



LUCY CLAY® Machine

THE ORIGINAL INSTRUCTIONS FOR USE

LUCY CLAY® Tools



ONLINE MANUAL
www.bit.ly/lcmachine

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Contact

LC Tools s.r.o.

support@lucyclay.com
www.lucyclay.com

IČ / ID: 018 76 864
DIČ / VAT: CZ01876864

P. O. Box 20, 318 00 Plzeň
Czech Republic



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1. Introduction

Thank you for your purchase of the LC Machine from LC Tools. You have in your hands a high-quality and robust professional tool/product designed specifically for the processing of polymer clay.

The quality of the device was controlled during the production process and an end-line and final inspection was conducted to guarantee its functionality. Your satisfaction is our main aim.

These instructions for use contain the device's specifications, installation and transport guidelines and instructions and information on setting the device up and putting it to use.

The user and operator shall familiarize themselves with this manual prior to use. It contains important occupational safety and maintenance guidelines and should be considered as part of the device. Error-free and safe operation of the device and the length of its useful life are largely dependent on proper and careful maintenance.

The operating personnel should fully understand and be familiar with the information contained in all the sections of this manual. Of special importance are the safety precautions included in each chapter. Also included are general precautions for operating this device.

If you are not quite clear about some information contained in this manual, please contact the manufacturer. We recommend that you make a copy of the 'Instructions for use' document once you have filled in the information on your purchase and store the original carefully so that you can retrieve it if the copy is lost or damaged. When working, follow the safety instructions to prevent any risk of injury to yourself or to other persons who may be present.

These instructions are marked with the following warning symbols throughout the manual:



A) CAUTION – HEALTH HAZARD OR RISK OF PROPERTY DAMAGE

B) CRUCIAL INFORMATION FOR THE OPERATING PERSONNEL

C) GENERAL INFORMATION FOR THE OPERATING PERSONNEL

2. Description of the intended use of the device

Any use of the device other than that specified by the manufacturer is inconsistent with the intended use of the device. This device should be operated only by persons who are familiar with its properties and the relevant operating procedures. Any unauthorized modifications to the device without the permission of the manufacturer will relieve the manufacturer of liability for any resulting damages or injuries. If the nature of the machine allows other than the specified intended or prohibited uses, the user accepts all liability. When working, follow the safety instructions to prevent any risk of injury to yourself or to other persons who may be present.

The device has been designed for kneading or conditioning polymer clay. It is manually operated with a crank. Through a hexagonal shaft adapter (optional), the machine can be driven by a cordless drill or motor.

This device is not designed, certified or approved for use with foodstuffs.

3. Pre-operational checks

(operations that the operating personnel shall perform before starting the device)



Prior to the start of work, the operator shall check the device for any signs of damage or other issues that might lead to injury or property damage. If such an issue is detected, the operator may not operate the device or continue using it in any way.

4. Warnings

(operations, activities, and uses which the operators must not perform)



- The safety devices must never be deactivated, removed or disabled.
- Do not touch the moving parts of the device with the body, objects or tools during its operation
- Do not make design modifications to the device unless recommended and approved by the manufacturer; the same applies to the replacement of spare parts with unauthorized components
- Do not remove waste from dangerous areas while the device is in operation
- Do not leave the device unattended while it is in operation
- Do not use the device while under the influence of alcohol, drugs or medications which can reduce your ability to respond or affect your attention
- Do not perform any maintenance, cleaning and repair operations while the device is in operation and when it is not safeguarded against an accidental or automatic start
- Do not use the device without the covers
- Do not operate the device if it has any structural or mechanical faults or if its safety elements have been removed
- Do not operate the device when unauthorized personnel are in close proximity
- Do not use the device in explosive environments
- Do not insert volatile or flammable materials into the device

5. Operational safety instructions

(the operating personnel shall observe these instructions)



- The safety devices must be kept in perfect condition at all times
- Keep the safety warnings on the device in a legible condition
- Observe the safety instructions contained in this manual
- If the device starts to vibrate with unusual intensity, emit increasing noise or show other symptoms untypical of normal operation, turn the device off and inspect all parts before resuming use

- Never use the device when you feel physically or mentally fatigued
- Do not operate the device without covers
- Damaged equipment must never be used
- Do not use the device for purposes other than those for which it was designed
- Work only in good lighting conditions or ensure that adequate artificial lighting is provided
- Prior to the start of work, the operating personnel shall conduct a visual inspection of the moving parts of the device for any signs of excessive wear or damage
- Do not use the device if there are excessively worn or damaged parts
- The device may be adjusted, serviced and cleaned only when the power supply is disconnected
- Younger users (users under the age of 18) must be supervised at all times
- The replacement of damaged parts may be performed by authorized personnel; only authorized spare parts may be used
- The device is intended for indoor use only
- Do not allow the device to run without supervision. If you have to leave the workplace, always turn the device off.

6. Danger zone

(zone of increased risk of injury)



- The entire inside area of the device. Keep hands, hair, clothing, and tools away from the mechanism while it is in use.

7. General description of the product



7.1. Description of the use

The machine is primarily used to knead or condition polymer clay. The material is inserted between the rollers and extruded/compressed by turning the crank. When the material has passed through the mechanism, it can be folded in half and inserted again between the rollers. This procedure is repeated until the material is sufficiently conditioned and supple.

Once the material is conditioned, you can alter its thickness by adjusting the offset between the rollers.

Mixing polymer clay of different colors ('blending technique') represents another use of the device.

7.2. Technical description

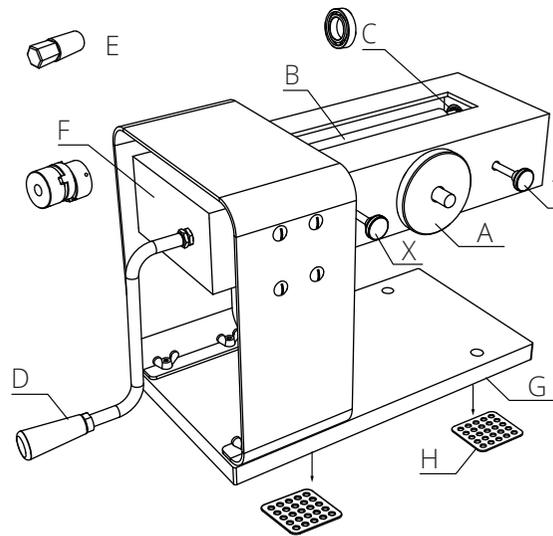
This polymer clay machine consists of the actual mechanism, leg and a base plate and has three gears with teeth placed at a constant distance from the centre. The gears are fixed to the device's frame. The drive gear meshes with a pinion (a small gear) providing a gear ratio of 2:1, thereby

reducing the force needed. The mechanism is also equipped with an Oldham coupling which is located between the drive gear and the sliding roller shaft. This coupling allows a smooth adjustment of the offset between the rollers. With this system, the offset, or opening, between the rollers can be varied from 0 and 15 mm.

The rollers have two U-shaped cleaner/scrapper blades at the bottom attached to the frame with two bolts. This ensures easy operation and cleaning (loosen the two bolts and remove the cleaner/scrapper blade for cleaning).

The device is designed for manual operation using a crank which is attached to the rollers with a 2:1 speed reducer. This makes it easy to knead solid and thick blocks of polymer clay. Optionally, the machine can be fitted with a hexagonal shaft adapter to which a cordless drill can be connected via a speed reducer (see the relevant chapter for guidelines for using the device with a connected cordless drill).

The machine can be secured to a table with a carpenter clamp or any C-clamp, which is not included. The machine is equipped with magnets and sheet metal rest pads. The rest pads can be placed freely and stuck to the table (observing the prescribed pitch) using double-sided tape (supplied together with the rest pads). This system (magnet + sheet metal rest pads) makes for a very simple way of securing the machine on a table. To disengage the machine from the table, just push it lightly away from you or move the magnets together away from the rest pads to break the magnetic grip holding the machine firmly on the rest pads. Further rest pads can be stuck at various locations to create an ergonomic arrangement on your work table that reflects your needs (spare rest pads may be purchased).



- A - linear setup
- B - rollers
- C - lifetime bearing solution
- D - crank handle (gear solution 1:2)
- E - extension for cordless (accu) drill / handle

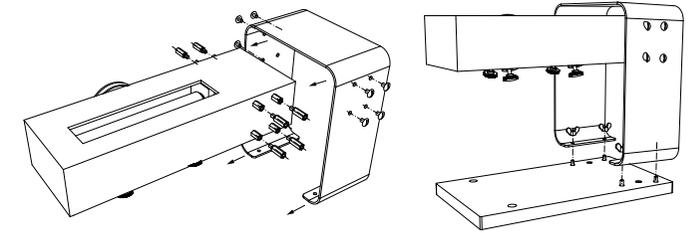
- F - Oldham clutch
- G - magnets (4 pcs)
- H - metal magnets pads (4 pcs)
- X, Y - supporting screws

8. Assembly and disassembly of the device/mechanism

8.1 Mounting the legs

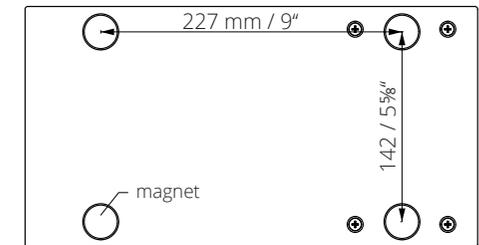
Screw in hexagonal bolts and then attach the leg using 8 bolts.

Place the mechanism with the leg onto the base plate and secure it with 4 wing-nuts.



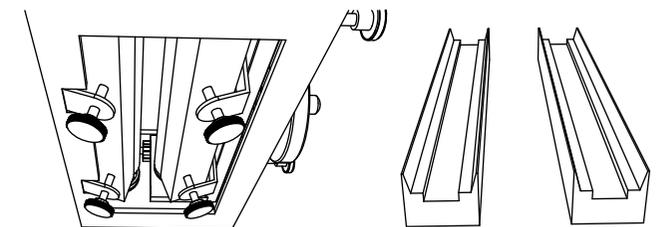
8.2 Attaching the adhesive rest pads on the work table

Attach the sheet metal magnetic pads with self-stick tape to the table. Alternatively, you can secure the rest pads to the table with small screws (the tabletop will be irreversibly damaged, so this is done at your own responsibility). It is important that you observe the offset between the rest pads – refer to the diagram. You can decorate the rest pads your own sticker which matches the color of the table. The base of the machine contains 4 special strong magnets allowing the device to be snapped onto the rest pads just installed on the table.



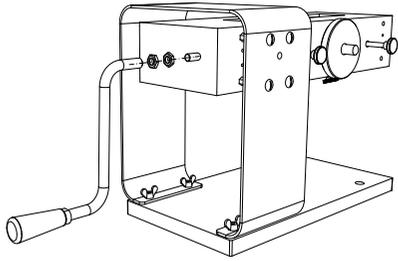
8.3. Installation of the cleaner blades

Attach both blades to the rollers. Secure both blades with the bolts by screwing them into the designated holes. The bolts must be properly tightened to ensure sufficient contact between the blade and the roller for optimal cleaning effect.



8.4. Installation of the crank

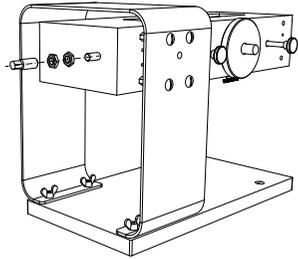
Your device may be powered manually by you through the use of a crank. First, screw two M8 nuts onto the pivot arm of the drive, and then screw on the crank. Tighten the nut closest to the crank using the key tool that is provided in your kit. Next, tighten the nut closest to the device. Tighten it so it is secure against the first nut. This procedure ensures that the crank will not loosen and fall off during operation.



8.5. Installation of the hexagonal shaft adapter

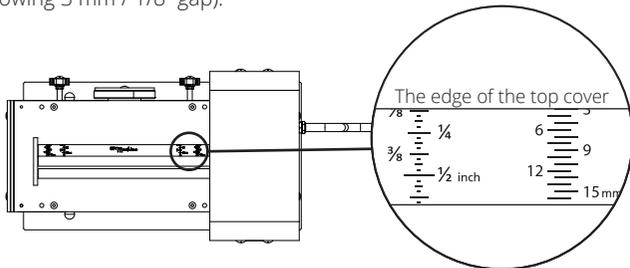
In the case that you want to use a cordless power drill instead of the manual crank to drive your device, you will install a hexagonal shaft adapter instead of the crank. If the crank is installed, remove it before proceeding.

Screw two M8 nuts onto the pivot arm of the drive, and then screw on the hexagonal shaft adapter after them. Tighten the nut closest to the hexagonal shaft adapter with the key tool in your kit. Ensure that it is firmly against the hexagonal shaft adapter. Tighten the second nut so it is secure against the first. This procedure ensures that the hexagonal shaft adapter will not loosen and fall off during the operation.



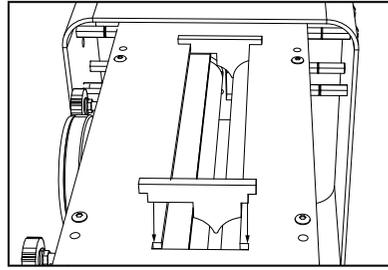
8.6. Ruler

Stick the laminated ruler on the sliding cover of the sliding roller. The edge of the top cover shows the size of the gap (see the fig. below - showing 3 mm / 1/8" gap).



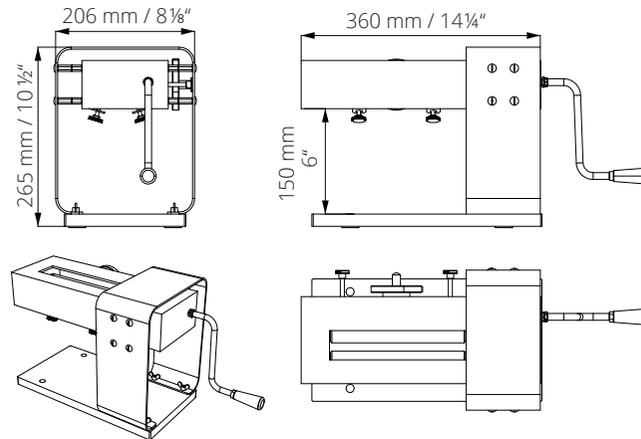
8.7. Mounting and dismounting the machine's covers

The upper cover includes two stoppers. Glue these two parts into their position to prevent the clay from entering into the mechanism.



The covers protect the machine from dust and ensure your safety and comfort. We recommend that you do not remove the covers, and contact the service department if any repairs are needed.

9. Specifications



10. Safety instructions and hazards



- Use this device only as described in this manual
- Rotating rollers – danger of entrapment of limbs/fingers.
- Do not reach into the danger zone between the rollers.

Wear appropriate workwear

- Avoid clothing that may get caught.
- When working, tie back long hair.

Secure device to a worktable

- Prevent a fall of the machine. In the case of a fall, personal injury or damage to the machine may result. LC Tools is not liable for the injury.

LC Machine is not suitable for children

- The machine is not intended for children and must not be used by children without the proper supervision of a responsible adult.

Not suitable for use with foodstuffs

- The machine is not intended for contact with food. Use with food only at your own responsibility.

Installation

- Secure the machine firmly and safely using the magnets or clamp.
- Before each use, check that the machine is properly secured and clean.

Magnets

- The device is equipped with strong magnets designed to hold the machine firmly on the table. These magnets may affect devices such as pacemakers. If you have concerns, please before you purchase consult your medical specialist prior to purchase.

Use with a cordless drill

- Use the cordless drill only as described in the manual.
- Do not use cordless drill types/models or settings with a speed of more than 350 rpm.
- Higher speeds increase the risk of hand injury or damage to the adapter.
- To connect the drill chuck to the hexagonal shaft adapter on the machine use a suitable extension, ideally with a Cardan joint, to cope with the axial misalignment of the two devices.

12. Operation and functional description



12.1. Kneading polymer clay

Insert the polymer clay into the opening between the rollers and turn the crank to compress it. Once the slice has passed through the mechanism, fold it in half and insert it again between the rollers. This procedure is repeated until the material is sufficiently conditioned and supple.

Once the material has been conditioned, you can change its thickness by adjusting the offset between the rollers.

Mixing polymer clay of different colors (blending technique) represents another use of the device.

12.2. Adjusting the offset between the rollers



The offset can be adjusted in the range of 0 to 15 mm. Before changing the offset between the rollers, make sure that the support bolts are loose (in case you want to increase the offset). If the knob will not turn when increasing the offset, you need to loosen the support bolts or you have already reached the maximum offset.

NEVER APPLY FORCE WHEN TURNING THE KNOB AND THE SUPPORT BOLTS.

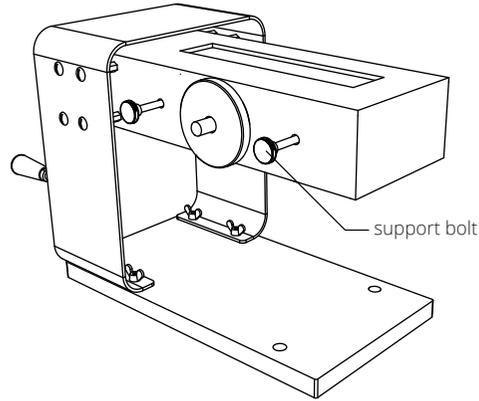
Applying excessive force may strip the screw. LC Tools is not liable for the damage.

The offset itself is adjusted using the knob on the machine. By turning it counter clockwise, you increase the offset. When you turn it clockwise, the offset between the rollers is decreased. If the rollers reach an extreme position, do not try to continue turning the knob by force as this might block the sliding mechanism.

12.3. Locking the roller motion

If you want a polymer clay slice with a specific thickness, lock the rollers in the desired position using the support bolts. Tighten the screws gently until they are secure against the opposite sliding roller frame. This sets the clearances for precise operation of the rollers with the specified offset.

We recommend that you use the support bolts at all times in order to extend the life of the sliding mechanism.



12.4. Attaching the device to the table

There are several options for securing your LC Machine to your work surface. Use the one that is best for you.

1. Use a carpenter clamp or any C-clamp to secure your device. Clamps are not included. Try not to damage your work surface; LC Tools is not responsible for damage to the table.

2. Use the sheet metal rest pads, which can be easily stuck to the table, and the magnets which are part of the machine's base. By placing the magnets on the sheet metal rest pads, the machine is secured by magnetic force. To release the machine, push or pull the machine lightly from or towards you to disengage the magnets. The magnets will move away from the rest pads and the magnetic grip will be broken.

Lifting the machine from the rest pads may be somewhat difficult due to the weight of the machine. Take care to avoid injury or strain to your back muscles.

You can remove the metal sheet rest pads by tearing them off from the tabletop. Carefully remove any remaining adhesive from the tabletop using toluene (or another adhesive solvent) – keep in mind that toluene is a dangerous substance!

3. Using the sheet metal rest pads as in option 2, bolt the rest pads to the table. This may damage the table top. LC Tools is not liable for this.

12.5. Prior to the start of work, check that:

- The machine is correctly placed/secured on the magnetic rest pads or clamped securely
- The crank and the reverse-thread nut are properly fastened, secure and tight
- Clean the scraper blades and make sure that they are fastened
- Set an appropriate offset between the rollers

12.6. Adjusting the opening between the rollers

Turning the adjustment knob causes the roller to move in a linear motion, increasing or decreasing the offset between the two rollers. Lock the roller in the desired position with the support bolts.

12.7. Direction of the crank's rotation

Insert a polymer clay block between the rollers and turn the crank forward to extrude the material through the mechanism.

12.8. Securing and releasing the device

If you need to put the device away or move it elsewhere, tear it off lightly/flip it away from the magnetic rest pads (on mounting the rest pads see chapters 8.2. and 12.4.) and then simply re-attach it. If it is clamped, release the clamps.

12.9. Tightening the cleaner blades

To achieve the best results, make sure that the bolts holding the blades are properly tightened.

12.10. Using a cordless drill as a motor

Unscrew the crank and attach the hexagonal cordless drill adapter in its place and secure it with a reverse-thread nut, as described in sections 8.5. and 10. We recommend that you place a Cardan joint between the hexagonal shaft adapter and the drill chuck to eliminate axial misalignment. Cardan joints can be purchased at a hardware store.

Use one hand to control the drill. A maximum speed of 280-350 rpm is needed when using the LC Machine.

13. Service and maintenance



13.1. Regular maintenance after each use of the machine

When you finish work, clean the mechanism with a dry cloth or brush. Do not clean the mechanism with sharp objects (knife, scraper, screwdriver, etc.) and do not wash it with water.

13.2. Cleaning the rollers

To clean the rollers, remove the cleaner blades, turn the adjustment knob to increase the offset between the rollers and clean the rollers from the bottom with a wet cloth. Wipe the surface of the rollers with a dry tissue/cloth. This can be done when the device is upside down.

13.3. Cleaning the cleaner blades

During use, clean the cleaner blades on the rollers from time to time and whenever needed. Unscrew the 2 bolts to release the blade, take it out and clean it again with a wet cloth and then wipe it dry. Then screw the blade back on. Repeat this procedure for the second blade as well.

13.4. Cleaning the surface of the machine

During use, polymer clay may get stuck to the surface of the machine. You should remove this material to prevent build-up and smearing other items. Remove the material carefully to avoid scratching the surface.

14. Warranty/Complaints



LC Tools products are made from high-quality materials which are subject to continuous quality control. They come with a 2-year warranty (a 1-year warranty for cleaner blades). The warranty does not cover damages caused by improper handling and manipulation which is inconsistent with the instructions specified in the product manual.

15. Spare parts



Any components can be ordered from LC Store or by e-mail at support@lucyclay.com

16. Storage – do not expose to frost, dust



Store the device and accessories in a clean and dry location. Do not expose the mechanism to extreme temperatures.

17. Disposal

When disposing of the device, observe the applicable legislation in the country in which it is used or disposed of.

The device contains:

a) Recyclable materials (reusable materials) which do not represent hazardous waste:

- Aluminium components
- Magnets
- Plastic components
- Plywood
- Steel components

b) Materials and substances which constitute hazardous waste under the law:

- Oils and lubricants
- Adhesives

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