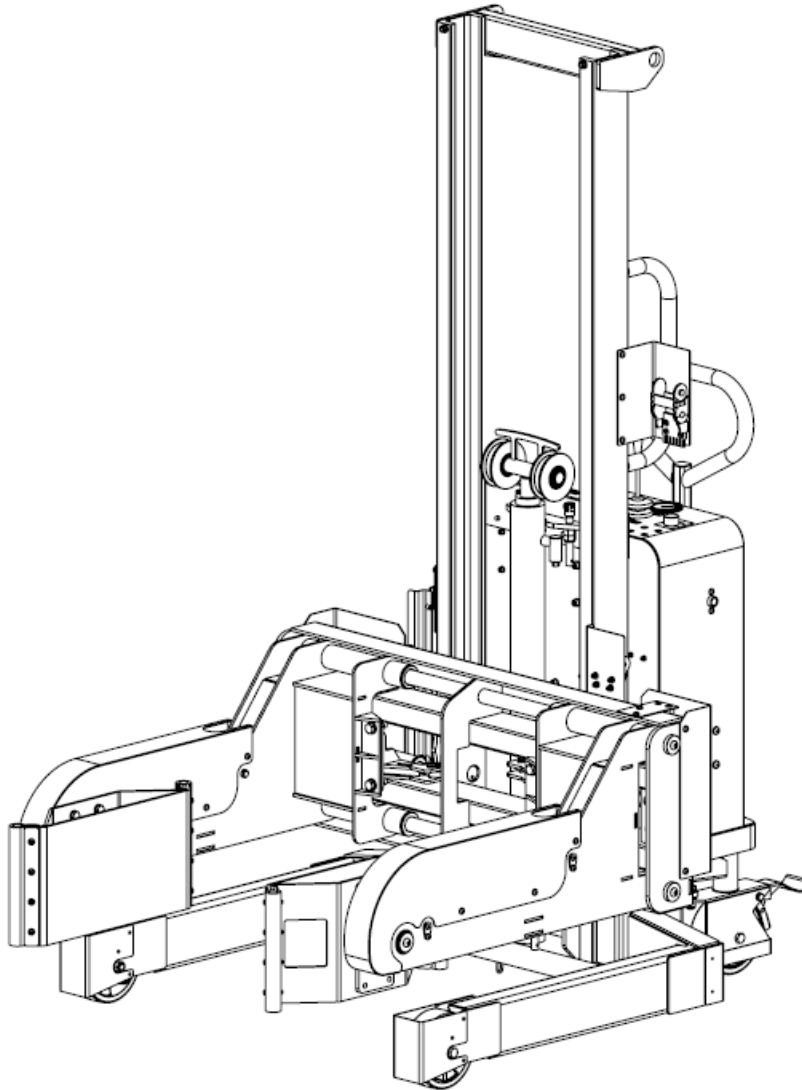


# Operating Instructions



## STP01-RRH01-Ex

ATEX Rated Pneumatic Hydraulic Stacker with  
Drum Clamp and Rotate

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# Section I – Correct Use and Application

## 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 can result in damage or injury to personnel, the unit or property. The unit described in the present operating instructions complies with BS EN ISO 17050-1:2010 and the EC Machinery Directive 2006/42/EC.

## Foreseeable Misuse of the Unit

### WARNING!

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

- The maximum load must not be exceeded;
- Do not travel with a raised load (>500mm);
- Do not carry or lift persons or stand on the unit;
- Do not negotiate on inclines;
- Do not stand underneath a raised load or within the confines of the unit during operation;
- Do not exceed the maximum operational speed of 4km/h;
- The load must be lifted by the attachment provided;
- Do not alter the machine specification from original supply;
- Do not disable, remove or adjust safety mechanisms or switches;
- Observe all instruction decals applied to the unit.

## Approved Application Conditions

- Operation in industrial and commercial environments;
- Permissible temperature range 5°C to 40°C;
- Maximum operational relative humidity of 50%;
- Operation only on secure, level surfaces with sufficient capacity;
- Operation only on routes that are visible and approved by the proprietor;
- 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.

## 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.

### WARNING!

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 Bespoke Handling Equipment Ltd 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.

### Operators 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. The operator shall be afforded all due rights. Safety shoes and appropriate Personal Protective Equipment (PPE) must be worn at all times.

### 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

Only original spare parts must be fitted to the unit. 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.

### Travel routes and operational areas

Only use lanes and routes specifically designated for unit traffic. Unauthorised third parties must stay away from operational areas. The unit must only be operated in operational areas with sufficient lighting to avoid damage or injury to personnel, the unit or property. Additional equipment is necessary to operate the unit in areas of insufficient lighting.

#### **Hazardous area of the unit**

##### **WARNING!**

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.

#### **Travel conduct**

The operator must adapt the travel speed to local conditions. The unit must be driven at slow speed when negotiating bends or narrow passageways, when passing through swing doors and at blind spots. Abrupt stopping (except in emergencies), rapid U turns and overtaking at dangerous or blind spots are not permitted.

#### **Travel visibility**

The operator must look in the direction of travel and must always have a clear view of the route ahead. When transporting loads that affect visibility, a second person must safely assist the operator to observe the travel route.

#### **Type of loads to be carried**

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 from tipping or falling down. Prevent liquid loads from spilling out.

#### **Consumables and Parts**

##### **Environmental hazards**

##### **WARNING!**

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

##### **Hydraulic hoses**

##### **WARNING!**

Brittle hydraulic hose lines cause accidents. Hairline cracks in the hydraulic lines can cause injury and infection. The hydraulic hoses installed on the unit are supplied in accordance with BS EN 857:2015. 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. The proprietor shall maintain the hydraulic hoses in accordance with BS 5244:1986.

##### **Lift chains**

##### **WARNING!**

Incorrectly cleaned chains can cause accidents. Lift chains are safety-critical parts. They must not contain any serious contamination. Lift chains and pivot pins must always be clean. Never clean chains with steam jet high pressure cleaners, cold or chemical cleaning agents. Immediately after cleaning, dry the lift chain with compressed air and apply a suitable chain spray.

#### **Safety Regulations Governing the Handling of Lead-Acid Batteries (if applicable)**

##### **Maintenance Personnel**

Batteries may only be charged, serviced or replaced by trained personnel. This operator manual and the manufacturer's instructions concerning batteries and charging stations must be observed when carrying out the work.

##### **Fire Protection**

Do not smoke and avoid naked flames when handling batteries. Wherever a unit is parked for charging there shall be no inflammable material or lubricants capable of creating sparks within 2m around the unit. The room must be well ventilated. Fire protection equipment must be on hand.

##### **Battery Maintenance**

The battery cell covers must be kept dry and clean. The terminals and cable shoes must be clean, secure and have a light coating of dielectric grease.

##### **Battery Disposal**

Batteries may only be disposed of in accordance with national environmental protection regulations or disposal laws. The manufacturer's disposal instructions must be followed.

##### **WARNING!**

Batteries can be hazardous

Batteries contain an acid solution which is poisonous and corrosive. Above all avoid any contact with battery acid.

- Dispose of used battery acid in accordance with regulations
- Always wear protective clothing and goggles when working with batteries
- Do not let battery acid come into contact with skin, clothing or eyes. If necessary, rinse with plenty of clean water
- Call a doctor immediately in the event of physical damage (e.g. skin or eye contact with battery acid)
- Neutralise any spilled battery acid immediately with plenty of water
- Only batteries with a sealed battery container may be used
- Follow nation guidelines and legislation

##### **WARNING!**

##### **Using unsuitable batteries can cause accidents**

The weight and dimensions of the battery have a considerable effect on the operation safety and capacity of the unit. Changing the battery features requires the manufacturer's approval, as compensating weights are required if smaller batteries are fitted. When replacing/installing the battery make sure the battery is securely located in the battery compartment of the unit.

Park the unit securely before carrying out any work on the batteries.

## Charging the Battery (if applicable)

### WARNING!

#### The gases produced during charging can cause explosions

The battery produces a mixture of nitrogen and hydrogen (electrolytic gas) during charging. Gassing is a chemical process. This gas mixture is highly explosive and must not be ignited.

- Switch the charging station and the unit off first before connecting/disconnecting the charging cable of the battery charging station to/from the battery connector
- The charger must be adapted to the battery in terms of voltage and charge capacity
- Before charging, check all cables and plug connections for visible signs of damage
- Ventilate room in which the unit is being charged
- The battery and battery cell surfaces must be exposed during charging to ensure adequate ventilation
- Do not smoke and avoid naked flames when handling batteries
- Wherever the unit is parked for charging there shall be no inflammable material or lubricants capable of creating sparks within 2m around the unit
- Fire protection equipment must be on hand
- Do not lay any metallic objects on battery
- It is essential to follow the safety regulations of the battery and charger station manufacturers

## Lifting the Unit

### Lifting and jacking up

#### WARNING!

##### Lifting and jacking up the unit safely

In order to raise the unit, the lifting gear must only be secured to the points specially provided for this purpose. You may only work under a raised load handler if they have been secured with a sufficiently strong chain. In order to raise and jack up the unit safely, proceed as follows:

- Jack up the unit only on a level surface and prevent it from moving accidentally
- Always use a jack with sufficient capacity. When jacking up the unit, take appropriate measures to prevent it from slipping or tipping over (e.g. wedges, wooden blocks, etc.)
- In order to raise the unit, the lifting gear must only be secured to the points specially provided for this purpose (see "Transport and Commissioning")
- When jacking up the unit, take appropriate measures to prevent it from slipping or tipping over (e.g. wedges, wooden blocks)

#### WARNING!

##### Improper lifting by crane can result in serious accidents

The use of unsuitable lifting gear can cause the unit to crash when being lifted by crane. Prevent the unit from striking other objects when it is being raised, and avoid any involuntary movements. If necessary secure the unit with guide ropes. The strap point on the mast is for loading the unit with lifting gear.

- The unit should only be handled by people who are trained in using lifting slings and tools
- Do not walk into or stand in a hazardous area
- Always use lifting gear with sufficient capacity
- Always attach the slings to the prescribed strap points and prevent them from slipping

#### WARNING!

##### Accidental movement during transport

Improper fastening of the unit and mast during transport can result in serious accidents.

- Loading must be carried out by special trained staff in accordance with recommendations contained in Guidelines BS EN 12640:2001. In each case correct measurements must be made and appropriate safety measures adopted
- The unit must be securely fastened when transported on a lorry or trailer
- The lorry/trailer must have fastening rings
- Use wedges to prevent the unit from moving
- Use only tension belts or tie-down straps or with sufficient strength

The strap point on the mast is for loading the unit with crane lifting gear.

### Lifting the Unit

#### Requirements

- Park the unit securely

#### Tools and Material Required.

- Lifting gear

#### Procedure

- Secure Lifting slings to the strap points

The unit can now be lifted.

### Securing the unit for transport

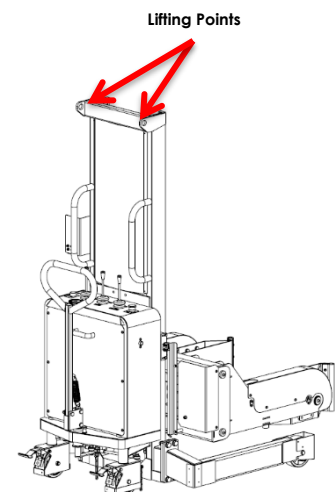
#### Tools and Material Required

- Tension belts/tie down straps

#### Procedure

- Move the unit onto the transporting truck
- Park the unit securely
- Strap the belts around the unit and tension them sufficiently, utilising the strap points on the mast

The unit can now be transported.



## Section II – Unit Description

The STP01-RRH01-Ex is a four-wheeled pneumatic powered pedestrian stacker with lifting, drum clamping and rotate functions. It is designed for use on level surfaces for use with drums ranging from 50-220L with a diameter of between 280mm and 610mm.

The drum should be stood vertical; the unit can then approach the drum with the drum pads opened to their maximum width. The operator then clamps the drum using the rear mounted control panel until secure. The drum can then be lifted, transported and rotated.

The unit incorporates enclosed, smooth geometry with rounded edges to ensure safe handling of the unit. The unit is fitted with a fully enclosed pump/ram unit which is operated by two-handed controls to keep operator's limbs away from dangerous machinery movement.

### ATEX CERTIFICATION

This equipment has been certified by STS for use in Zone 1 gas and zone 21 dust areas and has been designed for protection under constructional safety "c"

 II 2 G D

Ex c IIB T4 Gb

Ex c IIIB T135°C Db

**The Safe Working Load (SWL) of this unit is 350kg.**

**This unit is designed for use on flat and level floors only.**

## Section III – Unit Operation

### Set Up

1. The unit requires a dry clean air supply, which should be connected to the unit via a flexible air hose of minimum 12.5mm bore fitted with a quick release coupling. The unit will operate with a maximum pressure of 9 BAR, a recommended minimum of 6 BAR and a recommended minimum flow rate of 400 litres per minute.
2. The unit is now ready to use.
3. The unit requires an airline to be connected to operate any functions but the air supply may be disconnected to manoeuvre the unit. The head will remain at its current position when the airline is disconnected.

**NOTE – ALL LEVER FUNCTIONS REQUIRE THE OPERATE BUTTON TO BE DEPRESSED**

**ISOLATE AIR SUPPLY WHEN NOT IN USE**

### Moving the Unit

#### Requirements

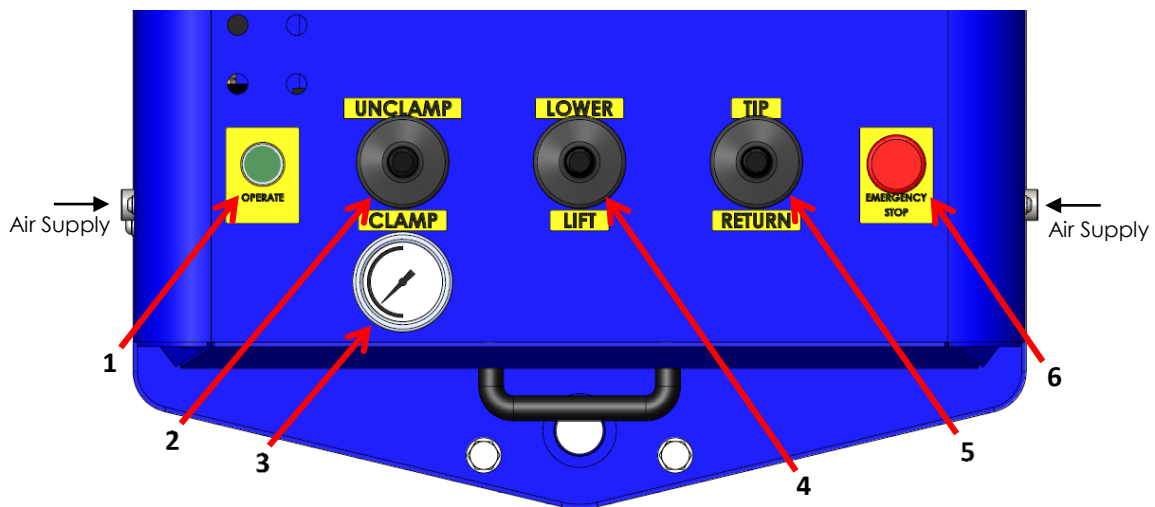
- Load correctly lifted, if loaded.
- Load at correct height for transport (< 500mm).
- Good ground conditions.
- Rear parking brakes engaged.

#### Procedure

1. Disengage the rear parking brakes.
2. The unit can then be manoeuvred to the desired location.
3. Steering is controlled from the rear of the stacker.
4. Travel at a constant speed.
5. Adapt your travel speed to the conditions of the route and the load you are transporting.
6. Always transport loads at as low a height as possible to increase the stability of the unit.
7. When finished manoeuvring, the rear parking brakes should be engaged.

**THIS UNIT IS DESIGNED FOR USE ON FLAT AND LEVEL FLOOR ONLY**

## Operation of the Function Controls



No.	Function	No.	Function
1	Operate Button	4	Lift / Lower Lever
2	Clamp / Unclamp	5	Tip / Return Lever
3	Clamp Pressure Gauge	6	Emergency Stop Button

### IMPORTANT

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

#### Requirements

- Good ground conditions.
- Load undamaged and within lift capacity of unit.

#### Procedure

1. All lever functions require the operate button to be pressed at the same time. The unit is safe even if the airline is disconnected during operation, the load will remain at it's attained position. All levers will return to a neutral position once released.
2. The lift / lower lever moves the head up and down when operated.
3. The clamp / unclamp lever will move the pads closer or further away from each other when operated. When clamping, the clamp pressure gauge needle should reach and remain within the green section.
4. The tip / return lever will rotate the load forwards and backwards when operated.
5. The drum should be positioned centrally, both vertically and horizontally, between the pads before clamping.
6. There is a red emergency stop button on top of the control panel which stops all powered movements when pressed. To reset the button, turn clock-wise.

**Warning – Never leave a raised load unattended**



## Section IV – Unit Maintenance

### 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.*

<b>Brakes</b>		<b>W</b>	<b>A</b>
1	Test rear parking brakes.	●	●

<b>Hydraulic/Pneumatics Operations</b>		<b>W</b>	<b>A</b>
1	Test hydraulic system.	●	●
2	Check hydraulic oil and top up if necessary.	●	●
3	Check that hydraulic ports, hose and pipe lines are secure, check for leaks and damage.	●	●
4	Check cylinders and piston rods for damage and leaks, make sure they are secure.		●
5	Test "hydraulic" controls and make sure the labels are present, legible and complete.		●
6	Replace hydraulic oil.		●
7	Check and replace if required pneumatic filter elements.		●

<b>Travel</b>		<b>W</b>	<b>A</b>
1	Check wheels for wear and damage.	●	●

<b>Chassis and Superstructure</b>		<b>W</b>	<b>A</b>
1	Check doors and/or covers.	●	●
2	Check labels are legible and complete.	●	●
3	Check mast guard for damage.	●	●
4	Check chassis and screw connections for damage.		●
5	Check the load chain and tension if necessary.		●
6	Visually inspect the mast bearings and check contact surface wear level.		●
7	Check lateral clearance of mast connections and carriage.		●
8	Check the clamping pads for wear and damage, replace if necessary.	●	●
9	Check for damage to painted surfaces, paint with approved touch up paint.	●	●
10	Ensure earthing chains are fitted and in contact with the ground.	●	●
11	Ensure the anti-static wheels are free from dirt and grime.	●	●

<b>Agreed Performance Level</b>		<b>W</b>	<b>A</b>
1	Carry out a test run with rated load, if necessary with customer specified load.		●

**OPERATORS SHOULD REPORT ANY DEFECTS ON THE STP01-RRH01-Ex TO THE APPROPRIATE PERSON, IF IN ANY DOUBT OR YOU NEED REPLACEMENT PARTS PLEASE CONTACT THE STS TECHNICAL SUPPORT LINE.**

## Consumables

Bespoke Handling Equipment manual stackers are factory-equipped with Shell Tellus 32 oil for the hydraulic system. It is recommended to use as stated or an equivalent when replacing hydraulic oil.

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.

The clamping pads should be replaced if they show signs of wear or damage. They should also be replaced if the rubber pads become slack within the flexible drum pad retaining frame, with regular use this should be at maximum every year.

## Trouble Shooting

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

### Load cannot be lifted

Possible Cause	Action
The load exceeds the SWL	Reduce mass of load
Hydraulic oil level too low	Check hydraulic oil level, top up if required
Air pressure too low	Check air supply
Emergency stop operated	Reset emergency stop button
Operate button is not pressed	Press the operate button

### Load cannot be lowered

Possible Cause	Action
Emergency stop operated	Reset emergency stop button
Air pressure too low	Check air supply
Operate button is not pressed	Press the operate button

### Load cannot be clamped

Possible Cause	Action
Drum outside clamping range	Note clamping range of unit
Hydraulic oil level too low	Check hydraulic oil level, top up if required
Air pressure too low	Check air supply
Operate button is not pressed	Press the operate button

### Load cannot be rotated

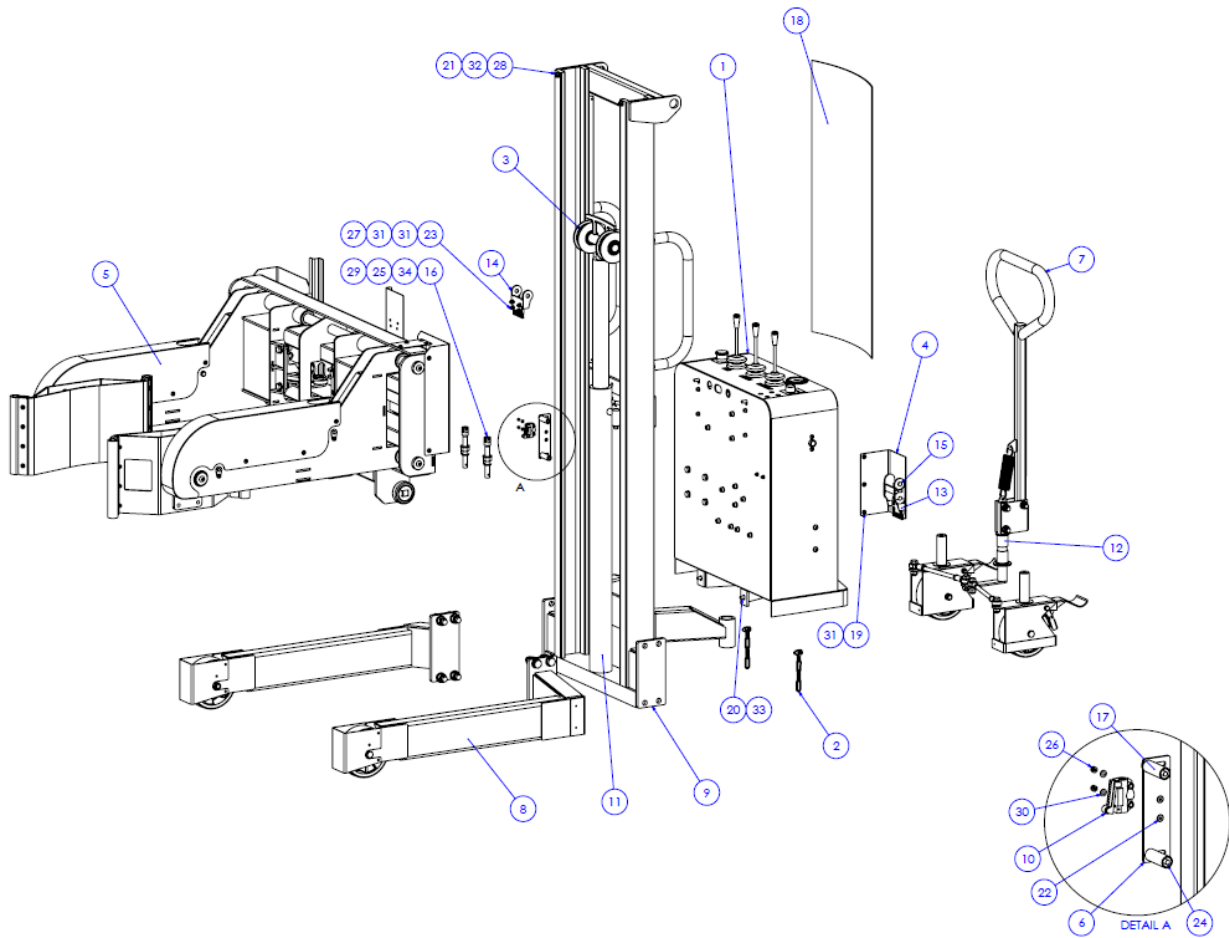
Possible Cause	Action
Off centred load too high	Reduce off centred load
Hydraulic oil level too low	Check hydraulic oil level, top up if required
Air pressure too low	Check air supply
Operate button is not pressed	Press the operate button

### Unit cannot be moved

Possible Cause	Action
Rear parking brakes are engaged	Release the rear parking brakes

## Section V - Technical Specification

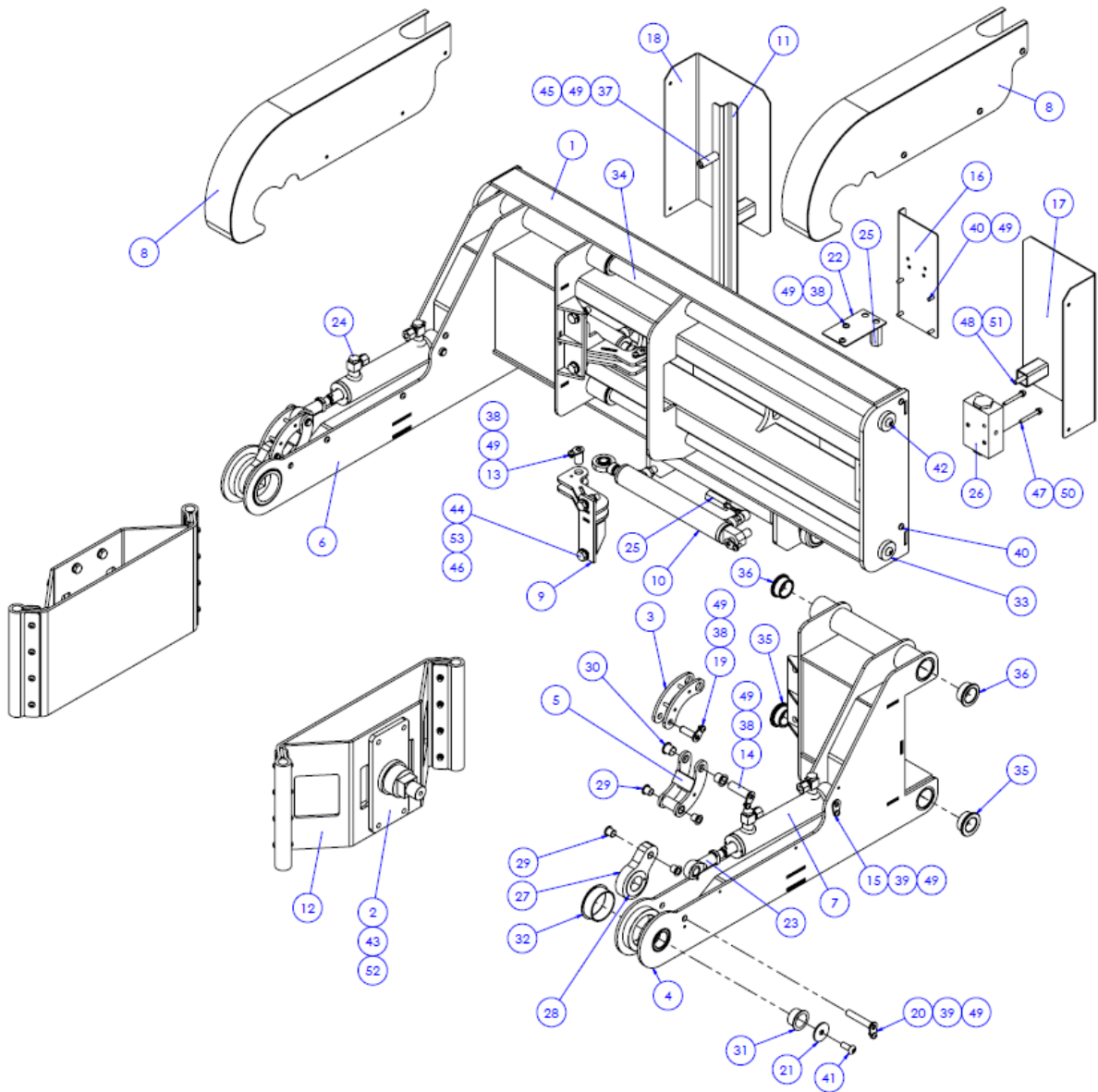
### Assembly Overview - Main



## Bill of Materials – Main

ITEM NO.	DESCRIPTION	PRODUCT CODE	QTY.
1	3 FUNCTION - STP - GX20 - CONTROL BOX ASSY	009153	1
2	4 LINK EARTHING CHAIN	004568	2
3	CHAIN WHEEL ASSEMBLY	001660	1
4	CHASSIS ENERGY CHAIN BRACKET	003393	1
5	CLAMPING DRUM ROTATOR WITH FLEXIBLE RUBBER PADS	010696	1
6	PNEUMATIC LIMIT SWITCH PLATE	011754	1
7	STACKER ACKERMANN STEERING ASSEMBLY (ANTI-STATIC WHEEL) (M/S)	011403	1
8	STANDARD 860 STRADDLE 700 LONG LEGS ASSEMBLY - ATEX	011533	1
9	STE01/STP01 STD CHASSIS - MS - 450 O/S - 1950 LG	001051	1
10	PNEUMATIC LIMIT SWITCH	011753	1
11	DISPLACEMENT CYLINDER - 800 STROKE - 70 OD - 50 ROD - 935 CLOSED	002534	1
12	IGLIDUR H FLANGE BEARING HFM-3034-40	001221	2
13	SERIES 2500 ENERGY CHAIN (57 X 25 ID) FIXED MOUNTING END	011992	1
14	SERIES 2500 ENERGY CHAIN (57 X 25 ID) MOVING MOUNTING END	011991	1
15	SERIES 2500 ENERGY CHAIN (57 X 25 ID)	011993	1
16	130MM ZINC COATED CLEVIS BOLT FOR LL10-44-Z	001602	4
17	5/8" OD X 1.5MM THK PIPE 44MM LONG	007055	2
18	ATEX ANTI-STATIC POLYCARBONATE STACKER GUARD	011344	1
19	BUTTON HEAD SCREW - M6 X 16 - A2	M6 X 16 - A2	3
20	BUTTON HEAD SCREW - M8 X 20 - A2	M8 X 20 - A2	4
21	BUTTON HEAD SCREW - M8 X 25 - A2	M8 X 25 - A2	2
22	CSK POZI HEAD SCREW - M4 X 30 - A2	M4 X 30 - A2	2
23	CSK SET SCREW - M6 X 20 - A2	M6 X 20 - A2	8
24	HEX SET SCREW - M6 X 50 - A2	M6 X 50 - A2	2
25	METRIC NUT - M14 - BZP	M14 - BZP	4
26	NYLOC NUT - M4T - A2	M4T - A2	2
27	NYLOC NUT - M6T - A2	M6T - A2	8
28	NYLOC NUT - M8T - A2	M8T - A2	2
29	NYLOC NUT - M14T - BZP	M14T - BZP	4
30	WASHER - 4 - A2	4 - A2	2
31	WASHER - 6 - A2	6 - A2	13
32	WASHER - 8 - A2	8 - A2	2
33	WASHER - 8 - BZP	8 - BZP	4
34	WASHER - 14 - BZP	14 - BZP	4

## Assembly Overview – Head



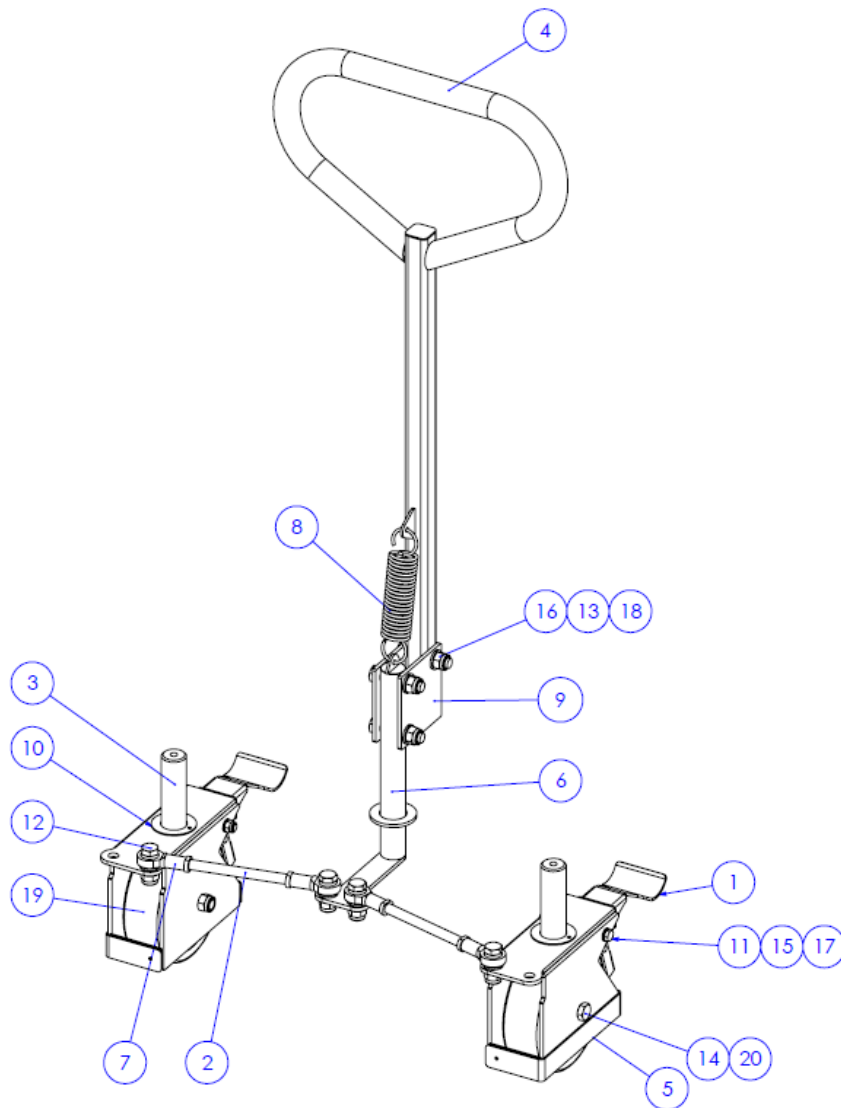
## Bill of Materials – Head

ITEM NO.	DESCRIPTION	PRODUCT CODE	QTY.
1	CARRIAGE - Ø70 - 280 BEARING CTRS - RRH01	010698	1
2	CLAMP PAD SHAFT	010695	2
3	HIGHER RAM LINK	008814	2
4	LH SLIDING ARM	010707	1
5	LOWER RAM LINK	008924	2
6	RH SLIDING ARM	011015	1
7	131 STROKE - 20 ROD - 40 BORE - D.A	009021	2
8	ARM COVERS	010708	2
9	CLAMP RAM BRACKET	010710	2
10	200 STROKE - 20 ROD - 32 BORE - D.A	009316	2
11	LIMIT SWITCH PLATE FOR RRH01	012538	1
12	FLEXIBLE DRUM PAD ASSEMBLY	012753	2
13	16MM X 30 LG TABBED PIN	009215-16-30	2
14	16MM X 55 LG TABBED PIN	009215-16-55	4
15	16MM X 75 LG TABBED PIN	009215-16-75	2
16	CARRIAGE ENERGY CHAIN PLATE	010856	1
17	MANIFOLD GUARD	010854	1
18	MANIFOLD GUARD ALTERNATE SIDE	011016	1
19	TABBED PIN - Ø12 X 40 LG	002676-12-40	2
20	TABBED PIN - Ø12 X 70 LG	002676-12-70	2
21	40OD 10.5ID 3T WASHER	007821	2
22	HOSE ATTACHMENT PLATE	011571	1
23	RIGHT HAND STEEL / BRONZE M16 ROD END (FEMALE)	001479	2
24	1/4" BANJO FITTING	006724	2
25	1/4" BSPP BURST VALVE	011645	3
26	DIVIDER COMBINER VALVE - 3/8" BSPP - 1-3 LPM - 250BAR MAX	012587	1
27	PIVOT TRANSFER PLATE	008802	2
28	G THRUST WASHER GTM-3254-015	GTM-3254-015	2
29	IGLIDUR H FLANGE BEARING HFM-1214-15	HFM-1214-15	8
30	IGLIDUR H FLANGE BEARING HFM-1618-17	HFM-1618-17	4
31	IGLIDUR H FLANGE BEARING HFM-3034-40	HFM-3034-37	2
32	IGLIDUR H FLANGE BEARING HFM-6065-50	HFM-6065-50	2
33	30MM GUIDE BAR END CAP	004108	4
34	30MM SUPPORT BAR	010697	2
35	40 OD 30 ID 20L OILITE BUSH	011567	4
36	40 OD 32 ID 20L OILITE BUSH	011568	4
37	5/8" OD X 1.5MM THK PIPE 44MM LONG	007055	2
38	BUTTON HEAD SCREW - M6 X 10 - A2	M6 X 10 - A2	6
39	BUTTON HEAD SCREW - M6 X 12 - A2	M6 X 12 - A2	4

40	BUTTON HEAD SCREW - M6 X 16 - A2	M6 X 16 - A2	22
41	BUTTON HEAD SCREW - M10 X 25 - A2	M10 X 25 - A2	2
42	BUTTON HEAD SCREW - M10 X 30 - A2	M10 X 30 - A2	4
43	HEX BOLT - M10 X 20 - A2	M10 X 20 - A2	8
44	HEX BOLT - M12 X 40 - A2	M12 X 40 - A2	4
45	HEX SET SCREW - M6 X 50 - A2	M6 X 50 - A2	2
46	NYLOC NUT - M12T - A2	M12T - A2	4
47	SOCKET HEAD CAP SCREW - M6 X 50 - BZP	M6 X 50 - BZP	2
48	SOCKET HEAD CAP SCREW - M8 X 80 - BZP	M8 X 80 - BZP	2
49	WASHER - 6 - A2	6 - A2	34
50	WASHER - 6 - BZP	6 - BZP	2
51	WASHER - 8 - A2	8 - A2	2
52	WASHER - 10 - A2	10 - A2	8
53	WASHER - 12 - A2	12 - A2	8



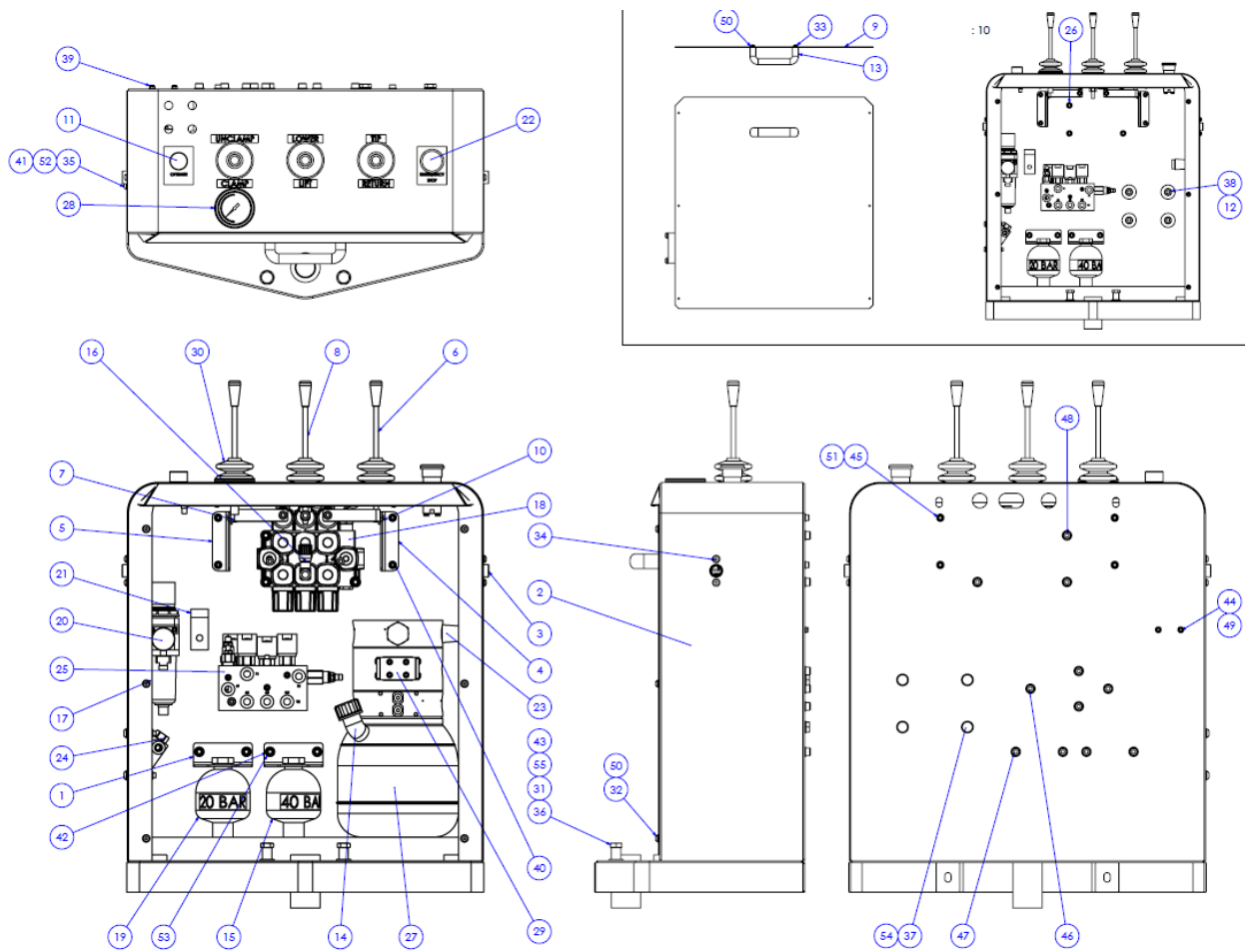
## Assembly Overview – Steering



## Bill of Materials – Steering

ITEM NO.	DESCRIPTION	PRODUCT CODE	QTY.
1	WHS01 BRAKE ASSEMBLY	001161	2
2	12MM THREADED BAR X 146 LONG	009060	2
3	160MM WHEEL CHASSIS (M/S)	001844	2
4	MANUAL DRAG HANDLE	001163	1
5	REAR WHEEL ATEX GUARD WHS01	011136	2
6	STEERING SHAFT	001165	1
7	M12 STEEL ROD END	001166	4
8	ZINC PLATED SPRING FOR STACKER STEERING HANDLE	001162	1
9	STEERING CLEVIS	001164	1
10	G THRUST WASHER GTM-3254-015	GTM-3254-015	2
11	HEX BOLT - M8 X 90 - A2	M8 X 90 - A2	2
12	HEX BOLT - M12 X 40 - A2	M12 X 40 - A2	4
13	HEX BOLT - M12 X 60 - A2	M12 X 60 - A2	3
14	HEX BOLT - M12 X 90 - A2	M12 X 90 - A2	2
15	NYLOC NUT - M8T - A2	M8T - A2	2
16	NYLOC NUT - M12T - A2	M12T - A2	9
17	WASHER - 8 - A2	8 - A2	4
18	WASHER - 12 - A2	12 - A2	11
19	WHEEL - Ø160 - 50TW - HW60 - Ø20 - GREY PU/ALU - 550KG (ANTI-STATIC)	002289	2
20	OD20-ID12.2-L22 ZINC FLANGED WHEEL BUSH	009049	4

## Assembly Overview – Control Box

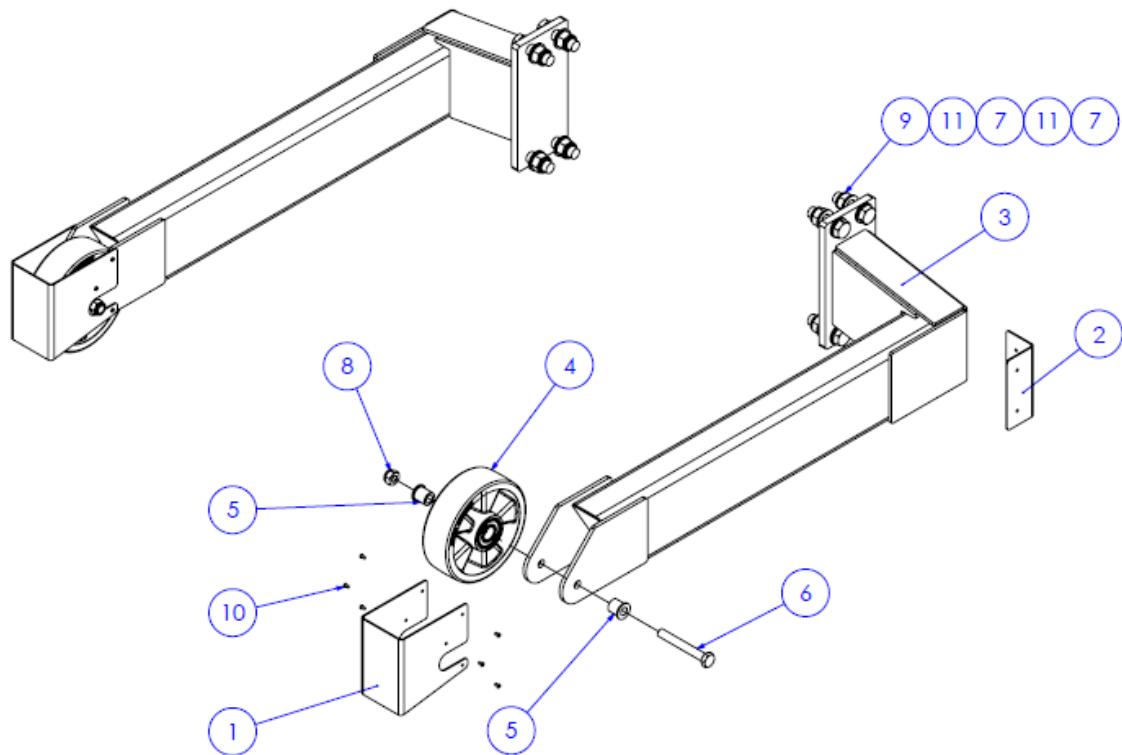


## Bill of Materials – Control Box

ITEM NO.	DESCRIPTION	PRODUCT CODE	QTY.
1	ACCUMULATOR MOUNT	001006	2
2	3 FUNCTION CONTROL BOX	009154	1
3	AIR INLET BRACKET	002187	2
4	FOLDED HANDLE BRACING PLATE	011661	1
5	FOLDED HANDLE BRACING PLATE ALTERNATE SIDE	011661-A	1
6	HANDLE WITH ATTACHMENT PLATE	011660	1
7	HANDLE WITH ATTACHMENT PLATE ALTERNATE SIDE	011660-A	1
8	STANDARD HANDLE FOR BUCHER VALVE	011658	1
9	STD STE/P01 CONTROL BOX COVER	002380	1
10	1/2" BRIGHT ZINCE PLATED STEEL CLEVIS PIN 3/16"	011662	2
11	GREEN COLOURED PUSH BUTTON	011729	1
12	M10 STUD MOUNT MALE TO FEMALE	011551	4
13	NYLON CONTROL BOX COVER HANDLE	002229	1
14	1/2" MALE TO 1/2" FEMALE 45 DEGREE ELBOW	010878	1
15	0.32L 40 BAR HYDRAULIC ACCUMULATOR	001244	1
16	1/4" 2 WAY VARIABLE FLOW RESTRICTOR	010884	1
17	FILTER REGULATOR - G 3/8, 8 BAR, 20 MICRON	001318	1
18	GALTECH 3 BANK 3 POSITION MONOBLOCK VALVE	010918	1
19	HYDRAULIC ACCUMULATOR 0.32L 20 BAR	001406	1
20	PNEUMATIC PRESSURE GAUAGE, 0-12 BAR, 40MM DIAL	007053	1
21	PNEUMATIC SHUT OFF VALVE	003497	1
22	PNEUMAX EMERGENCY STOP	001462	1
23	SINTERED BRONZE/BRASS SILENCER - 3/4 BSPP	012545	1
24	SUN SINGLE P.O. CHECK VALVE	011114	1
25	3 FUNCTION HYDRAULIC BLOCK	011643	1
26	5/8" OD 1.5 THICK PIPE 37 LONG	002181	3
27	GX20 STD 5L RESERVOIR	009020	1
28	WIKA PRESSURE GAUGE 0-160 BAR 60DI (EN 837-1)	001595	1
29	GX20 HYDRAULIC PUMP	009019	1
30	RUBBER LEVER BELLOW - 8MM HOLE	002184	3
31	15.9 OD 1.5THK 20LG - SPACER	001868	2
32	BUTTON HEAD SCREW - M6 X 10 - A2	M6 X 10 - A2	6
33	BUTTON HEAD SCREW - M6 X 16 - A2	M6 X 16 - A2	2
34	BUTTON HEAD SCREW - M6 X 20 - A2	M6 X 20 - A2	4
35	BUTTON HEAD SCREW - M8 X 50 - A2	M8 X 50 - A2	2
36	HEX BOLT - M12 X 50 - A2	M12 X 50 - A2	2
37	HEX SET SCREW - M10 X 16 - BZP	M10 X 16 - BZP	4

38	METRIC NUT - M10 - BZP	M10	5
39	NYLOC NUT - M5T - BZP	M5T - BZP	2
40	NYLOC NUT - M6T - BZP	M6T - BZP	8
41	NYLOC NUT - M8T - A2	M8T - A2	2
42	NYLOC NUT - M8T - BZP	M8T - BZP	7
43	NYLOC NUT - M12T - A2	M12T - A2	2
44	SOCKET HEAD CAP SCREW - M5 X 55 - BZP	M5 x 55	2
45	SOCKET HEAD CAP SCREW - M6 X 25 - BZP	M6 x 25	4
46	SOCKET HEAD CAP SCREW - M8 X 20 - BZP	M8 x 20	6
47	SOCKET HEAD CAP SCREW - M8 X 30 - BZP	M8 x 30	4
48	SOCKET HEAD CAP SCREW - M8 X 100 - BZP	M8 x 100	3
49	WASHER - 5 - BZP	5 - BZP	2
50	WASHER - 6 - A2	6 - A2	12
51	WASHER - 6 - BZP	6 - BZP	12
52	WASHER - 8 - A2	8 - A2	4
53	WASHER - 8 - BZP	8 - BZP	15
54	WASHER - 10 - BZP	10 - BZP	8
55	WASHER - 12 - A2	12 - A2	4

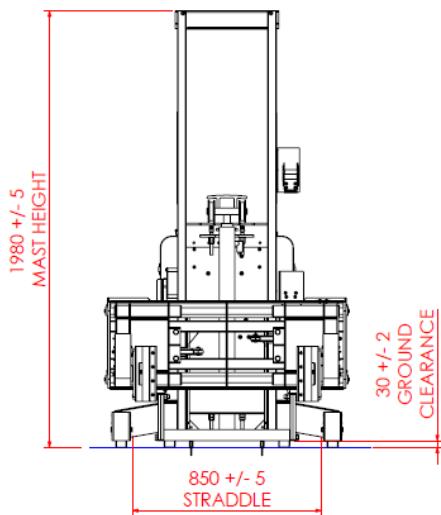
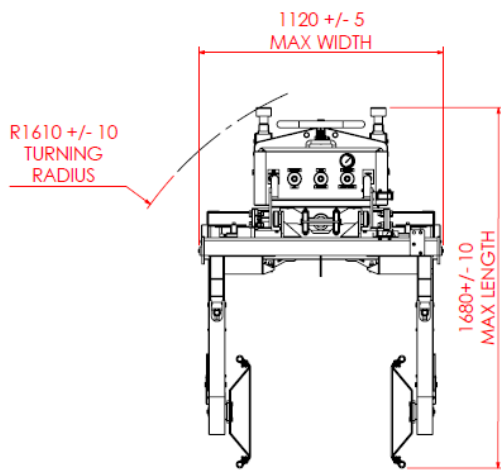
## Assembly Overview – Legs



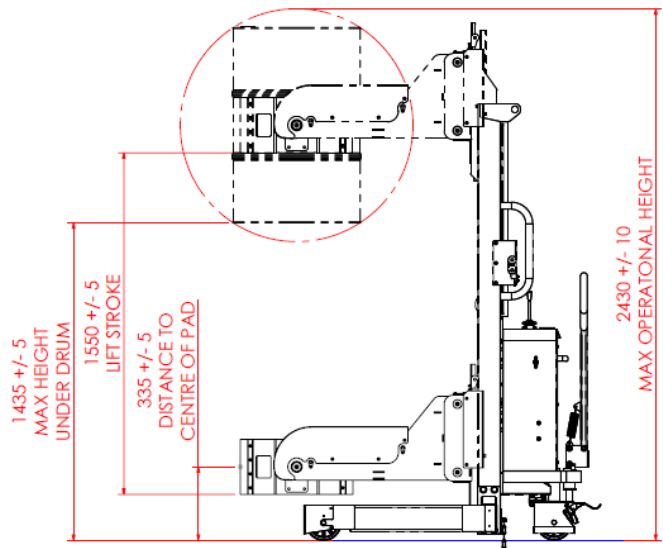
## Bill of Materials – Legs

ITEM NO.	DESCRIPTION	PRODUCT CODE	QTY.
1	FRONT WHEEL ATEX GUARD 160MM	011127	2
2	LEG CORNER ATEX GUARD	011128	2
3	LEGS - 860 STRADDLE - 700 LG - Ø160	001403	1
4	WHEEL - Ø160 - 50TW - HW60 - Ø20 - GREY PU/ALU - 550KG	002289	2
5	TOP HAT SPACER - OD20 - ID12.2 - L22 - ZINC WHEEL BUSH	009049	4
6	HEX BOLT - M12 X 90 - A2	M12 X 90 - A2	2
7	HEX BOLT - M16 X 55 - A2	M16 X 55 - A2	8
8	NYLOC NUT - M12T - A2	M12T - A2	2
9	NYLOC NUT - M16T - A2	M16T - A2	8
10	POZI PAN HEAD SCREW - M3 X 6 - A2	M3 X 6 - A2	12
11	WASHER - 16 - A2	16 - A2	16

## General Arrangement

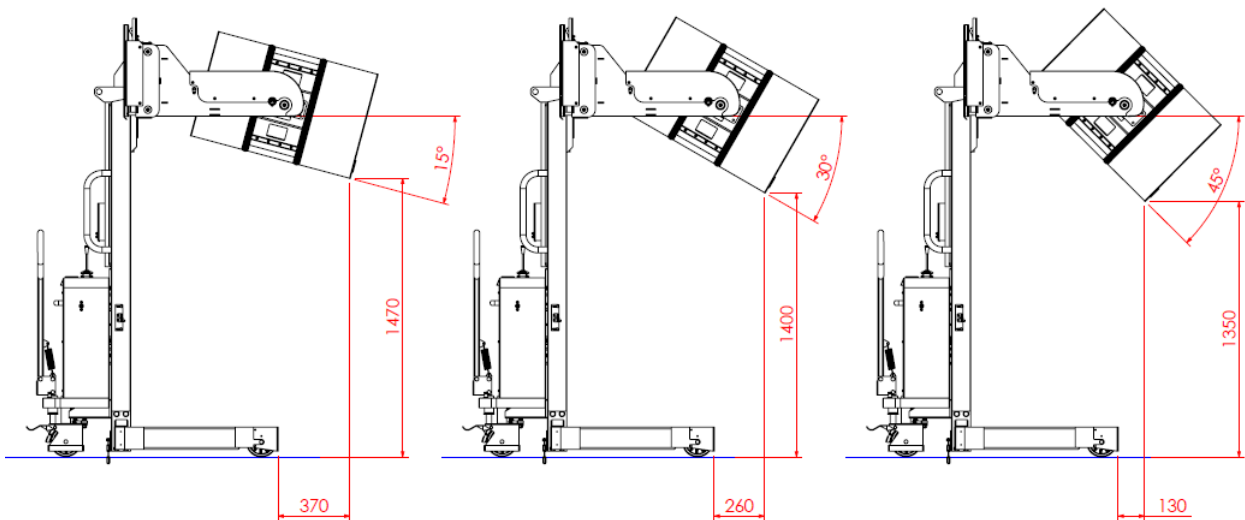


15° TIP



30° TIP

45° TIP



**SWL. 350kg**

**Net Mass. 440kg**

**Max Noise Level. 76dBA**

## 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.

### Prior to decommissioning

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

### Final De-commissioning and Disposal

Final de-commissioning 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 truck must only be disassembled by trained personnel.

### 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 the Bespoke Handling Equipment:

**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.