SIMPSON
A Norican Technology

Operating Instructions

Laboratory Muller

Model 42110

Type:	Laboratory
Model:	42110
Part No.:	0042110-ASM 0042110-2-ASM 0042110S-ASM 0042110S-2-ASM
Serial Number:	

Name and address of manufacturer:

Simpson Technologies
751 Shoreline Drive
Aurora, IL 60504

For other Simpson Technologies offices around the world and for our contact information please visit us on the internet at simpsongroup.com on the Contacts page.

Table of Contents

1 Introduction 1

1.1 Application and Designated Use 1

1.2 Organizational Measures 2

2 Safety 3

2.1 Safety Signs and Labels 3

2.1.1 Safety Alert Symbols 4

2.1.2 Safety Symbol Labels 4

2.2 Lockout and Tagout System Procedures 11

2.2.1 Lockout and Tagout Devices 12

2.2.2 Glossary: 13

3 Short Description & Specifications 14

3.1 Usage of the Laboratory Muller 14

3.2 Description 14

3.3 Specifications 15

3.4 Dimensions and Weights (Approximate) 15

4 Unpacking and Installation 16

4.1 Unpacking 16

4.2 Installation 17

4.3 Electrical Power Connection 17

4.4 Plow and Wheel Adjustment 18

4.5 Inside and Outside Plow 18

4.6 Wheel Scraper Adjustment 20

4.7 Wheel Adjustment 21

4.8 Airborne Noise Emission 22

5 Operating Instructions 23

6 Maintenance 26

7 Apparatus Layout 30

8 Parts List / Ordering Parts / Returns 31

8.1 Parts List 31

8.2 Ordering Replacement / Spare Parts 32

8.3 Returned Goods Policy 32

9 Decommissioning 34

10 Location of Safety Symbols 35

11 Commercial Manuals 38

11.1 Instructions Delta Electronics CTA4 Timer - Adjust Time Setpoint 38

1 Introduction

Congratulations, you have just purchased an extremely reliable sand testing instrument that is backed by the professional technical support and years of proven sand technology experience of Simpson Technologies .

This laboratory equipment is constructed of quality materials and is the result of unsurpassed craftsmanship. The Simpson Laboratory Muller should be operated only when it is in perfect condition, in accordance with its designed purpose and being aware of possible hazards. Observe the safety instructions in Section 2 and operating instructions in Section 5.

1.1 Application and Designated Use

This device is intended exclusively to prepare mixtures of clay bonded foundry sands and other applications that require the high intensity mulling action of the wheels. Usage of other materials may be possible upon consultation with the Technical Service Department of Simpson Technologies.

Any other application outside the intended usage will be regarded as use not in accordance with its purpose and, therefore, the manufacturer / supplier will not be held liable for any damage that might arise thereunder. The risk in this case will be exclusively that of the User.

1.2 Organizational Measures

The Operating Instructions should be kept permanently in the vicinity of the operating site of the apparatus! In addition to these Operating Instructions, pay close attention to the common valid, legal, and other binding regulations concerning accident prevention and environmental protection and instruct your staff accordingly.

The personnel operating the machine must have read and understood these Operating Instructions, especially the Safety chapter before commissioning the apparatus.

Wherever safety is concerned, do not modify, add parts to, or rebuild the device without the prior authorization from the manufacturer!

Spare parts must comply with the technical requirements set by the manufacturer. Compliance is always guaranteed when using original Simpson spares.

2 Safety

NOTICE

Before operating and/or performing maintenance or repair on Simpson Technologies designed and/or manufactured equipment, it is required that all personnel have read and understood the entire Operation Maintenance manual. If any questions exist, you must contact your supervisor or Simpson Technologies before taking further action.

If properly operated and maintained, your Simpson Technologies supplied equipment can provide many years of dependable and safe operation. Please follow all recommended safety, operating, and maintenance instructions. Furthermore, the introduction of any non-Simpson Technologies manufactured and/or approved parts to the equipment may create a hazardous situation. Never alter the equipment without prior consultation with Simpson Technologies .

DO NOT use this machine for purposes other than that for which it was intended. Improper use could result in death or serious injury.

2.1 Safety Signs and Labels

Simpson Technologies has incorporated the ANSI Z535.6 / ISO 3864-1-2 safety symbol only label format on all of its laboratory equipment. For the location of the safety labels on your equipment, refer to the "Location of Safety Decals" drawing in Section 10.

The harmonized ANSI Z535.6 format became an established safety label format since it not only fully meets the current ANSI Z535 standards, but also incorporates ISO 3864-2 symbology and hazard severity panels and thus, can be used for both the U.S. and international markets.

2.1.1 Safety Alert Symbols

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. OBEY all safety messages that follow this symbol to avoid possible injury or death.

DANGER! *Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.*

The safety alert symbol used without a signal word to call attention to safety messages indicates a potentially hazardous situation which, if not avoided, could or may result in death or minor injury.

NOTICE indicates information used to address practices not related to personal injuries but may result in property damage.

This symbol indicates information containing important instructions concerning the use of the machine or directions for further procedures. Ignoring this information can lead to malfunction of the machine.

2.1.2 Safety Symbol Labels

For proper location of the following Safety Labels on the Simpson Laboratory Muller, see “Location of Safety Decals” in Section 10.

HAND PINCH / MOVING PARTS

(STC #214013)

This label is located on the side of the crib, close to the top.

With the lid open or the discharge door open and receiving container removed; the blade inside the muller is exposed. Do not insert hands, body parts or objects into the machine, as this could result in serious injury.

Verify that the safety switch on the lid that prevents the muller from running when it is open and the safety switch on the receiving container that prevents the muller from running when it is not in place are both functioning properly before operating the muller. Follow **Lockout and Tagout** procedures before servicing.

BLADE HAZARD
(STC #214014)

This label is located near the muller discharge door.

With the lid open or the discharge door open and receiving container removed; the blade inside the muller is exposed. Do not insert hands, body parts or objects into the machine, as this could result in serious injury.

Verify that the safety switch on the lid that prevents the muller from running when it is open and the safety switch on the receiving container that prevents the muller from running when it is not in place are both functioning properly before operating the muller. Follow **Lockout and Tagout** procedures before servicing.

AVOID INJURY / CLOSE ALL DOORS

(STC #`214008)

This label is located on the muller crib cover.

With the muller crib cover open, the rotating mixing tools inside the muller can crush and cut body parts. Follow **Lockout** and **Tagout** procedures before servicing.

HIGH ELECTRICAL VOLTAGE

(STC #217958)

This label is located on the motor junction box cover and on the back of the base to the left of the fuse box.

With electrical enclosure covers open, electrical terminals are exposed. A hazardous voltage is present, which can cause electric shock or burn, and could result in serious injury. Follow Lockout and Tagout procedures before servicing.

DO NOT OPERATE WITH GUARD REMOVED

(STC #`204582)

This label is located on the coupling guard.

Without the guard in place, the driver coupling is exposed. The running coupling could entangle long hair or loose cloth, and crush or cut body parts. Follow **Lockout** and **Tagout** procedures before servicing.

READ AND UNDERSTAND ALL SERVICE MANUAL INSTRUCTIONS

(STC #214081)

This label is located on the muller base.

Before operating and/or performing any maintenance or repair on Simpson Technologies designed and/or manufactured equipment, it is required that all personnel read and understand the entire Operating Instructions manual. All protective guards shall be installed, and all doors and panels closed before operating the equipment. If any questions exist, you must contact your Supervisor or Simpson Technologies before taking further action. Follow **Lockout and Tagout** procedures before servicing.

2.2 Lockout and Tagout System Procedures

NOTICE

Whenever performing any type of maintenance or repair, whether in the form of cleaning, inspection, adjustment, mechanical or electrical maintenance, the equipment must be rendered into ***Zero Mechanical State (ZMS).***

Prior to any maintenance (routine or otherwise) or repair of equipment, a safety procedure should be established and maintained. This procedure should include training of personnel; identification and labeling of all equipment which is interlocked mechanically, electrically, through hydraulics, pneumatics, levers, gravity or otherwise; and a listing of the established lockout procedures posted on each piece of equipment.

The list of the established lock out procedures should be sealed in a clear plastic laminate before being posted on each piece of equipment and should be permanently attached to the machinery in a prominent area.

"Lockout and Tagout" refers to specific practices and procedures to safeguard personnel from the unexpected energizing of machinery and equipment, or the release of hazardous energy during service or maintenance activities. This requires, in part, that a designated individual turns off and disconnects the machinery or equipment from its energy source(s) before performing service or maintenance, and that the authorized employee(s) lock or tag the energy-isolating device(s) to prevent the release of hazardous energy and take steps to verify that the energy has been isolated effectively.

2.2.1 Lockout and Tagout Devices

When attached to an energy-isolating device, both lockout and tagout devices are tools used to help protect personnel from hazardous energy. The lockout device provides protection by holding the energy-isolating device in the safe position, thus preventing the machine or equipment from becoming energized. The tagout device does so by identifying the energy-isolating device as a source of potential danger; it indicates that the energy-isolating device and the equipment being controlled may not be operated until the tagout device is removed.

2.2.2 Glossary:

Authorized Person(s) - Personnel who have been designated by his/her department to perform maintenance or service on a piece(s) of equipment, machinery, or system, and are qualified to perform the work through proper training on the Lockout/Tagout procedures for the equipment, machinery, or system.

Lockout - The placement of a lockout device on an energy isolating device, in accordance with an established procedure, to ensure that the energy isolating device and the equipment being control- led cannot be operated until the lockout device is removed.

Lockout Device - Any device that uses positive methods, such as a lock (either key or combination type), to hold an energy isolating device in a safe position, thereby preventing the energizing of machinery or equipment. When professionally installed, a blank flange or bolted slip blind are considered equivalent to lockout devices.

Tagout - The placement of a tagout device on an energy isolating device, in accordance with an established procedure, to indicate that the energy isolating device and the equipment being control- led may not be operated until the tagout device is removed.

Tagout Device - Any prominent warning device, such as a tag and a means of attachment, which can be securely fastened to an energy isolating device in accordance with an established procedure. The tag indicates that the machine or equipment to which it is attached is not to be operated until the tagout device is removed in accordance with the energy control procedure.

Zero Mechanical State - The mechanical potential energy of all portions of the equipment or machine is set so that the opening of pipes, tubes or hoses, and the actuation of any valve, lever, or button, will not produce a movement which could cause injury.

3 Short Description & Specifications

3.1 Usage of the Laboratory Muller

The Simpson Laboratory Muller is used to prepare mixtures of clay bonded foundry sands and other applications that require the high intensity mulling action of the wheels.

3.2 Description

The Laboratory Muller is used to prepare mixtures of clay bonded foundry sands and other chemical processing applications. The muller incorporates two vertical mulling wheels on independent suspensions. Plows turn the sand or chemical mixture over and direct fresh material into the path of the muller wheels.

The vertical wheel muller is intended for the laboratory preparation of molding sands or chemical mixtures in conditions similar to those found in industrial mullers. It is essential for the preparation of standardized mixes for the control of bentonite and other chemicals.

The muller weight can be adjusted by a single load spring. The muller has a mixing capacity of approximately 4 kg. (9 lbs.) or 3.7 liters (0.13 cu.ft.) of bentonite bonded silica molding sand or similar chemicals and operates with a 0.559kw (0.75 HP) motor. The mixing bowl dimensions are 394mm (15.5”) inside diameter x 216mm (8.5”) deep.

3.3 Specifications

Specifications	Laboratory Muller
Power	120–230 Volts, 50-60 Hz (Check name plate)
Fuses:	25 Amp (115V) PN: 207491 16 Amp (230V) PN: 207409 8x32mm (Qty: 2)
Motor	0.559KW (0.75HP)
Mixing Capacity	4 kgs. (9 lbs.)

3.4 Dimensions and Weights (Approximate)

Dimensions/Weights	Laboratory Muller
Length	640 mm (25.2 in.)
Width	470 mm (18.5 in.)
Height	520 mm (20.5 in.)
Weight	115 kg (250 lbs.)

4 Unpacking and Installation

4.1 Unpacking

NOTICE

Your new Laboratory Equipment has been thoroughly inspected before being shipped to your plant. However, damage can occur in route, so it is wise to inspect all equipment on arrival. Notify both the carrier and Simpson Technologies of any damage at once. Damage should be noted on the shipper's receipt before signing for receipt of the shipment.

Your Simpson Laboratory Muller will be shipped and placed in one piece and is intended to be used as received; no further assembly/disassembly is required. Due to its weight, 115kgs (250 lbs.), proper lifting equipment, a crane, or a forklift, is required for handling. Unpacking the unit may require two to three people due to the bulky dimensions of the machine and tight-fitting crate. The approx. instrument dimensions are 640 mm (25.2") x 470 mm (18.5") x 520 mm (20.5"). The muller is enclosed in and bolted to a reinforced crate for shipment. Its shipping weight in the crate is 120 kgs (265 lbs.).

1. Remove the screws securing the sides of the crate from the bottom of the crate.
2. Remove the crate lid and top.
3. Remove the four bolts that hold the muller to the bottom of the crate.
4. Carefully remove the apparatus from the packing crate.

Heavy lifting can cause injury. Use three-man lift or a lift to remove the laboratory muller from the mechanical shipping crate and onto the work bench.

5. Place the muller on a sturdy table or work bench of suitable height close to an adequate-sized power source.

4.2 Installation

The installation of the apparatus is the responsibility of the Client to include procuring and preparing the material required for this purpose.

The muller should be located on a sturdy table or work bench of suitable height (recommended

100cm/36") that allows for ease of operation and the ergonomic loading and unloading of the machine. Anchoring is optional, but strongly recommended to prevent the unit from vibrating off of its platform. In order to guarantee effective performance, the muller should be situated close to an adequate-sized power source.

The Laboratory Muller is intended for use by one operator at a time. It is used in a foundry sand or chemical laboratory with its controls (switches, timer, etc.) and mixing bowl leveled at approximately 100 cm (36 inch) table height. The operator can fill and discharge the muller, set the timer and turn the unit on and off while observing proper ergonomic principles.

4.3 Electrical Power Connection

Electrical Requirements: 100-240 Volts, 50-60 Hz + Ground (5Ω or less).

Fuses : 25 AMP (115V) ; 16 AMP (230V) ; 8x32mm (Qty : 2)

Connect the equipment to a grounded electrical outlet.

Verify that the voltage marked on the serial number nameplate located on the side of the muller base is the same as the electrical outlet to be used for the machine. Outlet must be properly grounded! Failure to follow safety procedures could result in severe injury.

4.4 Plow and Wheel Adjustment

The lab muller has outside and inside plows along with wheel scrapers. These must be checked on a regular basis for wear and proper fit. The frequency depends upon how often the unit is run, the abrasiveness of the materials and the condition of the bowl, but it is generally recommended that these be inspected at least weekly. The wheels of the lab muller are packed with grease and sealed and should not require maintenance other than the occasional cleaning. Over time, they will wear and get to a point where they should be replaced.

Whenever performing any type of maintenance or repair, whether in the form of cleaning, inspection, adjustment, mechanical or electrical maintenance, the equipment must be rendered into ***Zero Mechanical State.***

4.5 Inside and Outside Plow

Check that the inside and outside plows do not scrape the bottom or the side walls of the pan and are close enough to ensure that material is cleaned from the bottom of the pan. The plow clearance should be adjusted to no more than 1mm (0.04”) from the highest point of the pan. These are adjusted by loosening the adjusting bolts, adjusting the plow accordingly and tightening the bolts.

Be sure to check for proper fit on the entire circumference of the muller by manually turning the crosshead 360 degrees.

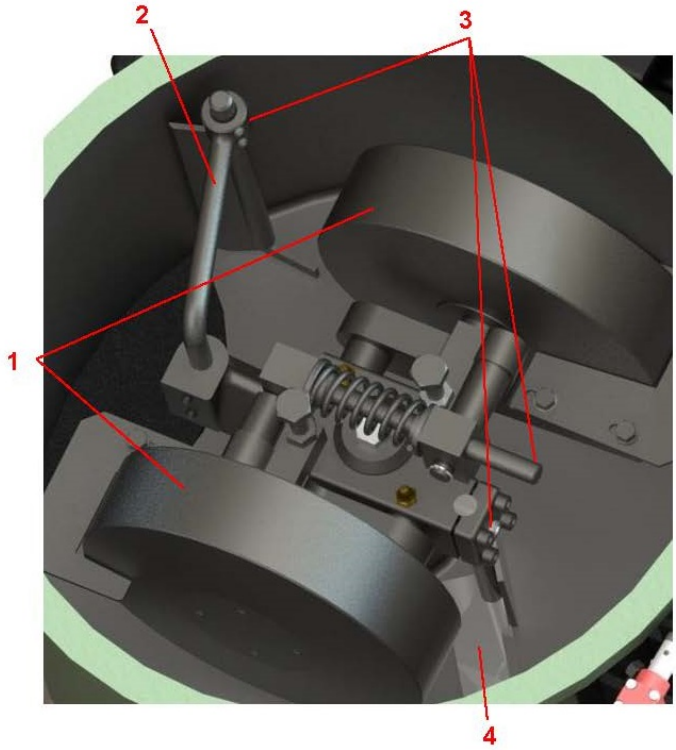


Figure 1

Item	Description
1	Muller Wheel
2	Outside Plow
3	Adjusting Bolts
4	Inside Plow

4.6 Wheel Scraper Adjustment

The wheel scrapers on each wheel should be adjusted to a distance of no more than 1mm (0.04”) from the highest point on the wheel face. This is accomplished by loosening the adjusting bolts on the rocker arm and moving the scraper accordingly and then tightening down the adjusting bolts.

Be sure to check for proper fit on the entire circumference of the muller wheel by manually turning the wheel 360 degrees.

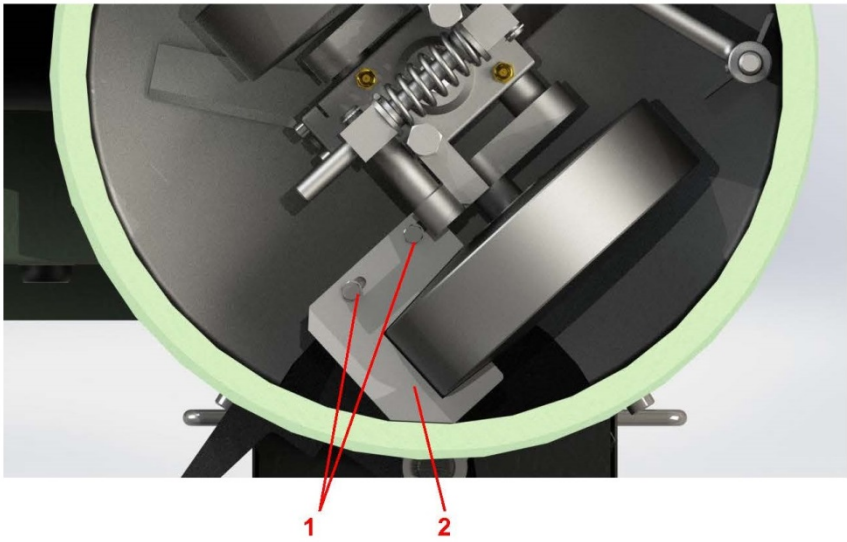


Figure 2:

Item	Description
1	Adjusting Bolts
2	Wheel Scraper

4.7 Wheel Adjustment

There are two adjustments to the wheels that will be dictated by the type of material mixed. These settings are the wheel height and the spring pressure.

1. The wheels have an adjusting bolt that limits the distance the muller wheel can drop down to the bottom of the mixing bowl. This distance should not be set less than 3mm (.12") and may be set higher depending upon the viscosity of the mix and the desired mulling action. This adjustment is made by simply loosening the jam nut on the adjusting bolt and turning the adjusting bolt clockwise to raise the wheel and counterclockwise to lower the wheel. Once adjusted, the jam nut should be tightened back down to prevent the adjusting bolt from moving.

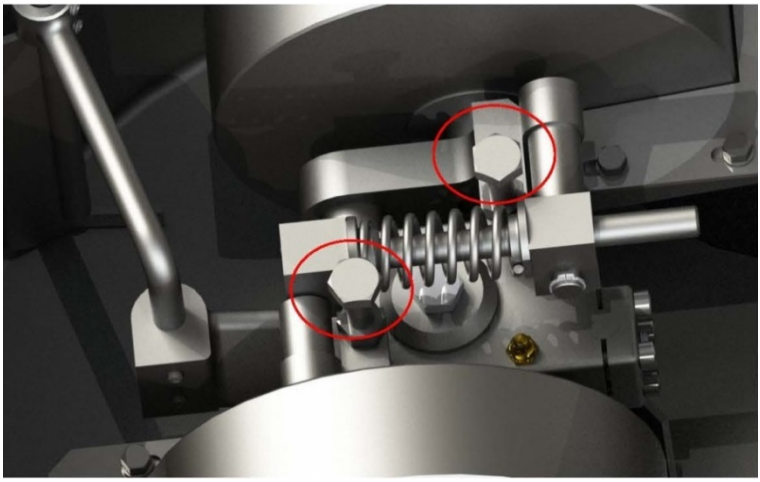


Figure 3: Adjusting Bolts and Jam Nut

2. The mulling intensity of the mulling wheels is increased or decreased by means of a spring mounted on an adjustable mechanism. This is adjusted by simply turning the hexagonal bolt clockwise or counterclockwise, which in turn compresses or decompresses the spring.

Turning the bolt clockwise increases the spring pressure. Turning the bolt counterclockwise decreases the spring pressure.

Bentonite Bonded Sands

The strength of sand increases with the applied mixing energy until it reaches a maximum.Thus, the time required to reach this point diminishes when the mulling force increases to a point. Greater mulling forces are needed as the molding sands increase their green strength. The spring pressure should not be changed once adjusted in accordance to the molding sand being used.

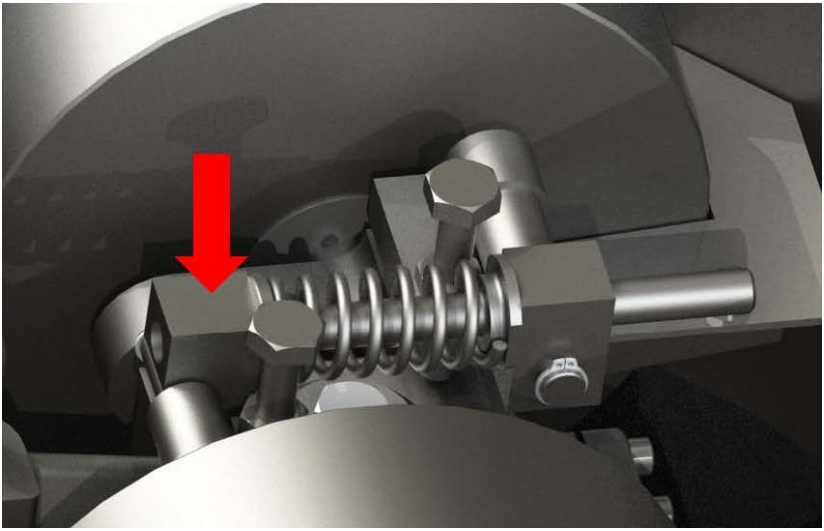


Figure 4: Spring Adjustment

4.8 Airborne Noise Emission

Regarding airborne noise emission by the Simpson Laboratory Muller, any occurrence of motor or other noise will be lower than 70db. Therefore, the equivalent continuous A-weighted sound pressure level at the workstation does not exceed 70db(A).

5 Operating Instructions

For more information on how to use and care for your Simpson Analytics equipment and accessories visit our Simpson Technologies channel on YouTube and search our library of videos. Subscribe to our channel to keep updated on new releases.

The machine is not designed to operate with the lid open. Attempting to operate this machine with the lid open or to perform maintenance of the unit with the power on or the unit plugged in is dangerous and could result in death or serious injury!

*Follow **Lockout and Tagout** procedures before putting objects and/or hands inside the mixing bowl!*

1. With the muller off, load material into the muller by lifting the lid and evenly dispersing the material along the bottom of the machine.

NOTICE *Material should not be put into the machine as to overload the motor or gearbox and should not be greater in volume than 1/3 of the height of the wheel. Failure to follow this will void the warranty and will result in premature failure of the motor, gearbox, seals, etc.*

2. Close the lid of the machine and keep it closed until the cycle has been completed.
3. Turn the Power switch on.

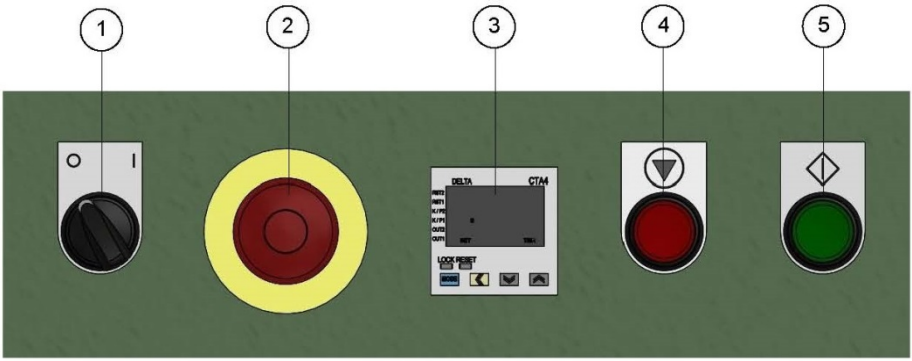


Figure 5: Control Panel

Item	Description
1	Power Switch
2	Emergency Stop Button
3	Digital Timer
4	Stop Button
5	Start Button

4. Set the timer to the desired mull time. To adjust the mull time, please refer to the timer OEM instructions, Section 11.1.
5. Press the Start Button.
6. Once the muller stops, the mulling cycle is completed.
7. Open the discharge door by turning the handle from left to right with your right hand.
8. Press the Start Button with your left hand. The material should begin to be discharged into the container as the plows and wheels push the material out of the machine.

Be aware and ready to hit the Stop Button instantly at any time should something bind, or another unexpected issue occurs. Never stick fingers or hands into the mixing bowl when machine is running, or power is connected to the machine! Wear appropriate Personal Protective Equipment (PPE), such as safety glasses or goggles when operating equipment.

*Follow **Lockout** and **Tagout** procedures should service need to be performed on the inside of the machine!*

9. Once the machine has adequately emptied, press the Stop Button.
10. The machine is now ready to run another batch by following Steps 1-10.

6 Maintenance

For more information on how to use and care for your Simpson Analytics equipment and accessories visit our Simpson Technologies channel on YouTube and search our library of videos. Subscribe to our channel to keep updated on new releases.

*Before performing any maintenance, the Laboratory Muller must be put into **Zero Mechanical State (ZMS).** Follow **Lockout** and **Tagout** procedures before servicing!*

- The gearbox is supplied complete with synthetic oil, ISO VG320 lubricant for 10,000 hours of operation.
- During the operational life of the gearbox, check the oil level periodically. For proper oil level refer to the sight glass.
- During the early stages of service, problems of lubrication may arise due to the high level of viscosity taken on by the oil and so it is wise to have a few minutes of rotation under no load.
- The bearings of the wheels are permanently lubricated and do not need any maintenance.
- Lubricate the hinge of the discharge port with a few drops of light machine oil.
- Keep the load spring adjustment screw, sliding end and block assembly clean and lubricate with light machine oil.
- Adjust the plows, wheels, wheel scrapers and springs to insure they are set to the optimum distance as described in Section 4.4 Plow and Wheel Adjustment.

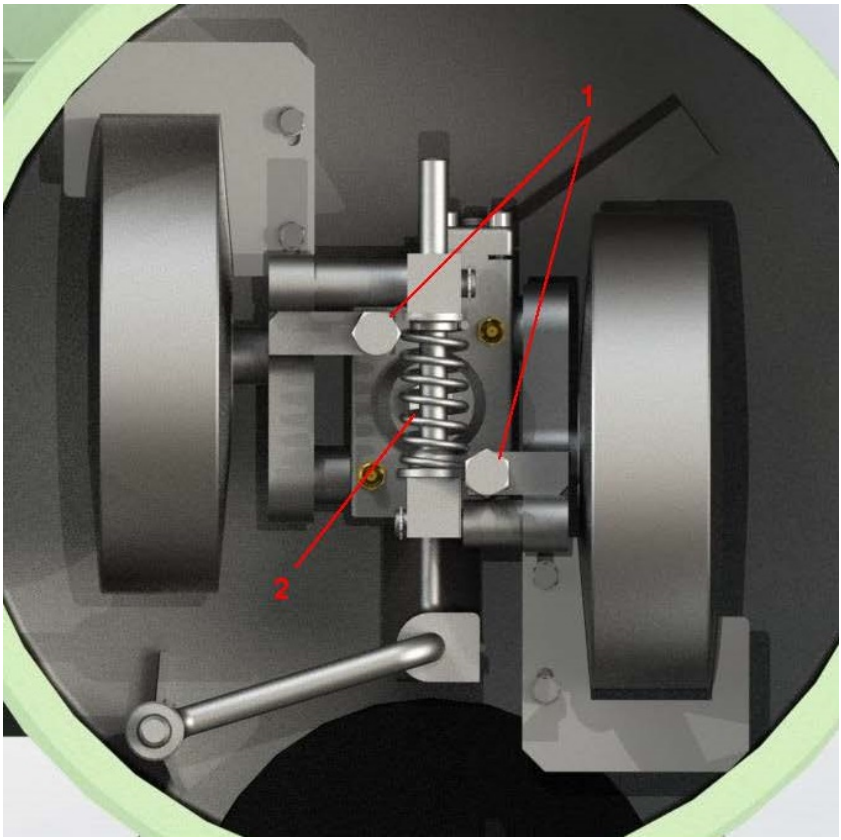


Figure 6: Muller Wheel Height Adjusters (1) and Loading Spring (2)

- Lubricate the rocker arms (Figure 7) by injecting grease into the zerk fittings located on each rocker arm mounting. Inject grease until some starts to come out of the mounting next to the zerk fitting.

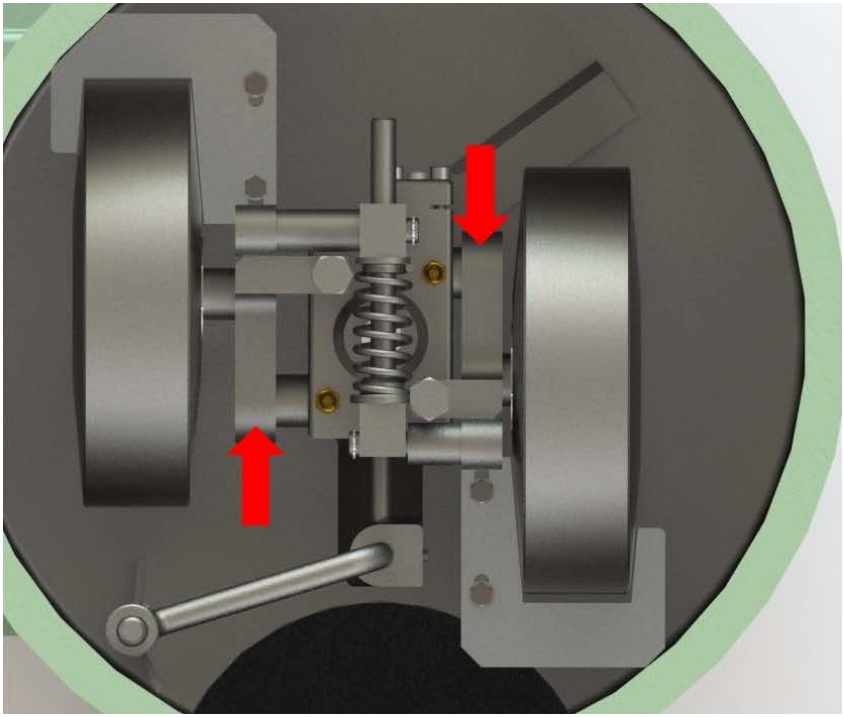


Figure 7: Rocker Arms

- Fuses: there are two slow blow 25 Amp (115V) or 16 Amp (230V) - IEC 269-3-1, 31.5mm x8.5mm fuses located in the back of the base of the muller (Figure 8). These should only be replaced with similar amperage and sized fuses.

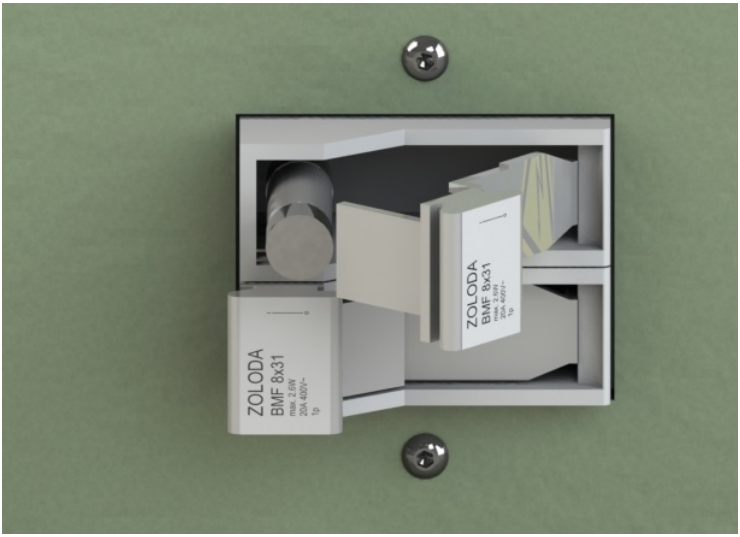


Figure 8: Fuse Box

7 Apparatus Layout

Spare parts are available for any of the Simpson laboratory mullers. Please review the following parts list of the muller and contact Simpson with balloon label and serial number of the unit for the part number.

8 Parts List / Ordering Parts / Returns

8.1 Parts List

Simpson maintains a large inventory of common spare parts for all current Simpson Analytics products. The following table provides part numbers for common spare parts for this device. Contact Simpson Technologies with the part number and description when ordering.

42110 Laboratory Muller	
Part No.	**Description**
0046338	Outside Plow
0046339	Inside Plow
0046340	Muller Wheel Scraper (Set of 2)
210708	Muller Wheel Bearings

42110S St. Steel Laboratory Muller	
Part No.	**Description**
210704	Outside Plow
210706	Inside Plow
210703	Muller Wheel Scraper (Set of 2)
210708	Muller Wheel Bearings

8.2 Ordering Replacement / Spare Parts

The source of replacement parts for your Simpson Analytics equipment is just as important as the make of the equipment you purchase. ALWAYS order parts for your Simpson Analytics equipment directly from Simpson Technologies. To find the Simpson office closest to you please visit us on the internet at www.simpsongroup.com on the "Contact Us" page.

Parts may be ordered from the sales department via e-mail at parts@simpsongroup.com: When contacting our sales department to obtain a quotation on replacement parts or service please always include the equipment serial number, the description of the part and the part number. Your Simpson Technologies sales team representative will provide you with a quote on the items with current price and delivery times. When ordering, please always refer to the quote number on your order.

To arrange for calibration support or repair assistance please contact our customer service department at service@simpsongroup.com.

8.3 Returned Goods Policy

Simpson Technologies strives to provide their customers with maximum follow-up support and, in order to offer the most practical flexibility, the following conditions apply to returned goods. Adherence to these procedures will ensure the most prompt and efficient service.

RETURNS WILL BE CONSIDERED IN THE FOLLOWING SITUATIONS:

- Products ordered in error by customer (subject to a restocking charge).
- Incorrect or defective products shipped to customer.
- The return of existing products for factory repair or upgrade.
- Products ordered correctly but which are unwanted or unsuitable (subject to a restocking charge).

- A Material Safety Data Sheet (MSDS) must accompany material that is sent to Simpson Technologies for testing purposes. Simpson Technologies will NOT authorize the return of hazardous materials.

RETURN PROCEDURE:

- **Customer must obtain a Return Material Authorization Number (RMA#) from Simpson Technologies prior to returning the merchandise.**
- To obtain an RMA#, the customer should contact the Customer Service department by phone, fax, e-mail to service@simpsongroup.com. The material being returned must be identified and the reason for its return clearly specified. Once approved for return, Simpson Technologies will issue the customer an RMA form to be included with the shipment and with instructions on where and how to ship the goods.
- All returned goods are to be shipped with transportation charges PREPAID, unless otherwise agreed when the RMA# is assigned. If it has been predetermined that return goods are to be shipped COLLECT, Simpson Technologies will specify the desired routing.
- All returned shipments will be subject to inspection upon arrival at Simpson Technologies.
- Material returned without an RMA# may be refused and returned at customer's expense.

9 Decommissioning

*Before doing any work, review the Safety Procedures in Section 2 and **Lockout** and **Tagout** all the power sources to the machine and peripheral equipment.*
Failure to follow safety procedures could result in serious injury.

Use qualified personnel and follow safety procedures, applicable local policies, and regulations in decommissioning the Simpson Laboratory Muller and peripheral equipment.

Electrical Power: Disconnect the electrical power source and verify there is no power on all com- ponents being decommissioned.

WASTE DISPOSAL

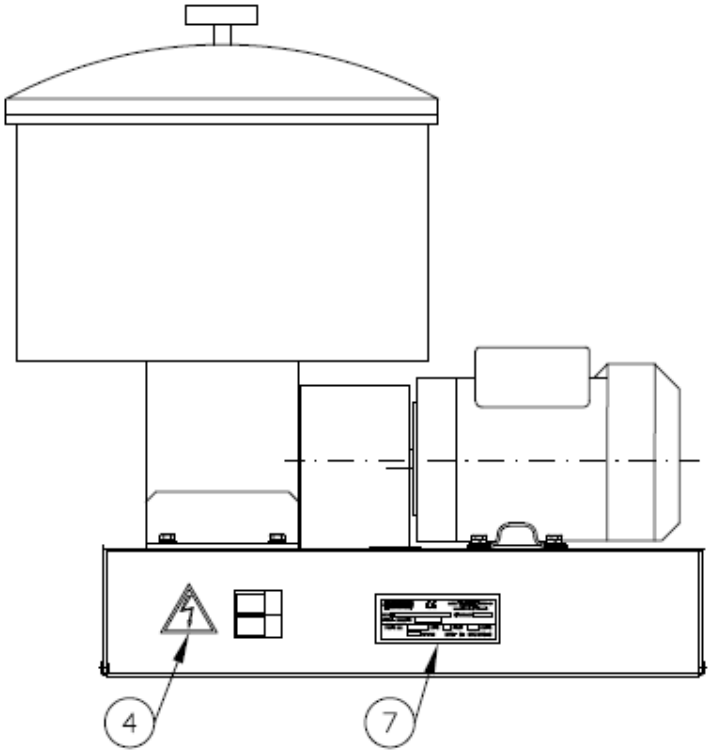
The machinery and controls consist of:

- Iron
- Aluminum
- Copper
- Plastic
- Electronic Components and circuit boards

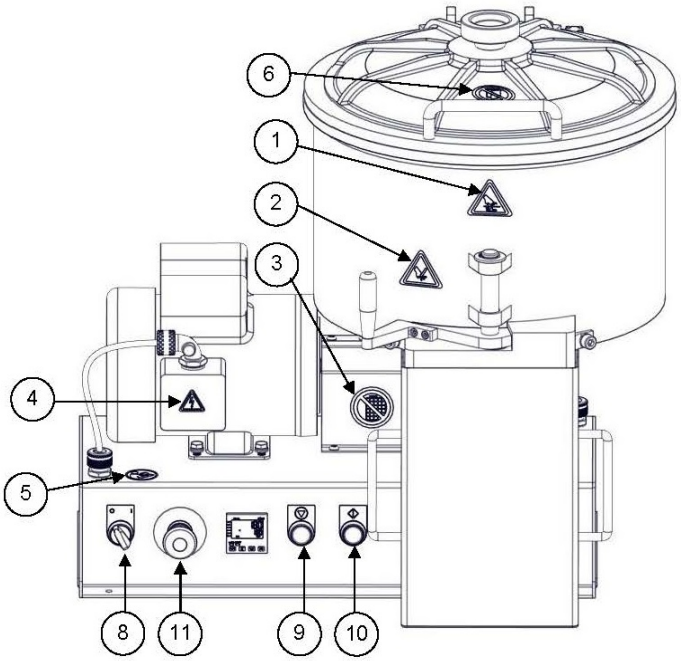
Dispose of the parts in accordance with the applicable regulations.

Oil and Grease: Used oil and grease, which are no longer suitable for their intended use, must be transported to the relative collection point and disposed of in accordance with local regulations.

10 Location of Safety Symbols



Rear View



Front View

Location of Safety Decals

Item	Part No.	Description
1	214013	Hand Pinch / Moving Parts
2	214014	Blade Hazard
3	204582	Do Not Operate with Guard Removed
4	217958	High Electrical Voltage
5	214081	Read and Understand All Service Manual Instructions
6	214008	Avoid Injury / Close All Doors
7	50000-3	Equipment Nameplate (Supplied with Base)
8	207424-1	“Off” (Power) “On” Push Button Legend Plate
9	207424-2	“Stop” (Of Action) Push Button Legend Plate
10	207424-3	“Start” (Of Action) Push Button Legend Plate
11	214015	Emergency Stop Legend Plate

11 Commercial Manuals

11.1 Instructions Delta Electronics CTA4 Timer - Adjust Time Setpoint

1. Turn on power switch of the equipment.
2. The time unit for the Timer is in seconds.
3. Press the yellow, left arrow button (Item 2, Figure 9) to enter the set mode. The first digit to the right column on the Set Value Display (Item 5, Figure 9) will begin to flash.
4. Press the UP or DOWN arrow buttons (Item 3, Figure 9) to set the first digit on the selected column.
5. Press the yellow, left arrow button to move the cursor to the next left and use the UP and DOWN arrow buttons to set the desired digit.
6. Repeat this process for as many columns and digits being utilized.
7. Once desired set value time is showing on the display, press the blue MODE button (Item 6, Figure 9) to set the time.
8. The unit is now ready to start.

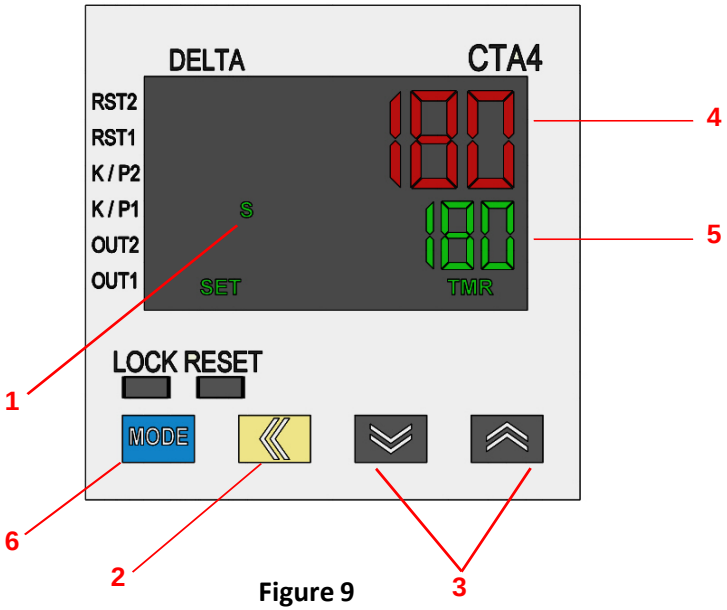


Figure 9

Item	Description
1	Seconds
2	Left Arrow Button
3	UP and DOWN Arrow Buttons
4	Present Value Display
5	Set Value Display
6	Mode Button

In North America

Simpson Technologies
2135 City Gate Lane Suite 500
Naperville, IL 60563
Tel: +1 (630) 978 0044
sandtesting@simpsongroup.com

In Europe

Simpson Technologies GmbH
Thomas-Eßer-Str. 86
D - 53879 Euskirchen,
Germany
Tel: +49 (0) 2251 9460 12
sandtesting@simpsongroup.com

SIMPSON
A Norican Technology

simpsongroup.com