the cap locking plate with a clean cloth.



- 20. Take the sliding sheets and the top section and submerge them in the water.
- 21. Use a wire pipe cleaner and/or toothbrush to clean difficult-to-remove debris on the sliding sheets and the top section.
- 22. Use the cleaner on the sliding sheets and top section, wash off the cleaner with water, and immediately dry them with a clean cloth.
- 23. Sanitize the sliding sheets and top section with a clean cloth.



- 24. Take the powder guard and the capsule holding tray and submerge them in the water.
- 25. Use a wire pipe cleaner and/or toothbrush to clean difficult-to-remove debris on the powder guard and the capsule holding tray.
- 26. Use the cleaner on the powder guard and capsule holding tray, wash off the cleaner with water, and immediately dry them with a clean cloth.
- 27. Sanitize the powder guard and the capsule holding tray with a clean cloth.





- 28. Submerge the PharmaCap<sup>™</sup> accessories in the water.
- 29. Use a wire pipe cleaner and/or toothbrush to clean difficult-to-remove debris on the accessories.
- 30. Use the cleaner on the accessories, wash off the cleaner with water, and immediately dry the accessories with a clean cloth.
- 31. Sanitize each accessory with a clean cloth.



# Cleaning Schedule Matrix

|                           |                             |                     |                     | Frequency   | ency   |         |                              |                             |
|---------------------------|-----------------------------|---------------------|---------------------|---|--------|---------|------------------------------|-----------------------------|
| Part                      | After installing<br>machine | After every use     | Before every use    | In between products that present a cross contamination risk | Weekly | Monthly | Before placing In<br>storage | After removing from storage |
| Capsule Holding Tray      | Remove from machine         | Remove from machine | Remove from machine | Remove from machine   | A/N    | A/A     | Remove from machine          | Install on machine          |
| Cap Locking Plate         | Clean on machine            | Clean on machine    | Clean on machine    | Remove from machine   | A/N    | A/A     | Remove from machine          | Remove from machine         |
| Tamping Plate             | Clean on machine            | Clean on machine    | Clean on machine    | Remove from machine   | A/A    | A/A     | Remove from machine          | Remove from machine         |
| Formulation Scraper       | Remove from machine         | Remove from machine | Remove from machine | Remove from machine   | N/A    | A/A     | Remove from machine          | Remove from machine         |
| Sliding Sheet Top Section | Clean on machine            | Remove from machine | Clean on machine    | Remove from machine   | A/N    | A/N     | Remove from machine          | Remove from machine         |
| Capsule Body Plate        | Clean on machine            | Clean on machine    | Clean on machine    | Remove from machine   | A/A    | N/A     | Remove from machine          | Remove from machine         |
|                           |                             |                     |                     |   |        |         |                              |                             |

| Cleaning Level Key | Level 1 - Hemove powder Level 2 - Dry clean with cloth | Level 3 - Dry clean and re-lubricate if specified in lubrication schedule | Level 4 - Wet clean and re-lubricate if specified in lubrication schedule | Remove from machine - Take part out of machine and clean if required. Store it correctly or install back into machine. | Install into machine - Install part into the machine and make sure that it has been cleaned. If needed, lubricate to the level required. | Clean on/in machine - Clean the part while in the machine and do not remove it. Make sure that all contact surfaces are clean to the level required |
|--------------------|--|---|---|--|--|---|
|--------------------|--|---|---|--|--|---|

This cleaning matrix is intended as a guide only and is not an exhaustive list. All cleaning schedules will need to be adapted to the industry and product, following industry regulations and the material safety data sheets that come with specific products. Please check with your Food Safety Manager/Department, Quality Control Manager/Department, or other relevant internal departments at your company before using.

# **Troubleshooting**

Sometimes unavoidable issues will occur while operating the Pharma $Cap^{\mathsf{TM}}$  Capsule Filler. Fortunately, there are several methods to remedy these issues.

## Common Issues

| Symptom                       | Possible Cause  | Possible Solution  |  |
|-------------------------------|---|--|--|
|                               | The eccentric pin handle is not in the correct position.                      | Pull the eccentric pin handle towards you to the maximum position.   |  |
| Capsules are not separating   | The eccentric pin that connects the eccentric pin handle is worn.             | Replace the eccentric pin.   |  |
|                               | The pins of the tamping plate are uneven.                                     | Inspect the tamping plate for any damage and replace if needed.  |  |
| Inconsistent capsule weights  | There is not enough powder.   | Increase the amount of powder and ensure that it is evenly distributed over the capsule bodies with the formulation scraper.   |  |
|                               | The capsule loading tray is not lining up correctly with the PharmaCap™ base. | Inspect the alignment and adjust if needed.  |  |
| Capsules are not sealing      | The cap locking plate has incorrect spacer sizes.                             | Replace the spacers.   |  |
|                               | The large lifting lever is not pressed to the required extent.                | Press the lever more until it is fully down.   |  |
| Conculos are aplitting        | The capsule loading tray is not lining up correctly with the PharmaCap™ base. | Inspect the alignment and adjust if needed.  |  |
| Capsules are splitting        | The capsules have been exposed to moisture.                                   | Improve capsule storage conditions.  |  |
| Capsules are sealing unevenly | The cap locking plate has incorrect spacer sizes.                             | Replace the spacers.   |  |
| Capsules are sealing unevenly | The top section of the sliding sheet is damaged.                              | Replace the top section and sliding sheet.   |  |
| Improperly closed capsules    | There is damage to the body-cap interface (sealing area).                     | Replace the damaged capsules.  |  |
| Dusty capsules                | Capsules are not being polished.  | Use a capsule polisher after filling capsules. Order one from LFA at https://www.lfacapsulefillers.com/cp7000-capsule-polisher |  |

## Storing the PharmaCap™ Capsule Filler

After its thorough cleaning, the PharmaCap<sup>™</sup> Capsule Filler needs to be stored in the proper conditions. It is important to store it in an environment in which the machine is safe from rusting. The PharmaCap<sup>™</sup>s high traction areas need to be lubricated before storing it.

#### **Tools and Materials Needed**

- Mineral oil
- NLGI Grade 1 and Grade 2 grease
- Disposable latex/rubber gloves (for food grade products and to protect hands from lubricant)
- Hairnet and/or beard net (food grade products only)
- Sterile shoe covers (food grade products only)

#### Instructions

Note: Wear latex/rubber gloves (and appropriate food grade attire if applicable) during this process.

#### **Lubricate the Handles and Large Lever**

Lubricate the tamping plate's handle threads, the eccentric pin handle, and the large lever with mineral oil.

#### **Lubricate the Eccentric Pin and Cogs**

Apply NLGI Grade 1 and Grade 2 grease to the cogs underneath the machine and the eccentric pin.

If the capsule filler is not to be in use for a long time, close and lock the tamping plate and lower the cap locking plate to minimize any chance of damage to the machine.



#### **Environmental Conditions**

It is important that the environment in which you store the PharmaCap<sup>™</sup> has the appropriate temperature and relative humidity levels. These two environmental factors can potentially cause damage to the machine. The table below shows the acceptable temperature and relative humidity levels:

| Machine    | Tempe | erature | Humidity  |
|------------|-------|---------|-----------|
| PharmaCap™ | °C    | °F      | 45-55% RH |
|            | 15-28 | 59-83   |           |

# **Appendix**

# Glossary

| Term                                 | Definition   |
|--------------------------------------|--|
| API/Active Pharmaceutical Ingredient | Any substance or mixture of substances used that is an active ingredient in the drug product.  |
| Cap Locking Plate                    | Component of the PharmaCap <sup>™</sup> that presses down the capsule caps onto the capsule bodies.                                      |
| Capsule Holding Tray                 | Component of PharmaCap <sup>™</sup> that holds capsules on top of the machine's base.  |
| Excipient                            | An inactive substance that serves as the vehicle or medium for a drug or other API.  |
| Formulation                          | Powder mix of the excipient and the API.   |
| Formulation Scraper                  | PharmaCap <sup>™</sup> accessory that helps spread powder over the holding tray and into the capsule bodies.                             |
| Powder Guard                         | Component of PharmaCap <sup>™</sup> that allows powder to be spread over the capsule bodies and prevents it from spilling over the base. |
| Tamping Plate                        | Component of the PharmaCap <sup>™</sup> that has pins that press down powder into the capsule bodies.                                    |
| Tamping Tool                         | PharmaCap <sup>™</sup> accessory that helps with pushing down capsule bodies into the machine.   |

## **Material of Contact Parts**

| Contact Part                | Material |
|-----------------------------|----------|
| PharmaCap <sup>™</sup> Base | SS304    |
| Capsule Holding Tray        | SS304    |
| Tamping Plate               | SS304    |
| Cap Locking Plate           | SS304    |
| Formulation Scraper         | Teflon   |
| Tamping Tool                | Teflon   |

# **Technical Specifications**

| Maximum Output/Hour      | 6,000-7,200            |
|--------------------------|------------------------|
| Compatible capsule sizes | 00 / 0 / 1 / 2 / 3 / 4 |
| Filling precision        | ± 3%                   |
| Weight                   | 40 kg / 88 lbs         |
| Depth                    | 306 mm                 |
| Height                   | 589 mm                 |
| Width                    | 511 mm                 |

# Bores per Plate

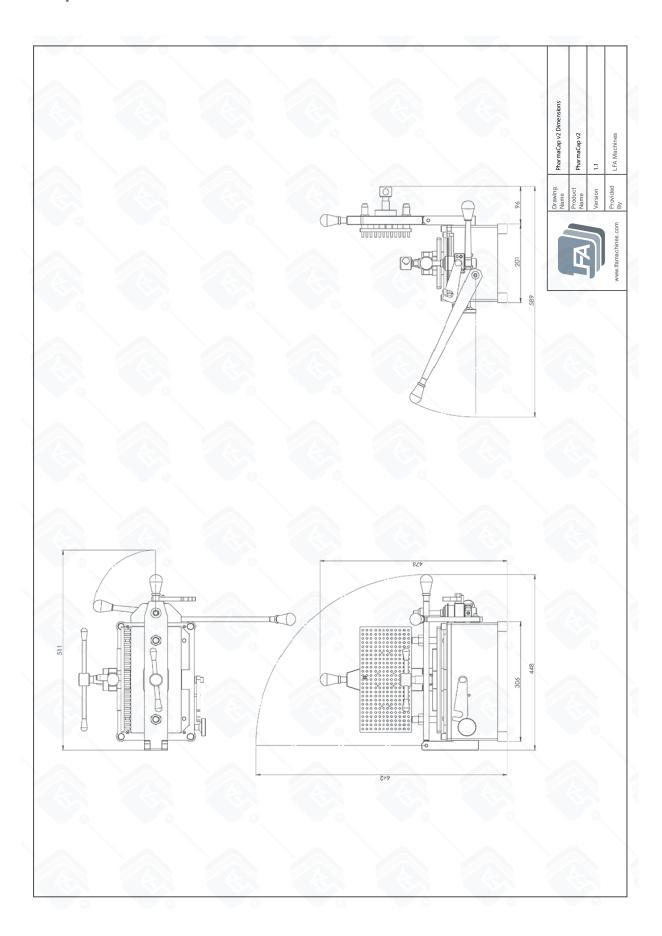
| Plate Size | Number of Bores/Plates | Maximum Output/Hour |
|------------|------------------------|---------------------|
| #00        | 300                    | 6,000               |
| #0         | 300                    | 6,000               |
| #1         | 300                    | 6,000               |
| #2         | 300                    | 6,000               |
| #3         | 300                    | 6,000               |
| #4         | 300                    | 6,000               |

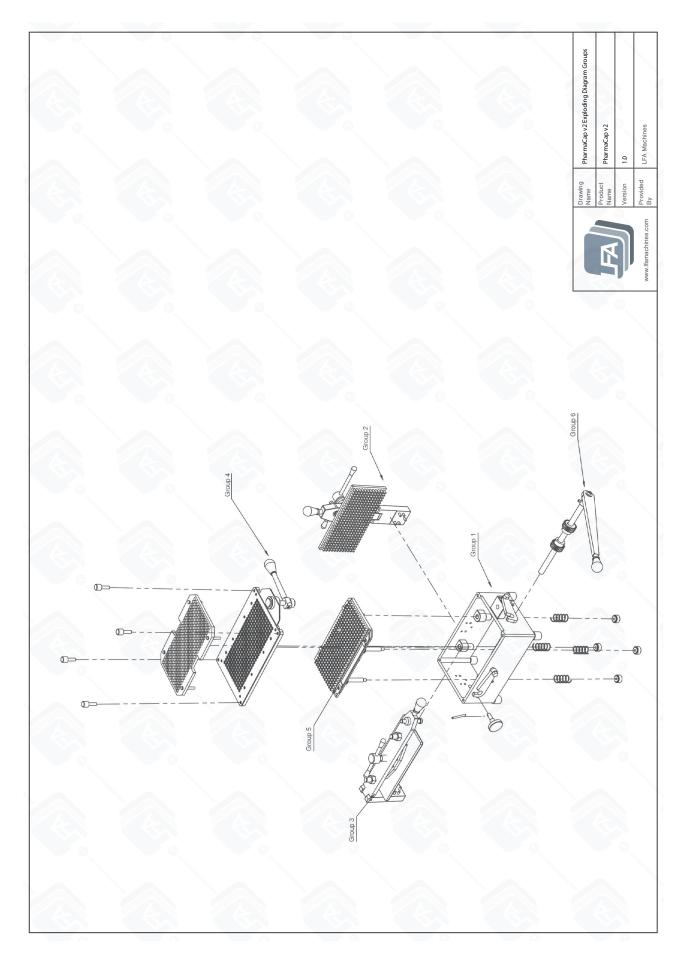
## **Maintenance Checklist**

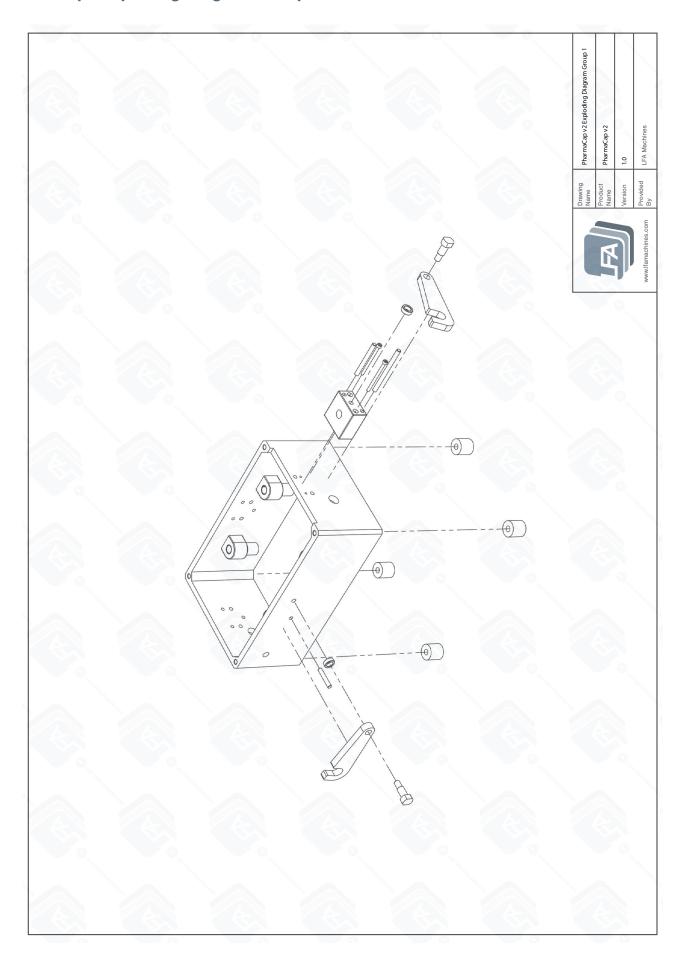
| Before Operation |  |  |
|------------------|--|--|
|                  | Visually inspect the capsule filler and the parts.   |  |
|                  | Ensure all nuts and bolts are tight.   |  |
|                  | Operate the capsule filler with no powder to ensure it is not jammed.                      |  |
| During Operation |  |  |
|                  | Watch for buildup of powder in the capsule loading plate, tamping plate, and powder guard. |  |
|                  | Weigh a few sample capsules to ensure the desired weight and fill are being met.           |  |
| After Operation  |  |  |
|                  | Remove all excess powder with a bagless vacuum.  |  |
|                  | Dismantle the PharmaCap <sup>™</sup> and clean all its parts.                              |  |
|                  | Wipe down the other surfaces with a damp cloth and dry with the cleaning cloth.            |  |
|                  | Apply grease to all the hinges of the handles and lever.                                   |  |
|                  | Store the PharmaCap <sup>™</sup> in a clean, dry, and cool place.                          |  |

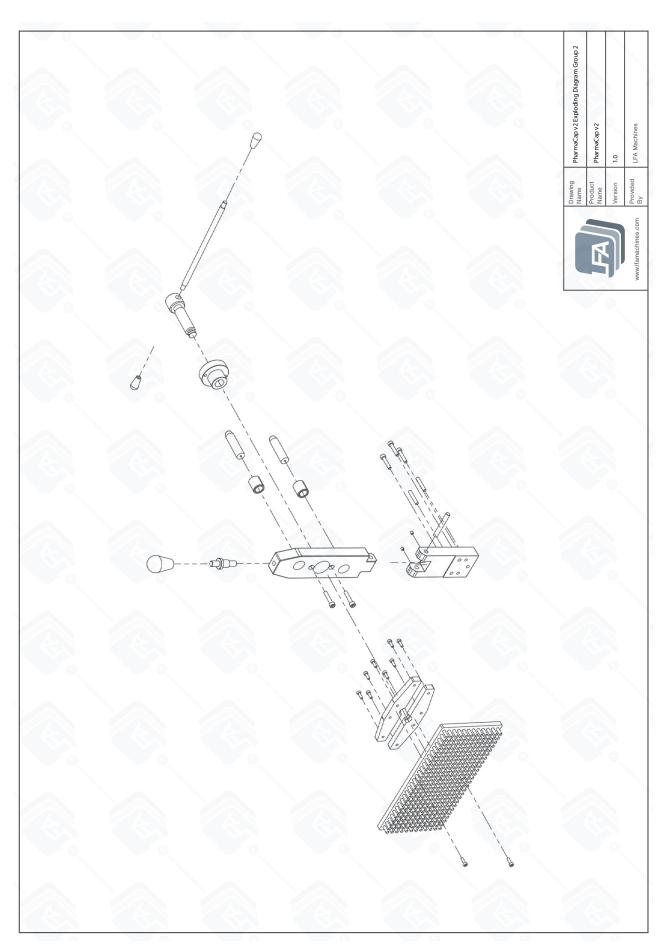
# Diagrams

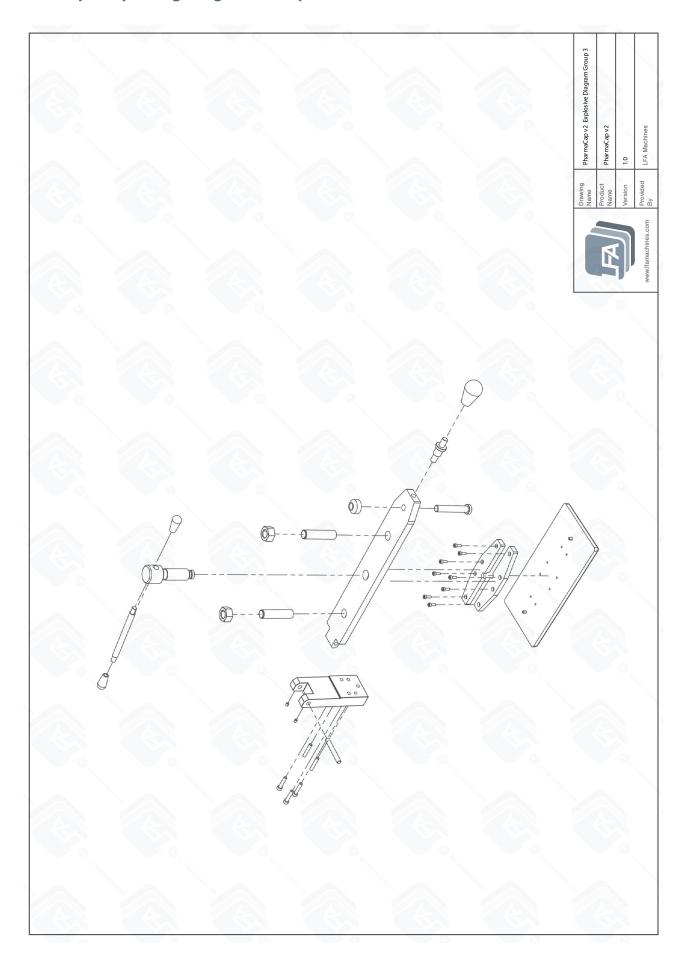
## PharmaCap<sup>™</sup> Dimensions

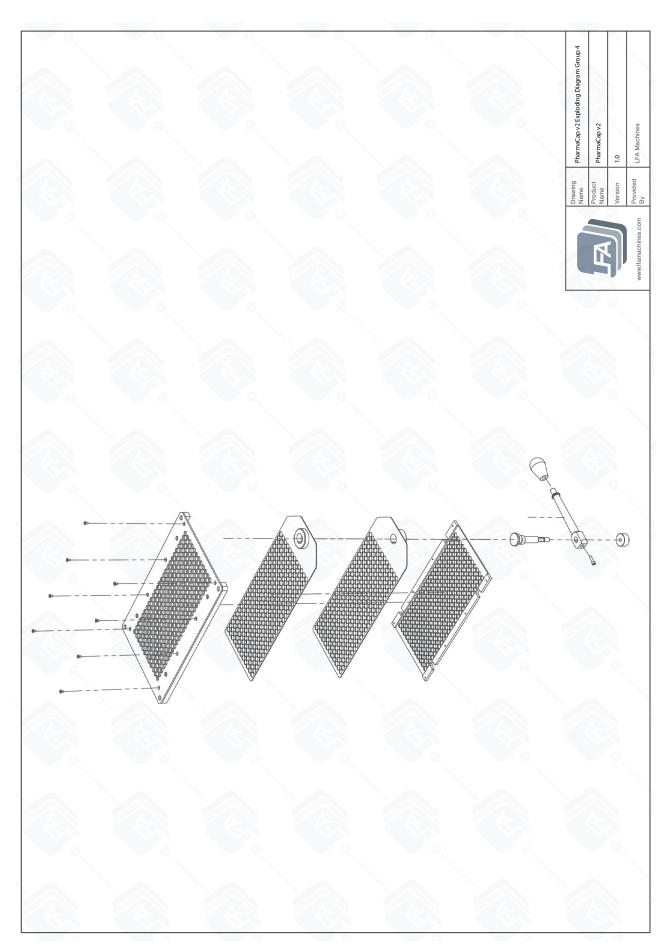


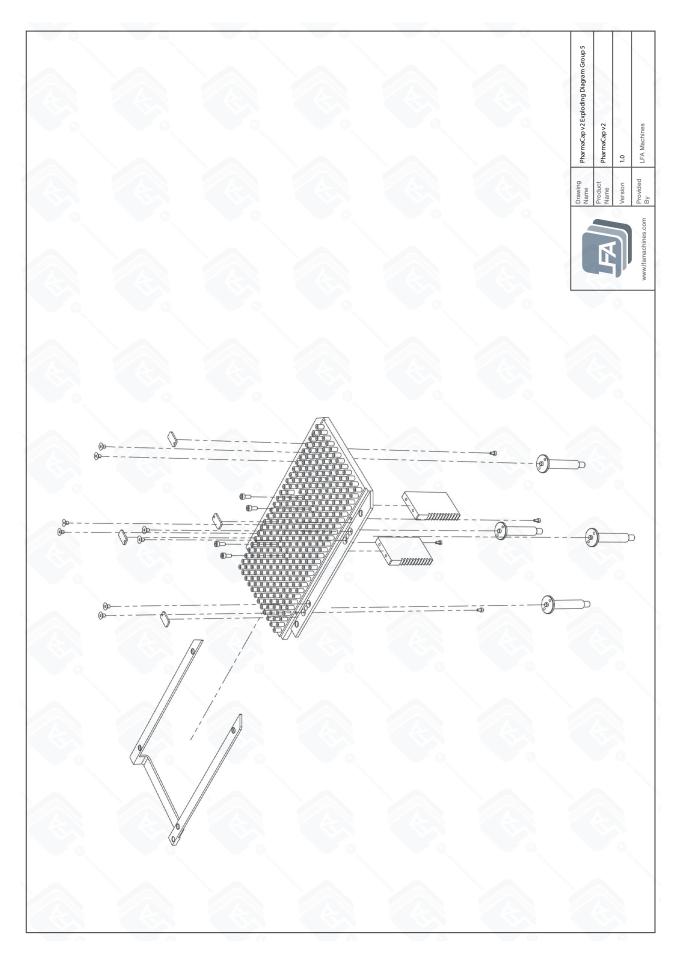


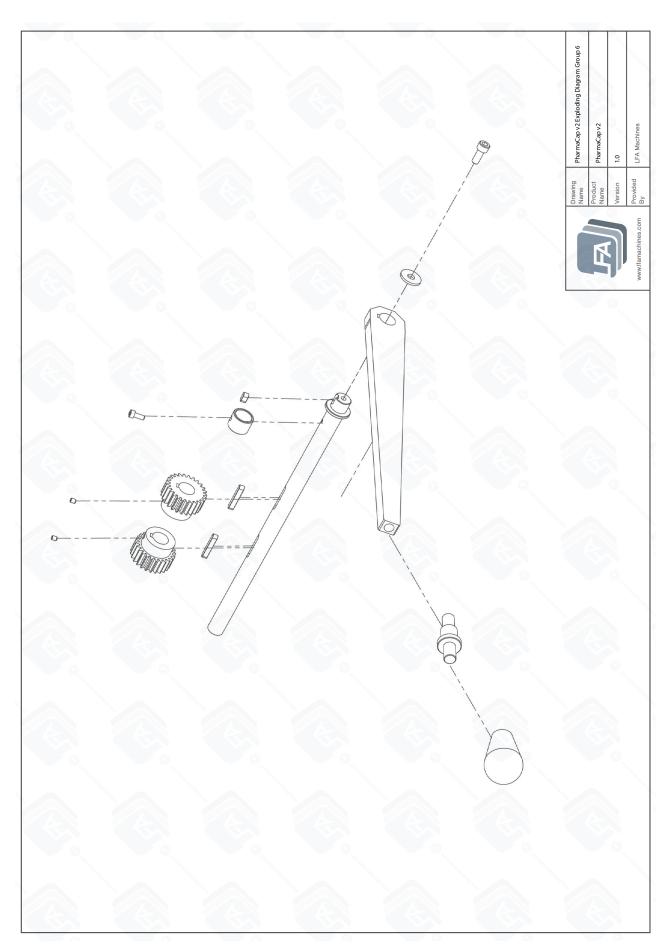












### Resources

#### **Helpful Links**

#### Warranty

For information regarding the warranty policy of the PharmaCap<sup>™</sup> Capsule Filler and other LFA products, please visit <a href="https://www.lfacapsulefillers.com/warranty">https://www.lfacapsulefillers.com/warranty</a>

#### **LFA** Website

In order to aid you in your mixing production, LFA Machines maintains a website that offers a breadth of useful information about the PharmaCap<sup>™</sup> Capsule Filler and other machines.

Visit the LFA homepage at <a href="https://www.lfacapsulefillers.com">https://www.lfacapsulefillers.com</a>

#### **LFA Machines YouTube Channel**

Our YouTube videos provide you an opportunity to see how to use our machines, common troubleshooting tips, and other LFA products such as tablet presses and mixers. We regularly upload videos to give you a visual aid that will hopefully support you in your production efforts. To watch our videos, please visit <a href="https://www.youtube.com/channel/UCwtbcwja77ai7vX2o34FUkQ">https://www.youtube.com/channel/UCwtbcwja77ai7vX2o34FUkQ</a>

#### **LFA Machines Social Media**

Social media is a great way to keep yourself updated on new developments and exciting things happening at LFA Machines. The list below contains our current social media pages:

Twitter: @lfatabletpress

Instagram: @lfatabletpresses

Facebook: https://www.facebook.com/

**Ifatabletpresses** 

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