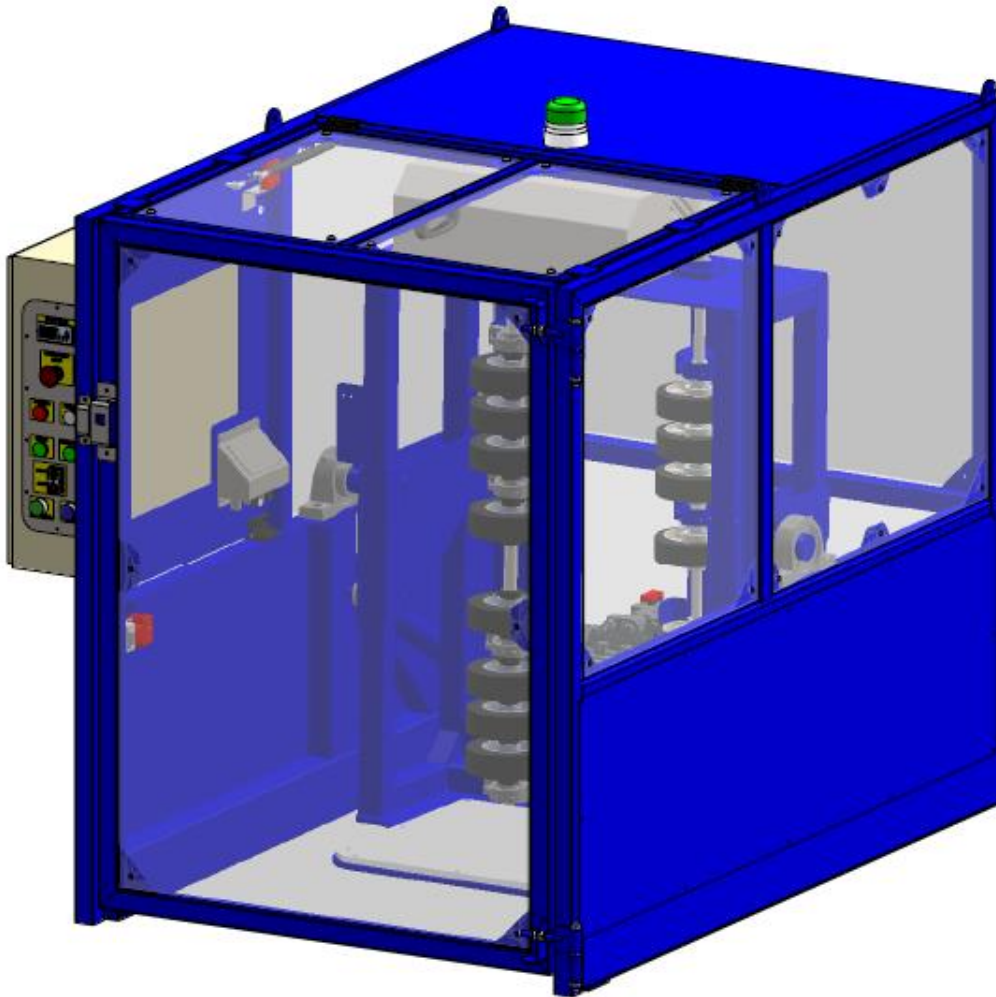




Bespoke
Handling
Equipment

Operating Instructions



DME02-230V

Horizontal Drum Roller Mixer

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Section I – Correct Use and Application

Only operation manuals written in English are the original instructions, versions provided in any other language then become a translation of the original instructions.

General

The unit described in the present operating instructions must be used, operated and serviced in accordance with the present instructions. Any other type of use is beyond the scope of application and can result in damage or injury to personnel, the unit or property. The unit described in the present operating instructions complies with all relevant directives and standards.

Foreseeable Misuse of the Unit

Personnel must take care when operating the unit. The following actions must be adhered to:

- The maximum safe working load (SWL) must not be exceeded.
- Do not stand or ride on the unit.
- Loads must be undamaged.
- Do not stand underneath a raised load or within the confines of the unit during operation.
- The load must be lifted and/or mixed by the attachment provided.
- Do not alter the unit specification from original supply.
- Do not disable, remove or adjust safety mechanisms or switches.
- Observe all instruction decals applied to the unit.
- Do not leave the unit in direct sunlight.
- The manufacturer shall not be held liable in case of faults or accidents due to negligence, incapacity, installation by unqualified personnel or improper use.

Approved Application Conditions

- Operation in dry industrial and commercial environments.
- Permissible temperature range 5°C to 40°C.
- Lighting of at least 300 Lux.
- Altitudes not exceeding 2000m.
- Operation only on secure, level surfaces with sufficient capacity.
- Operation in accordance with guidance stated within the operating instructions.
- The unit must be maintained in accordance with the maintenance schedule stated within the operating instructions.
- Appropriate personal protective equipment, PPE, must be worn at all times.

Proprietor Responsibilities

For the purposes of the present operating instructions the “proprietor” is defined as any natural or legal person who either uses the unit themselves, or on whose behalf it is used. In special cases (e.g. leasing or renting) the proprietor is considered the person who, in accordance with existing contractual agreements between the owner and user of the unit, is charged with operational duties. The proprietor must ensure that the unit is used only for the purpose for which it is intended and that there is no danger to life or limb of the user and third parties. Furthermore, accident prevention regulations, safety regulations and operating, maintenance and repair guidelines must be followed. The proprietor must ensure that all users have read and understood these operating instructions. The proprietor must perform an onsite risk assessment before the unit is put in to service.

IMPORTANT

Failure to comply with the operating instructions shall invalidate the warranty. The same applies if improper work is carried out on the unit by the proprietor or third parties without the permission of the manufacturer.

Adding Attachments and/or Accessories

The mounting or installation of additional equipment which affects or enhances the performance of the unit requires written permission of the manufacturer. Local authority approval may also need to be obtained. Local authority approval does not however constitute the manufacturer’s approval. An onsite risk assessment must then be carried out.

WARNING - ANY UNAUTHORISED MODIFICATIONS OR ADDITIONS TO THE UNIT SHALL INVALIDATE THE WARRANTY AND STS SHALL NOT BE LIABLE.

Safety Regulations for the Operation of the Unit

Operator authorisation

The unit may only be used by suitably trained personnel, who have demonstrated to the proprietor, or their representative that they can operate the unit safely and in accordance with the operating instructions.

Operator’s rights, obligations and responsibilities

The operator must be informed of their duties and responsibilities and be instructed in the operation of the unit and shall be familiar with the operating instructions. Operators must be provided the appropriate PPE as mentioned in the ‘Approved Application Conditions’ section of this manual.

Unauthorised use of unit

The operator is responsible for the unit during the time it is in use. The operator must prevent unauthorised persons from operating the unit.

Damage and faults

The proprietor must be immediately informed of any damage or faults to the unit or attachment. Units which are unsafe for operation must be quarantined until faults have been rectified and the unit deemed safe for operation.

Servicing and repairs

All unit parts and consumables are available from STS. The unit must be fitted with original STS parts and consumables unless otherwise stated. Any deviation from non-original parts and consumables may result in injury to personnel or damage to the unit and will invalidate the warranty. The operator must never disable, remove or adjust safety mechanisms or switches. The unit should only be serviced and repaired by a competent individual as selected by the company the equipment is intended for use with.

Safety devices and warning decals

Safety devices, warning decals and warning instructions in the operating instructions and on the unit must be strictly observed.

Hazardous area of the unit

The hazardous area is defined as the area in which a person is at risk due to the unit itself or movement of the unit and/or load. This also includes areas which can be reached by falling loads. The operator must:

- Instruct unauthorised personnel to leave the hazardous area.
- Give a warning signal with plenty of time for personnel to leave.
- Stop all operations if unauthorised personnel are within or enter the hazardous area.

Type of loads

The operator must make sure that the load is in a satisfactory condition. Loads must always be positioned safely and carefully. Use suitable precautions to prevent parts of the load and/or their contents from falling or spilling.

Cleaning

Cleaning of the unit depends on the environment that the unit is used in. It is recommended that the unit be cleaned daily if the unit comes into contact with aggressive substances such as chemicals, fertilizers, salt, etc. It is recommended to use detergent and a damp cloth to clean the body of the unit. Do not use flammable liquids to clean the unit. Do not clean the unit with pressurised water. If the unit is rated for Ex environments, the unit must be kept clean and dust free.

Personal protective equipment (PPE)

PPE must be worn at all times. A minimum of safety shoes must be worn while operating the unit. Safety shoes, safety glasses, protective gloves, hearing protection and protective overalls are to be worn when carrying out servicing, repairs and maintenance. When operating overhead loads, a hard hat must be worn. End user health and safety procedures and best practices should be followed in addition to the above recommendations.

Consumables and Parts

Environmental hazards

Parts and oils must be disposed of in accordance with the relevant environmental protection regulations.

Hydraulic hoses

Brittle hydraulic hose lines cause accidents. Hairline cracks in the hydraulic lines can cause injury and infection. The hydraulic hoses should only be serviced or replaced by a competent individual as selected by the company the equipment is intended for use with. It is the responsibility of the proprietor to maintain the hydraulic hoses.

NOTE: For more consumable information refer to 'Section IV – Unit Maintenance, Troubleshooting and Consumables'.

Lifting the Unit

Lifting the unit safely

In order to raise the unit safely, including off a pallet, proceed as follows:

- The unit must be on a level surface to prevent it from moving accidentally.
- The lifting gear must only be secured to the points designated for this purpose.
- Always use lifting gear with sufficient capacity.
- The unit should only be handled by qualified personnel who are trained in using lifting slings and tools.
- Do not walk into or stand under a raised unit.
- If necessary, secure the unit with guide ropes to aid when lifting the unit.

Jacking the unit safely

In order to jack up the unit safely, proceed as follows:

- The unit must be on a level surface to prevent it from moving accidentally.
- Always use a jack with sufficient capacity.
- The unit should only be handled by qualified personnel who are trained in using lifting slings and tools.
- When jacking up the unit, take appropriate measures to prevent it from moving, slipping or tipping over (e.g. wedges, wooden blocks, stops)

WARNING - IMPROPER LIFTING CAN RESULT IN SERIOUS ACCIDENTS

Securing the unit for transport

In order to transport the unit safely, proceed as follows:

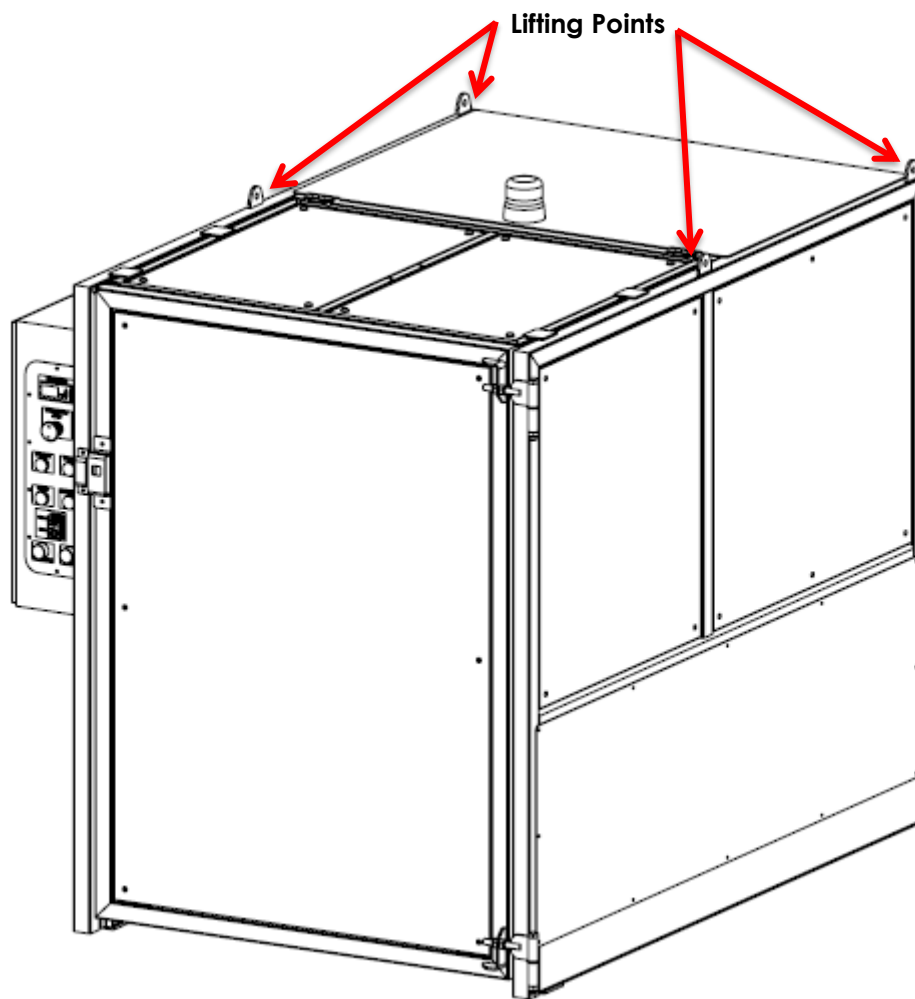
- The unit must be securely fastened when transported on a lorry/trailer.
- The lorry/trailer must have fastening rings.
- Use wedges to prevent the unit from moving.
- Use only tension belts or tie-down straps with sufficient strength.

WARNING - IMPROPER FASTENING OF THE UNIT DURING TRANSPORT CAN RESULT IN SERIOUS ACCIDENTS

IMPORTANT

After use, remove supplied lifting strop(s) and/or dee shackles and dispose.

Lifting Points



Section II – Unit Description

The DME02 drum mixer is designed for use on flat and level floor.

The intended purpose of this unit is to accept, secure and rotate drums. The rotational speed can be adjusted by the operator to suit the application. The unit is designed to accept drums of between 200-220 litres. The drums must have a maximum diameter of 600mm and be between 860mm-1010mm in height. The drum mixer will output a maximum rotational speed of 27 RPM.

An emergency stop button has been incorporated which will rapidly cut out all the electrical functions when pressed. The drum mixer will not start unless the gate and roof are closed, if the gate is opened whilst the unit is operating then the mixer will stop to ensure the safety of the operator and other personnel.

The unit has been designed with smooth geometry including rounded edges. The rotating head of the unit is fully enclosed in guarding which is compliant with BS EN 13857:2019 to ensure safe handling of the mixer. Ergonomic controls ensure fatigue-free operation. For electric versions, a digital timer displays the remaining mixing time which can be set by the operator.

THE SAFE WORKING LOAD (SWL) OF THIS UNIT IS 300kg

Section III – Unit Operation

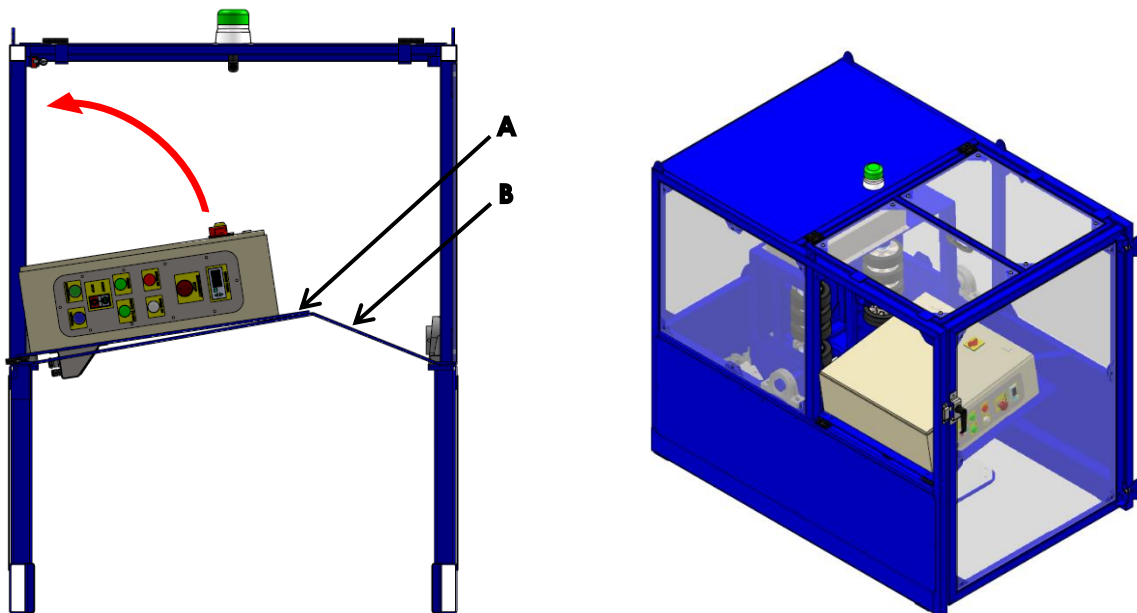
IMPORTANT

Before using this unit, operators must read and understand this instruction manual. Failure to observe the instructions in this manual will invalidate the warranty.

NOTE: Personal Protective Equipment (PPE) must be worn at all times, see 'Section I – Correct Use and Application' for more information.

Installing the Control Box

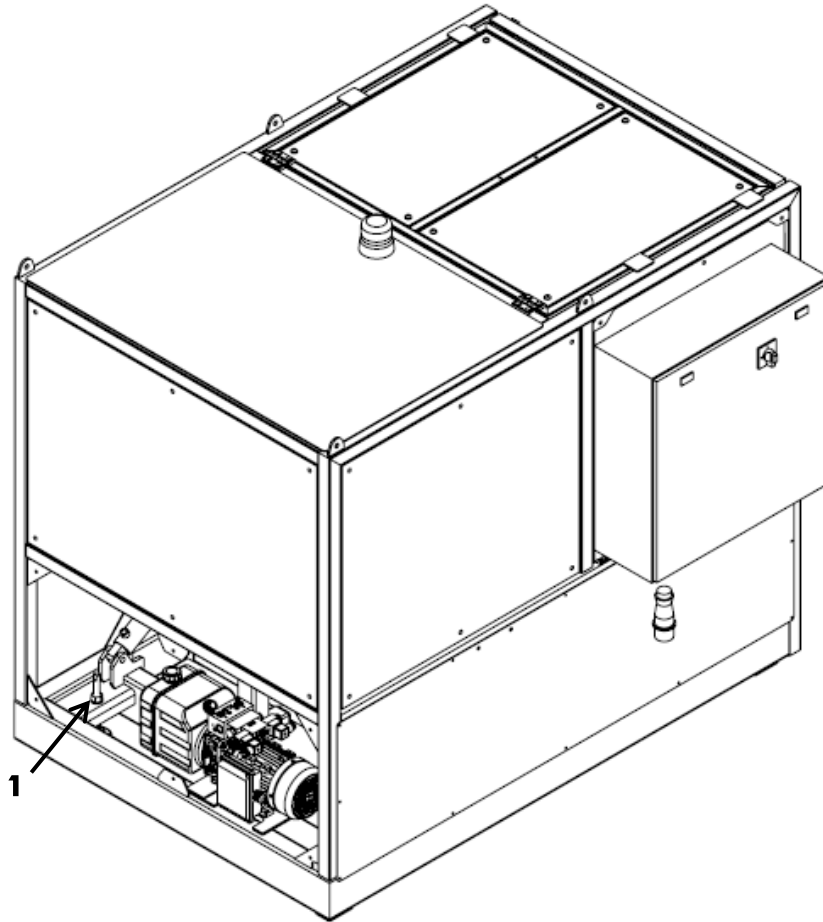
- The mixer unit is shipped with the control box positioned within the mixer. To position the control box for use, remove the shipping bolt **(A)** and lift the control box up into the vertical position, ensuring that the main power cable and plug are on the outside of the mixer.
- Bolt the control box in place using the supplied 2x M8 bolts and tighten to 24Nm.



- Once the control box is bolted in position, unbolt and remove the transportation cross brace **(B)**.
- Connect the main power cable to side of the unit using the supplied P-clips.

Positioning the Mixer

- Ensure lifting straps are removed after transport and before putting the unit into operation.
- Position the mixing unit in a position close to a 230V mains power supply and ensure that the gate can be opened fully for drum loading.
- The unit is fitted with one rear jacking screw foot **(1)** located behind the rear steel cover. Remove the cover and screw down the foot so that the mixer is stable across all four corners. The lock nut can then be tightened to lock the screw in place.
- Plug the mains lead into a suitable power supply. Ensure that the cable is positioned away from any areas that would cause the cable to be a trip hazard.



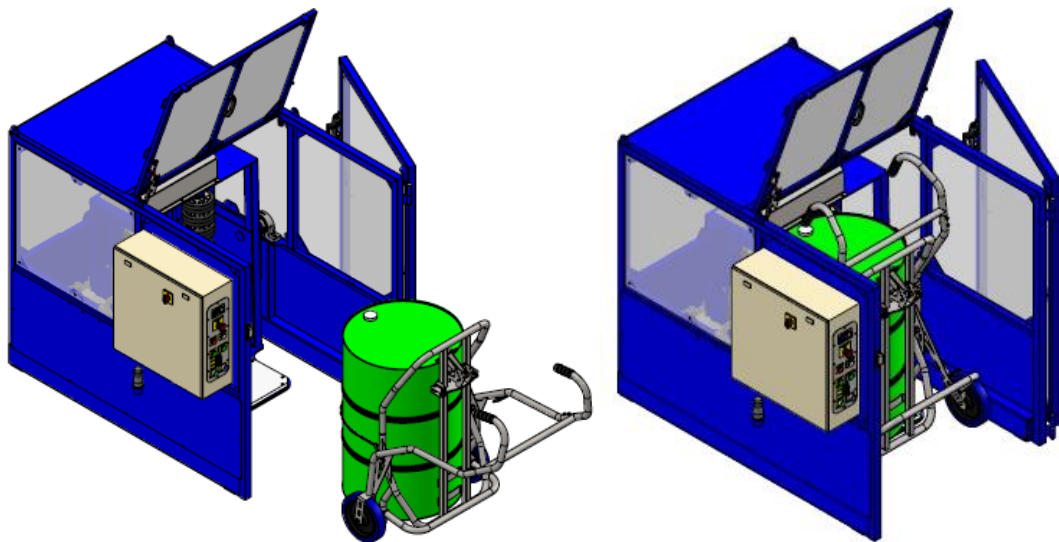
Pre-start Inspection

Before operating the drum mixer:

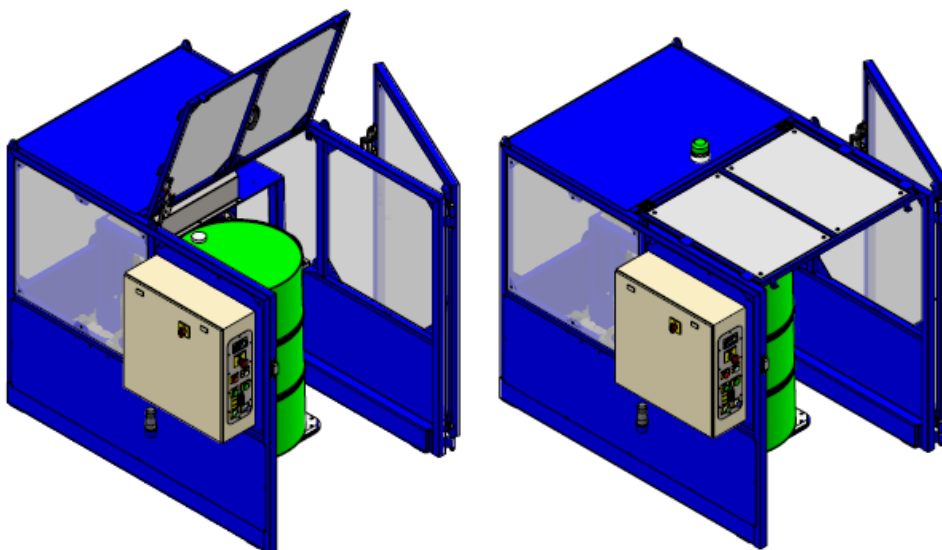
- Check the whole of the mixer for signs of damage.
- Check that the markings and labels are present, clean and legible.
- Check the mixing wheels and hydraulic tilt rams for wear and damage.

Loading the Mixer

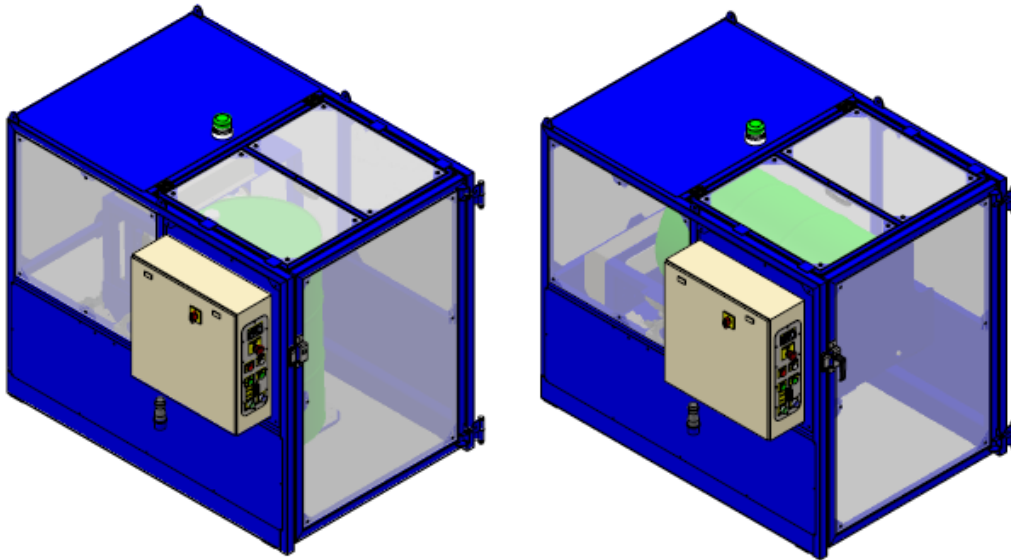
- The mixer can be loaded with either a DTC01 drum trolley (as shown below) or a DTP08 counterbalance depalletiser.
- Open the door and the roof to allow access to the mixer head, ensuring that the mixer head is in the vertical position.
- Lift the drum using the drum trolley, ensuring that the drum catch is as high as possible when connecting to the drum to achieve maximum lift height. Load the drum onto the white nylon baseplate.



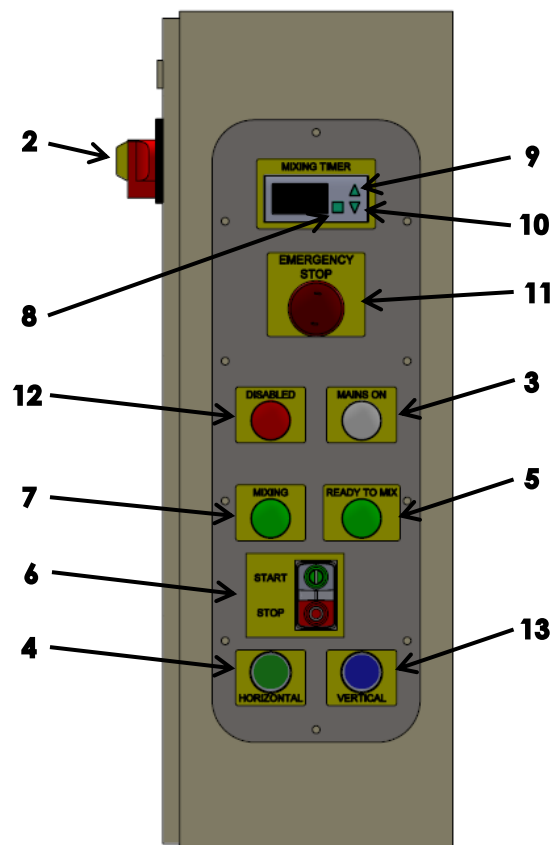
- Disconnect the drum trolley from the drum, close the roof, then closed the door.



- Once the door is locked, the mixer is ready to be rotated to the horizontal position.



Starting the Mixer



- With the drum loaded, door & roof closed, turn the control box isolator switch on **(2)**. The 'mains on' white light **(3)** will be illuminated.
- Rotate the mixing head to the horizontal position by pushing the green button **(4)**.
- Once the head is horizontal, the green 'ready to mix' light **(5)** will illuminate.

- Press the green start button on the start/stop controls **(6)** on the main panel to start the mixing cycle, the 'mixing' light **(7)** will illuminate during operation and the green beacon will flash. The timer is initially set for 30 minutes, if you wish to adjust the mix time follow the instructions for setting the operation timer.
- The timer will count down until the set time has elapsed. Alternatively, you can press the red stop button on the start/stop controls **(6)**.

Setting the Operation Timer

- Press the set button **(8)** once. The display will start flashing. Use the up **(9)** and down **(10)** arrows to set the desired mixing time in hours and minutes.
- Press the set button **(8)** to confirm the mixing time. The mixing time figures should now stop flashing.

Safety Features

- There is an emergency stop button **(11)** on top of the panel. If this is pressed the rotation will stop and the disabled light **(12)** will illuminate. Rotate clockwise to reset.
- If the gate is opened whilst the unit is operating, the unit will stop. The disabled light **(12)** will illuminate.

Unloading the Mixer

- To unload the mixer, once mixing has finished, rotate the mixing head to the vertical position by pushing the blue button **(13)**.
- Open the door and the roof to allow access to the mixer head, ensuring that the mixer head is in the vertical position, then remove the drum.

Section IV – Unit Maintenance, Troubleshooting and Consumables

Maintenance Checklist

The follow servicing checklist indicates the operations to be performed and the respective intervals to be observed. Maintenance intervals are defined as:

- W = Every 50 service hours, at least weekly
- A = Every 1000 service hours, at least annually
- = Standard maintenance interval

During the run-in period – after approx. 100 service hours – the owner must check the wheel nuts/bolts and re-tighten if necessary.

NOTE: Personal Protective Equipment (PPE) must be worn at all times, see 'Section I – Correct Use and Application' for more information.

NOTE: Maintenance must only be performed by a suitably competent individual as decided by the company the equipment is intended for use with. All electrical maintenance must only be performed by qualified personnel.

Chassis and Superstructure		W	A
1	Check doors and/or covers for damage	●	●
2	Check labels are legible and complete	●	●
3	Check chassis and fixings connections for damage		●
4	Check wheels for any signs of damage	●	●
5	Check gearbox, shaft and head for wear and damage		●
6	Check shaft nut for signs of movement	●	●

Electrical System		W	A
1	Test warning and safety devices in accordance with operating instructions	●	●
2	Test unit controls are functioning and in particular that the stop/emergency stop is functioning quickly and effectively	●	●
3	Visually inspect all cables, glands and electrical components for damage/degradation	●	●

OPERATORS SHOULD REPORT ANY DEFECTS ON THE UNIT TO THE APPROPRIATE PERSON, IF IN ANY DOUBT OR YOU NEED REPLACEMENT PARTS, PLEASE CONTACT THE STS TECHNICAL SUPPORT LINE.

Troubleshooting

When trying to locate a fault, proceed in the order shown in the table.

NOTE: Troubleshooting must only be performed by a suitably competent individual as decided by the company the equipment is intended for use with.

If, after carrying out the following remedial action, the unit cannot be restored to operation, contact the manufacturer's technical helpline. In order for customer services to react quickly and specifically to the fault, the following information is essential:

- Unit serial number
- Unit product name
- Description of error
- Current location / Company

Unit does not start

Possible Cause	Action
Emergency stop engaged	Reset the emergency stop button
Isolator set to 'Off'	Set isolator switch to 'On'
Unit unplugged	Check unit is plugged in to power supply

Mixer does not rotate

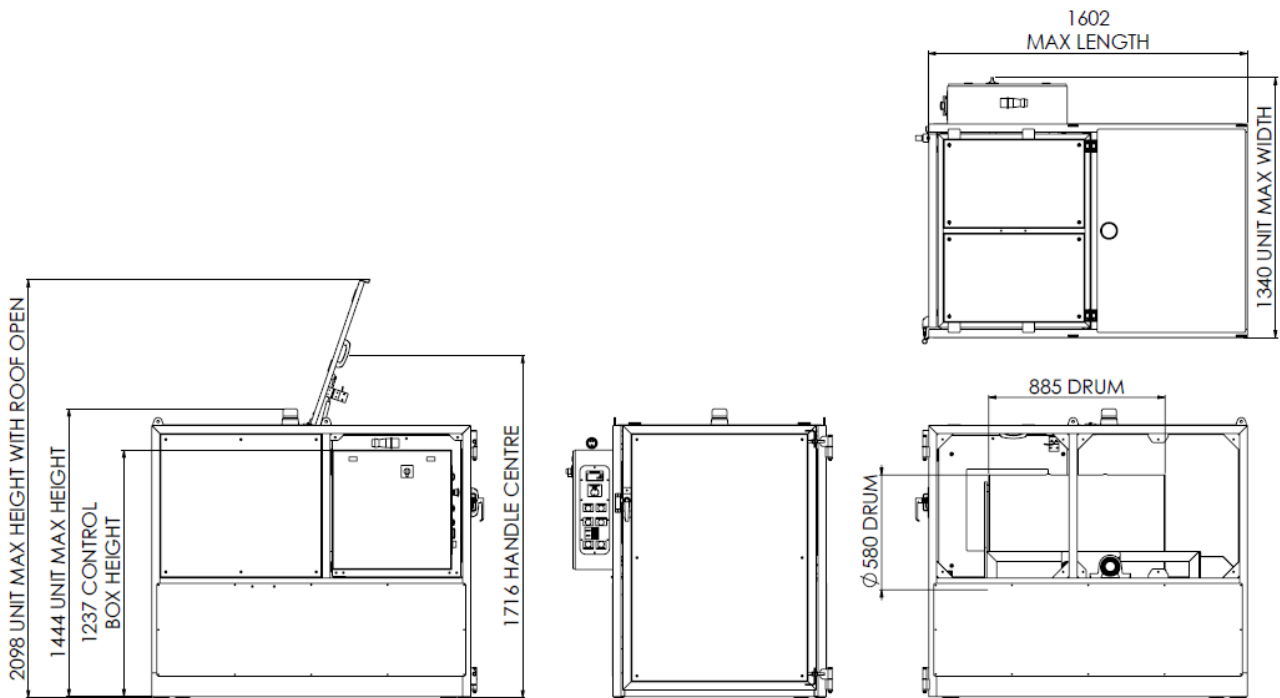
Possible Cause	Action
The load exceeds the SWL	Reduce mass of load
Load incorrectly secured	See instructions for loading the drum
Emergency stop engaged (if applicable)	Reset emergency stop button(s)
Door or roof open	Close door or roof
Mixer head not horizontal	Check head is horizontal and docking light 'Ready to mix' is activated

Consumables

Approved touch up paint should be used on any damaged painted surfaces, the surface should be rust free before painting with a non-aluminium based paint. STS use RAL 5010 for their blue paint.

Section V - Technical Specification

General Arrangement



NOTE: ALL DIMENSIONS +/- 10MM.

SWL. 300kg

System Voltage. 230V

Max Noise Level. 79dba

Drum Range. 200-220 litres (max diameter - 600mm), (max height 860mm-1010mm)

Net Mass. 474kg

Nominal Power. 0.92kW

Section VI - Decommissioning the Unit

If the unit is to be out of service for more than a month, e.g. for commercial reasons, it must be stored in a frost-free and dry room. All necessary measures must be taken before, during and after decommissioning as described hereafter. Decommissioning and recommissioning must only be performed by a suitably competent individual as decided by the company the equipment is intended for use with.

NOTE: Personal Protective Equipment (PPE) must be worn at all times, see 'Section I – Correct Use and Application' for more information.

Prior to Decommissioning

- Thoroughly clean the unit.
- Check the hydraulic oil and replenish if necessary (if applicable).
- Apply a thin layer of oil or grease to any non-painted mechanical components.

Final Decommissioning and Disposal

Final decommissioning or disposal of the unit must be performed in accordance with the regulations of the country of use. In particular, regulations governing the disposal of batteries, fuels and electronic and electrical systems must be observed. The unit must only be disassembled by trained personnel.

Recommissioning

- Reconnect the battery, first ensuring that the battery undamaged (if applicable).
- Follow the annual servicing check list located in 'Maintenance Checklist'.
- Follow the pre-start checklist located in 'Pre-start Inspections'.

Safety Tests to be Performed at Intervals and After Unusual Incidents.

Perform a safety check in accordance with national regulations. The unit must be inspected at least annually or after any unusual event by a qualified inspector. The inspector shall assess the condition of the unit from purely a safety viewpoint, without regard to operational or economic circumstances.

For further help contact STS:

Technical Support Line: +44 (0) 1736 851050

In the interest of all concerned it is essential that equipment of our manufacture is used only for the purposes for which it has been designed and it must be used in accordance with the instructions which are supplied.