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Service and Operation Manual for Penny Hydraulics Lifts

1000kg MezzLift

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Introduction and Intended Use

Thank you for purchasing a Penny Hydraulics MezzLift. This is a unique design that is built in our factory to your specification. Each one is tailor-made and we trust that it meets with your approval and will provide you with a safe, efficient and trouble free means of moving goods for many years.

This manual tells you what you need to know about its operation together with some useful guidance on safety and general care. It also explains the servicing requirements and the availability of a service agreement should you wish to take advantage of it. We have our own engineers around the country lead by our Central Service Department to give an exceptional after-sales service.

We strongly recommend that each operator of the MezzLift be trained in its use and read all the details set out in this booklet.

This MezzLift is designed to be used by trained persons in a workplace to move goods between two levels. It has hold-to-run control buttons, with the control circuits remaining live whilst the motor is running. Any gates or doors will unlock automatically as the lift platform docks at that level and vice versa. Generally, any shaft or hoist run should be clearly visible by the operator so that they have complete control over the lifting operation. The lift is not suitable for carrying persons.

Accessories

We provide a wide range of accessories for your MezzLift and we can make bespoke items to suit your exact requirements.

Service

With our service contract you can be sure of continued safe, reliable use of the equipment and full compliance with current legislation. We have our own team of service engineers around the UK and their vans are well stocked with spares enabling most visits to be a first-time fix reducing downtime to a minimum. We understand that safe and reliable deliveries are essential to your business.

Contents

Safety Warning

These signal words mean:

WARNING – You CAN be KILLED or SERIOUSLY HURT if you don't follow instructions.

CAUTION – You CAN be HURT if you don't follow instructions.

Notice: – Your equipment can be damaged if you don't follow instructions.

WARNING  **In the interest of safety, all personnel involved in the lifting operation must read the operation manual and comply with the following;**

1. The lift must not be used for man riding.
2. Do not step on the forks or platform.
3. As a minimum requirement, the lift should be inspected every 6 months and serviced annually by a competent person. The lift also requires a thorough examination and certificate of test as determined by the competent person at least every 12 months. See the Service Contract section for full statutory responsibilities.
4. Do not use the lift if it is not supported with valid documentation recording a thorough examination being carried out by a competent person within the last 12 months.
5. Do not interfere with the factory settings
6. Do not modify or re-install this machine without seeking guidance from Penny Hydraulics Ltd. Only use correct and certified lifting accessories. Any lifting or securing attachments must be formally certified by thorough examination every 6 months.
7. Only use genuine parts and accessories.
8. The lift must not be overloaded. Refer to the Max Working Load signs attached to the equipment
9. Always park the lift at the bottom when not in use.
10. The lift must only be operated by trained and competent personnel. A training register is included at the back of this manual.
11. Whilst the transfer of goods is in progress, access to the area should be restricted to those personnel essential to the operation.
12. No persons should go near the forks or platform whilst they are raised.
13. All safety notices must be read and complied with at all times.
14. Never interfere with the unit, it should run smoothly at all times. If in doubt call the HELPLINE telephone Number 01246 811475.
15. Keep the MezzLift properly maintained by a competent person.
16. Where barriers, guards and/or safety gates are fitted, always ensure that they are in place before commencing any work.
17. Isolate, immobilize and lock off the equipment before commencing any maintenance routine. Please note that any control panel may remain live, even when the motor is not running.

Method of Operation

Before operation, please read the operating instructions and ensure all persons involved in the operation are familiar with the equipment and site requirements.

WARNING Read all safety warnings and instructions carefully. Failure to do so could result in seriously injury or death.

Standard operation is via a hold to run, push button control. The person at the controls is in a safe position and no one should pass them whilst the lift is in motion.

Notice: Operate the buttons until the platform stops. DO NOT try to judge the top or bottom by releasing the buttons before the platform reaches the stops. The lift can be stopped at any time by releasing the hold-to-run button.

1. Clear the working area of unnecessary people or obstructions, erect any barriers required by house procedures then open the entrance doors and make them secure.
2. Turn on the lift at the mains power switch if a lockable isolator is installed.
3. Ensure that the platform is locked at the correct level. Open the safety gate.
4. Load the platform. Do not overload.
5. Use the button control to send the lift to the next level by holding the appropriate button.
6. Unload the platform once it reaches the correct level. The operator must not operate the button until they are certain it is safe. The safety gates will not be able to be opened until the platform is locked in to the set level.
7. Once unloaded, close the safety gates and the operator can use the buttons to return the platform to the original level.
8. The process can be repeated until the delivery is complete.
9. When finished, ensure that all gates and doors are closed and the platform is docked at the lower landing.

WARNING The control panel remains live, even when the motor is not running.

Fault Finding

Power failure. Should the power supply to the MezzLift be cut off for any reason during operation, the platform will be held in position by the hydraulic brake on the end of the hydraulic motor.

1. The electric motor has thermal overload protection that may operate after prolonged use. Leave the unit turned off for an hour to cool before trying for normal operation, if this is suspected.
2. Occasionally a surge in power may cause a circuit breaker to trip. Switch off the power and check the appropriate circuit breaker at the distribution board in the building. Reset if possible and restore the power.

If the problem continues, phone the HELPLINE or have an electrician check the circuit.

The platform does not descend when buttons are operated.

1. A door or gate is not fully closed. The "Gate Open" light should be illuminated on the main control panel. Ensure that all gates are closed and that the "Gate Open" light is not lit.
2. An emergency stop button has been activated. Check that all emergency stop buttons are out by gently pulling and turning each one anti-clockwise.

Oil appears at the base of the lift. There has been an internal oil leak. It is still safe to continue operating the unit but see below. Phone the HELPLINE to arrange for an engineer to call.

The lift operates slowly and will not go up or down. There is an oil leak, and the tank is empty. Call the HELPLINE. Do not attempt to refill the tank.

Minor oil leaks from hose connections or the power pack. These are not serious but call the helpline for prompt attention.

IF IN DOUBT CALL THE HELPLINE ON 01246 811475

Penny Hydraulics Limited Warranty Policy

This Policy is intended to provide our customers with the best possible support to ensure trouble-free use of their new Penny Hydraulics lifting equipment.

Products sold by the Company are guaranteed to be free from defective material and workmanship for a period of one year from the date of invoice, or from the date of the commissioning certificate.

This warranty applies only under the following conditions:

a) The unit or part must not have been subject to neglect or abuse or operated under abnormal conditions or in an unapproved application.
b) The responsibility of the Company is restricted to what is, in their judgement an adequate repair or replacement of the Company's product.
c) An authorised engineer must carry out a six-monthly inspection.
d) The warranty is void if examination reveals that the unit or part has been repaired or adjusted other than by an authorised engineer.
e) Normal service repairs carried out by authorised engineers are supported by their own warranty.
f) Warranty does not extend to consumable items requiring replacement due to normal wear and tear.

Any claim under warranty must be made in the first instance by contacting Penny Hydraulics Ltd Service Department on 01246 811475 or via email at sales@pennyhydraulics.com. The decision will then be made on how best to proceed after consultation with the customer.

UK Mainland

We will normally have one of our own engineers based around the country visit the site to rectify the problem. This policy may be varied at our discretion, but it is our aim to give the very best possible response to minimize product downtime and inconvenience.

Other locations

Warranty is limited to a parts-only service, but in certain areas we may have service partners who may be able to assist. Any defective item should be returned to Penny Hydraulics Ltd for inspection and any valid warranty claim will include reasonable carriage costs both ways. A replacement part will then be sent to the customer.

No variation of the warranty as stated in the Company's Standard Terms and Conditions of Sale is authorised unless agreed in writing by a Director of the Company. This is the only warranty given and the Company accepts no other responsibility.

Maintenance

It is the premises duty holder's legal responsibility to ensure the lift is maintained in accordance with the manufacturer's specification. This will also ensure the continued safe and reliable operation of your lift for many years to come.

Your lift is subject to the Lifting Operations and Lifting Equipment Regulations (LOLER) which is a statutory requirement to record on a formal document, the safe working condition of the lift, attachments and mounting structure. Penny Hydraulics Ltd support team offers a service package to meet customer requirements and to conform to LOLER certification. Please see service contract form enclosed.

The following planned maintenance schedule is designed to ensure the safe working order of the lift and includes a thorough examination by a competent person as required by LOLER. LOLER also requires that a thorough examination is carried out following any exceptional circumstance that may affect the safety of the equipment.

Any defects that are found that are, or could become dangerous to persons, whilst carrying out the planned maintenance schedule must be reported and recorded, and the equipment taken out of operation until sufficient action by a competent person is undertaken. The planned maintenance schedule may require the use of parts and consumables.

A list of recommended spares and lubricants is attached.

Item	Lubricant	Specification
General Lubrication	Lithium-based Grease	LEP2
Roller Chain	Chain Grease – Aerosol	Proprietary Chain Grease
Power Pack	Hydraulic Oil	Tellus 32 or Equiv.

Planned Maintenance schedule

A competent person must carry out a thorough examination and test every six months. In addition to this there are various service operations that must be done on an annual basis. These are indicated in bold. Various split pins, oils, greases and sealant are required to complete a full service.

Before starting work on site always inform the manager/site foreman what operation is to be carried out and of any health and safety issues. The manager/site foreman may have additional requirements that must be followed.

Never leave an open shaft unguarded. Treat ladders with respect and fasten them into position. Never work beneath the cradle or platform without setting safety sprags.

Mountings	Check top and bottom mountings for security. These are to be re-examined under full load conditions during the testing procedure and inspected for movement.
Cradle chain type	Visually check chain attachment points on cradle.
	Check for free movement of cradle.
	Check rollers for free movement and wear.
	Apply LEP grease to any grease nipples.
Chain sets	Examine both drive & suspension chains for damage and wear.
	Visually check coupling points for security.
	Examine all sprockets & clear any debris from behind the bottom sprocket.
	Grease all four chains.
	Grease the motor and two bottom bearings via the grease nipples.
	Check suspension chain tensions with the platform near the top. They should be even with only hanging tension in the fall from the cradle to the bottom sprocket but no bunching of the chain when the cradle is lowered. Adjust as necessary using the two adjusters beneath the top sprocket.
	Check the drive chains for even tension. There should be no bunching of the chain when under load. If they need adjusting loosen the motor mounting plate bolts and use a bottle jack to push the assembly up so tightening the chains. Retighten the plate bolts.
Hydraulic system	Check that power pack is securely mounted.
	Check power pack and hose ends for leaks.
	Check oil level and top up as necessary using Tellus 32 hydraulic oil.
	Check that relief valve is not causing motor to stall by driving the platform into the end stops.
	Examine visible hose run for leaks and damage.
	Check and reposition hoses at the top of the column to ensure clearance on cradle rear axle.
	Check the ram whilst removed from the column for leaks or scoring to the piston. Do not attempt any ram repair on site but replace the complete unit if necessary.
	Check internal hose run or leaks and damage.
Test	Run up and down five times unloaded. It may not always be possible to go to the top. Check for smooth running and correct relief valve operation.
	Load with the largest standard load and run up and down five times. Check that the flow control valve gives the correct speed of descent. Check for partial porting of the control valve leading to loss of control over descent. Adjust relief valve to give constant speed of ascent. Examine hoist mountings.
	Repeat the unloaded test. Check for leaks. Check rope or chain tensions.

General	Check for correct operation of all door locks.
	Check for correct operation of all proximity switches.
	Check for correct operation of all control buttons.
	Check existing guarding and assess the general safety of the installation.
	Check that all signage is in position. Replace signs as necessary.
	Check that there is an Operation & Service Manual available.
Training	Train staff if requested and complete the training register.
Reporting	Note any defects found, remedial action taken or work still required to be done on the test certificate and in the schedule at the back of the handbook. If the inspection was a Statutory Thorough Examination under LOLER then any defect that is or could become a danger to persons must be notified to the relevant enforcing authority and the lift taken out of use.
	Leave a copy of the test certificate on site. Inform the Manager of any defects.

Service Requirements

We believe that the Penny Hydraulics Lift will make a revolutionary improvement in the handling of your goods, both in terms of safety and efficiency.

The machine is manufactured to the highest quality standards we can achieve to give long and reliable service. To ensure this we have made available an ongoing service contract to provide our customers with a number of benefits.

- Fixed labour cost per year. Costs can be planned closely for the year.
- No call-out charges.
- Includes all statutory thorough examinations and tests for compliance with LOLER.
- Any follow-on visits free of charge.
- Liaise with enforcing authorities as required.
- All spares available ex works. All routine spares carried on the service vans.
- All engineers specifically trained in Mezz, Scissor and Cellar Lift maintenance and inspection.
- All engineers are health and safety trained and externally accredited via CSCS.
- Penny Hydraulics' health & safety performance is externally assessed by the Safe Contractor Scheme.
- Penny Hydraulics is BS 9001:2008 registered ensuring quality compliance.
- The Company is working towards Environmental Quality Mark BS 14001.
- No subcontract labour is employed.
- Lift kept in first class working order.
- Expect 95% or better first-time fix rate.

A test certificate will be left on site following each visit.

Service Contract

Date ……

Lift Location	……
Post code	……
Contact	……
Telephone	……
Email	……

Invoice address	……
Post code	……
Contact	……
Telephone	……
Email	……

Penny Hydraulics Ltd agrees to carry out one annual service and one interim inspection on the lift in any 12-month period. A test certificate will be left on site and a copy sent with invoice.

In the event of a problem arising in-between scheduled visits, the customer should telephone the HELPLINE on 01246811475 as soon as possible so that appropriate action can be taken by us. There will be no charge for the call-out or for labour unless the problem is due to misuse or abuse. Parts may be added to the next invoice due.

The customer will be invoiced following each visit and by signing this document agrees to make full payment within 30 days of the invoice date in accordance with the agreed scale of charges, which may vary from time to time. This service contract will continue until cancelled in writing by either party.

Signed ……

Printed name ……

Position ……

Order number ……

More details are available online. Please fax, post or email this form to the office below.

Penny Hydraulics Ltd

Tel 0044 (0) 1246 811475

Fax 0044 (0) 1246 810403

Email service@pennyhydraulics.com

Web www.pennyhydraulics.com

Technical Data

Power supply

Standard lifts require a 20 Amp, 240 Volt 50Hz single phase electrical supply or 2.2kW,415V three-phase and neutral. This should be terminated in a switch with a neon "LIVE" indicator. If circuit breakers are employed in the system, they must be of a type that can cope with the surge of the electric motor.

Electrical specification

240 Volt	9.5 Amp	1.5 kW	1 Ph IP54
240 Volt	12.6 Amp	1.8 kW	1 Ph IP54
240 Volt	13.0 Amp	2.2 kW	1 Ph IP55
415 Volt	4.8 Amp	2.2 kW	3 Ph IP55

Typical Weights

MezzLift Column	267kg
Power Pack	32kg

Maximum Working Loads

Each lift is tested and marked individually up to a maximum of 500 kg.

Noise levels

A survey sheet giving full details is available on request. Briefly the results are as follows;

Hydraulic Pump – motor running	72 dB(A)
Lift operating while loaded	68 dB(A)
Lift operating whilst unloaded	71 dB(A)

These levels are well below those at which hearing can be damaged, and below levels at which action is required under the Noise at Work regulations.

Oil Leaks

All Penny Hydraulic lifts contain Tellus Type 32 hydraulic oil which is not considered hazardous as defined by EC legislation. Any spillage should be wiped up, not flushed away. Penny Hydraulics will collect and dispose of rags or sand used to soak up oil in an approved manner. Contact with the oil should be avoided as it may cause transient irritation. Wash affected areas with soap and water or in the case of eyes, just water. If irritation persists, seek medical attention.

Terminal Disposal

Penny Hydraulics Ltd will remove and dispose of the entire lift in an environmentally sound manner when required.

Survey, Installation and Commissioning

All Penny Hydraulics lifts are manufactured to a high standard and can be installed in many diverse situations. Since no two applications are the same, this lift is custom-made following a site survey and risk assessment.

It is assembled in the factory and delivered on site and cannot be altered. It is therefore essential that when the original survey is carried out, that all dimensions and facts that may affect installation are correct. The following section explains the important points at various situations.

Survey

A trained person must perform the survey and complete a site assessment form, as it is part of the installation risk assessment and layout evaluation. A quotation may be derived from an architect's drawing, but knowledge of the intended use and a site survey is essential as the job progresses to take full account of the special requirements of the task and location.

Installation

All installations must be carried out by qualified engineers trained in the method of installation and approved by Penny Hydraulics. It is important to note that should a non-approved engineer on installation cause damage or fault, this could invalidate the warranty.

- Clear the working area.
- Check all dimensions before unloading.
- Manoeuvre the lift into position noting that this will normally require a crane mounted on the delivery vehicle or chain blocks fixed inside the building. Lifts can be made in two or more sections to aid manual handling and then assembled in position.
- Bolt the lift to the floor and back wall or framework. It is essential that a sound fixing is obtained at the top of the lift. Welding may be required.
- Locate and mount the power pack such that the operator is in a safe position at the bottom but has sight of the lift.
- Erect any guarding necessary as previously agreed. This is sometimes done earlier in the installation process depending on site circumstances and how the lift fits into the structure.
- Couple all electric and hydraulic connections. They must all be fastened securely and neatly back. It is possible to commission lifts on a temporary supply and then an electrician couple into a permanent supply prior to lift going into service.

Commissioning

- Perform all pre-commissioning checks;
    - All hose connections are tight and not leaking.
    - Hoses to be fastened back securely
    - All nuts and bolts are tight and safety lock pins in place
- Switch on the power and by listening, ensure the motor is running smoothly
- Operate the lift up and down and check the direction matches the signage.
- Run the lift up and down empty five times
- Run the fully loaded lift up and down five times.
- Check the speed of descent. Adjust to between 0.5 to 0.75 metres/sec.
- Perform a 25% Static Load test. Check hoist mountings for security.
- Remove load and run the platform for a further five times up and down, the platform should run smoothly at all times, and the rollers should remain cool.
- Check for any oil leaks on the hose connections, around the power pack and at the base of the main pillar.
- Check the power pack mountings, minimum two M8 bolts.
- Check that the lift mountings are secure to the floor. A minimum of two M10 bolts or equivalent in total.
- Check that the lift mountings are secure to the wall at the top. A minimum of two M10 bolts or equivalent are required at each side.
- Check for correct operation of all lift features and safety devices.
- Where applicable, check that the platform locks in the folded position and that the safety hook is in place.
- Check that all notices are posted correctly.
- Train an appointed person on site in all operational procedures and safety precautions. Enter details in the training register at the back of this manual.
- Enter your own details on the work record.
- Complete a test/commissioning certificate.

Declaration of Conformity

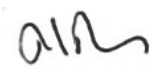
This declaration relates exclusively to the machinery in the state in which it was supplied, and excludes components, which are added, and/or operations carried out subsequently by the final user.

Penny Hydraulics Limited hereby declares that the product(s) listed below:

Model
MezzLift
Serial Number(s)
00000 to 99 000

Conform to the essential requirements of 2006/42/EC Machinery Directive of the European Community.

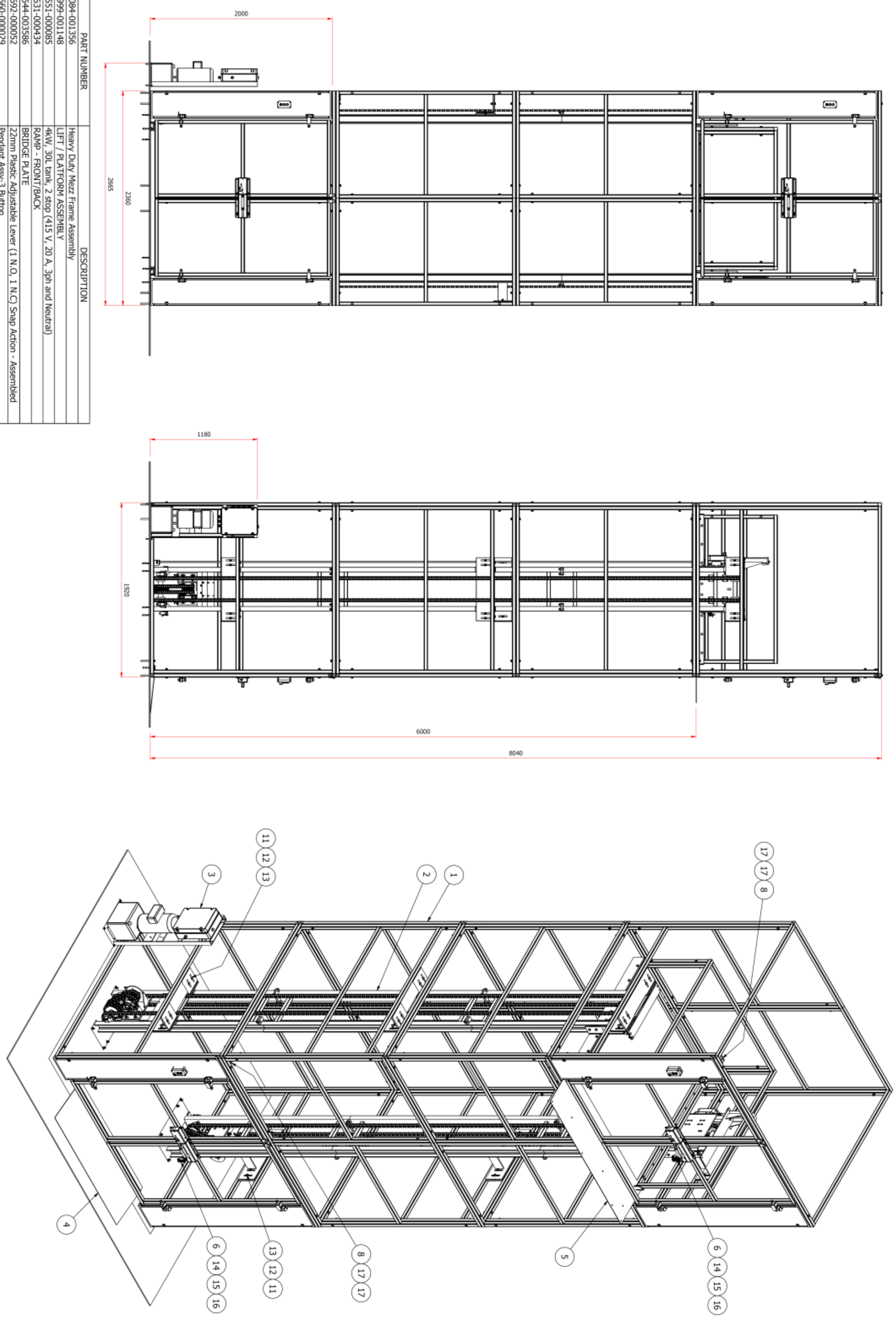
Applied Harmonised Standards
EN 12100:2010 Safety of Machinery - General Principles for Design
Other Technical Standards and Specifications
BS EN ISO 4413:2010 Hydraulic Fluid Power. General Rules and Safety Requirements. **BS EN 60204-1:2006+A1:2009 Safety of Machinery. Electrical Equipment of Machines. General Requirements.** **BS EN 61000-6-3:2001 Electromagnetic Compatibility (EMC). General Standards.** **The Lifting Operations and Lifting Equipment Regulations 1998.** **The Provision and Use of Work Equipment Regulations 1998** **HSE Guidance LAC 49/10: Power operated cellar hoists for beer containers**
All information is given within a Technical File compiled by: Mr Terry Brocklehurst c/o Penny Hydraulics Ltd.
Penny Hydraulics Limited, Station Road Industrial Estate, Station Road, Clowne, S43 4AB.

Place	Penny Hydraulics Limited	**Signature:**	
Date	27/10/2019	**Full Name**	R.G. Penny
		Position	Managing Director

BS EN ISO 9001: 2008 British Standards Institute Registered Company Certificate No. FM 20203

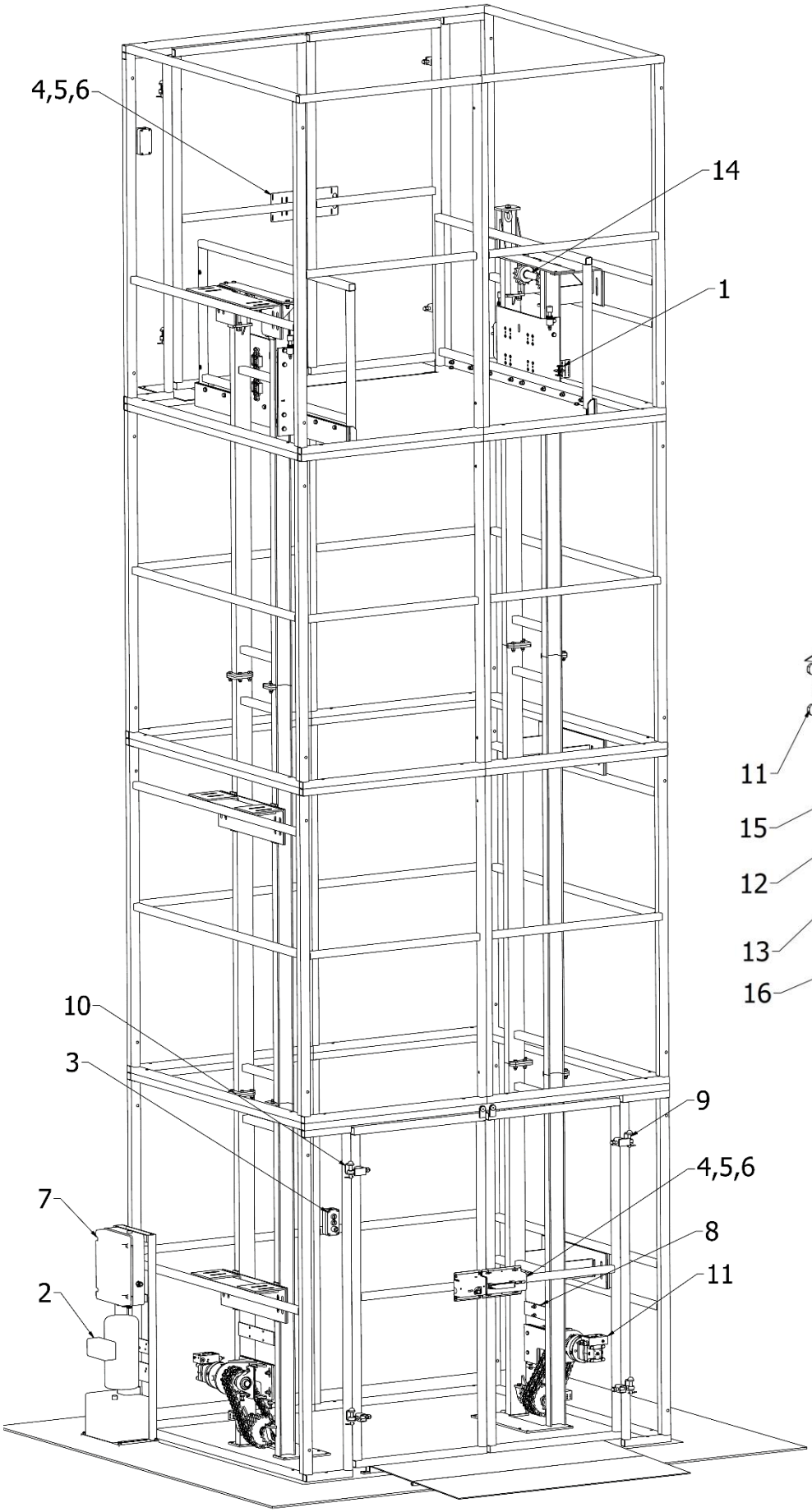
General Arrangement

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	084-001356	Heavy Duty Mezz Frame Assembly
2	1	999-001148	LIFT / PLATFORM ASSEMBLY
3	1	551-000085	4kW, 30L tank, 2 stop (415 V, 20 A, 3ph and Neutral)
4	1	631-000434	RAMP - FRONT/BACK
5	1	544-003586	BRIDGE PLATE
6	2	692-000052	22mm Plastic Adjustable Lever (1 N.O, 1 N.C) Snap Action - Assembled
7	2	560-000029	Pendant Assy-3 Button
8	2	195-000061	Box 80 x 80 x 52 IP 65
9	14	009-000009	HST STUD ANCHOR- M12 x 115 STEEL GALVANISED
10	10	011-000270	M12 Anchor Bolt 160mm long
11	58	761-12A002	M12 Plain Washer(Form A)BZP
12	24	253-120802	M12 Nyloc Grade 8 BZP
13	24	206-120452	M12 x 45 Hex Hd Bolt-8.8 BZP
14	4	416-040350	M4 x 35 Hex Skt Hd Capscrew-Stainless A2
15	4	253-04A200	M4 Nyloc Grade A2
16	4	761-04A002	M4 Plain Washer(Form A)BZP
17	4	ISO 7049 - ST 4.8 x 9.5 - F - Z	Cross recessed pan head tapping screws



Spares List (See P18 for Drawing)

Label	Part No.	Description
1	692-000052	Limit Switch
2	550-000077	4Kw Power Pack
3	560-000029	Control Button Unit
4	186-000002	Interlock
5	692-000052	Interlock Slider
6	064-000020	Interlock Housing Assembly
7	052-000669	Control Panel
8	FD-PM2RV	Flow Divider
9	158-000031	Gate Hinge - RHS
10	158-000030	Gate Hinge - LHS
11	614-000043	MSS250cc motor/LBS289-63CB brake/KPBS dual valve assembly
12	-	1” BS Roller Chain
13	033-000005	Bearing block 1 1/4" shaft
14	017-00243	Idle Driveshaft
15	017-000238	Upper Driveshaft
16	017-000241	Lower Driveshaft
	-	3/8” BSP Hoses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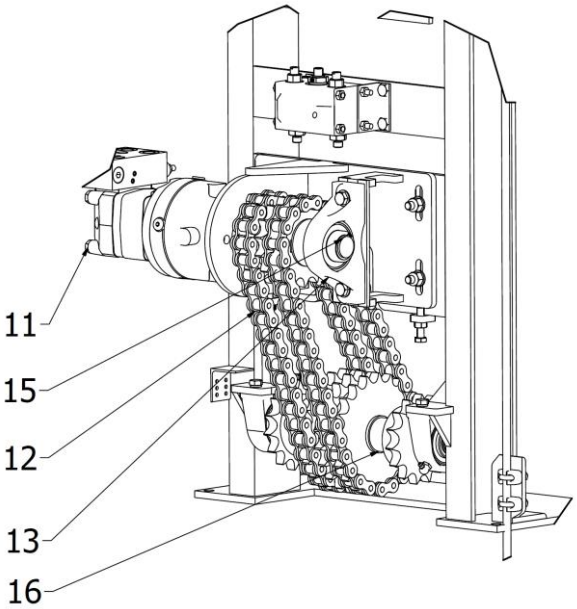
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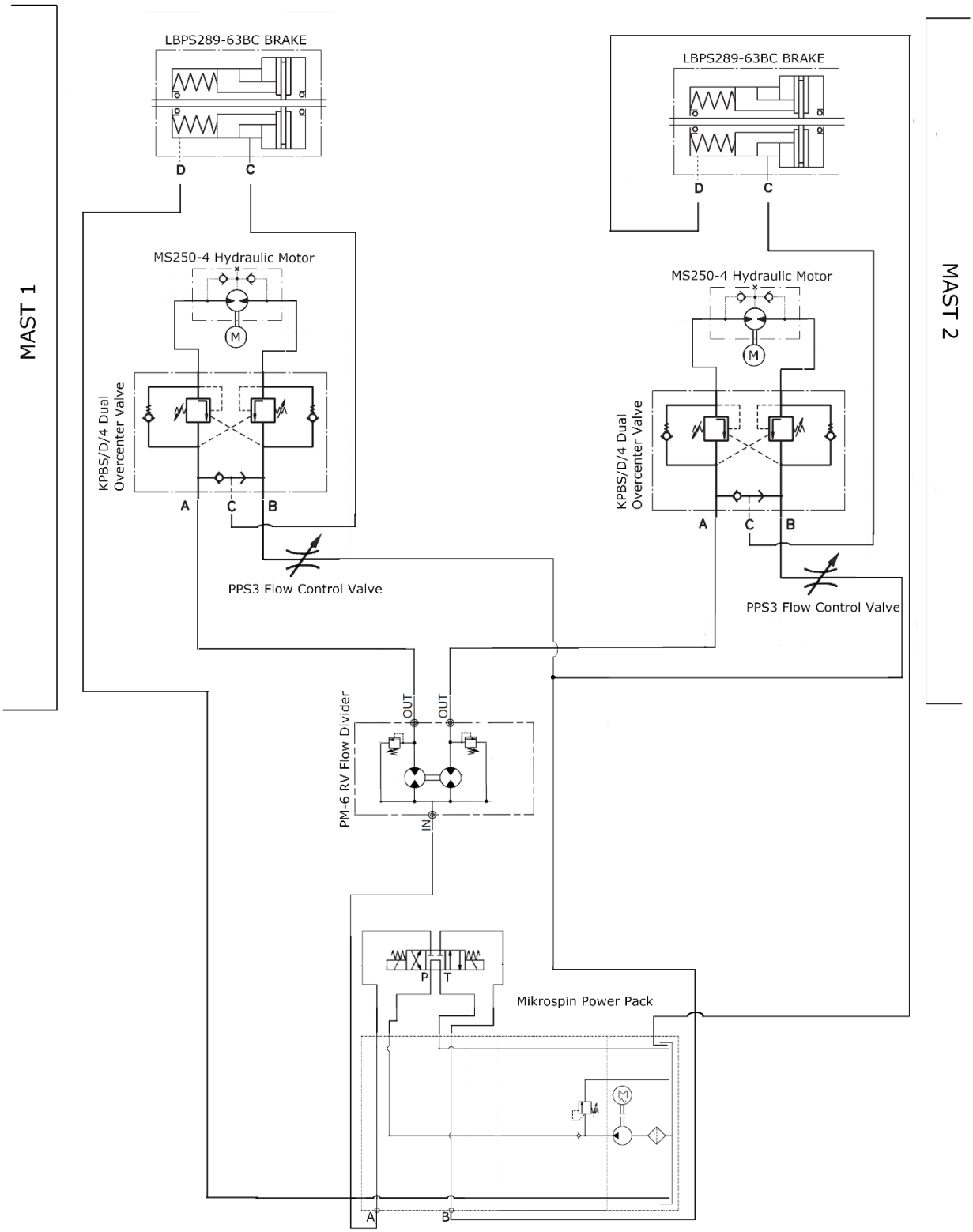
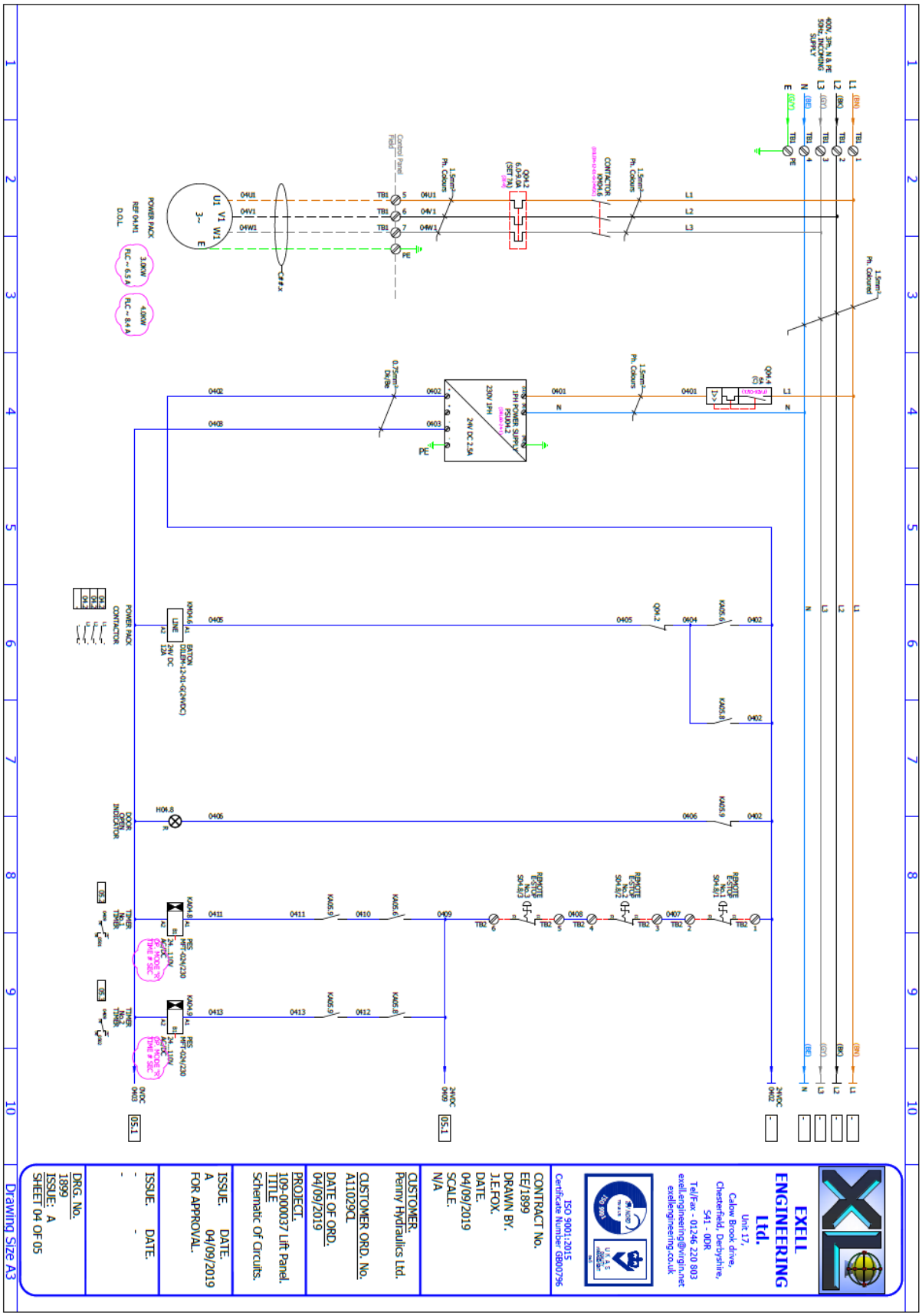
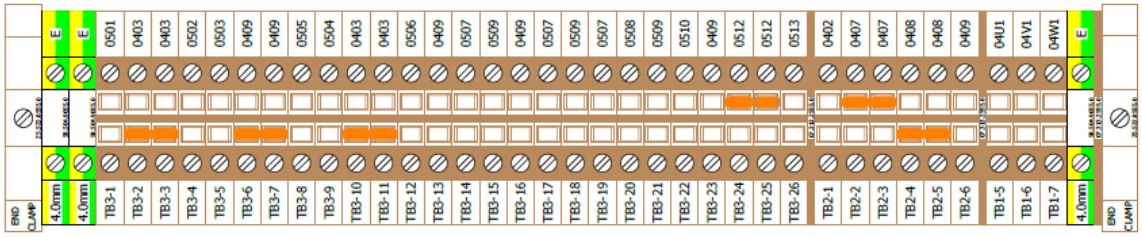
Hydraulic Diagram

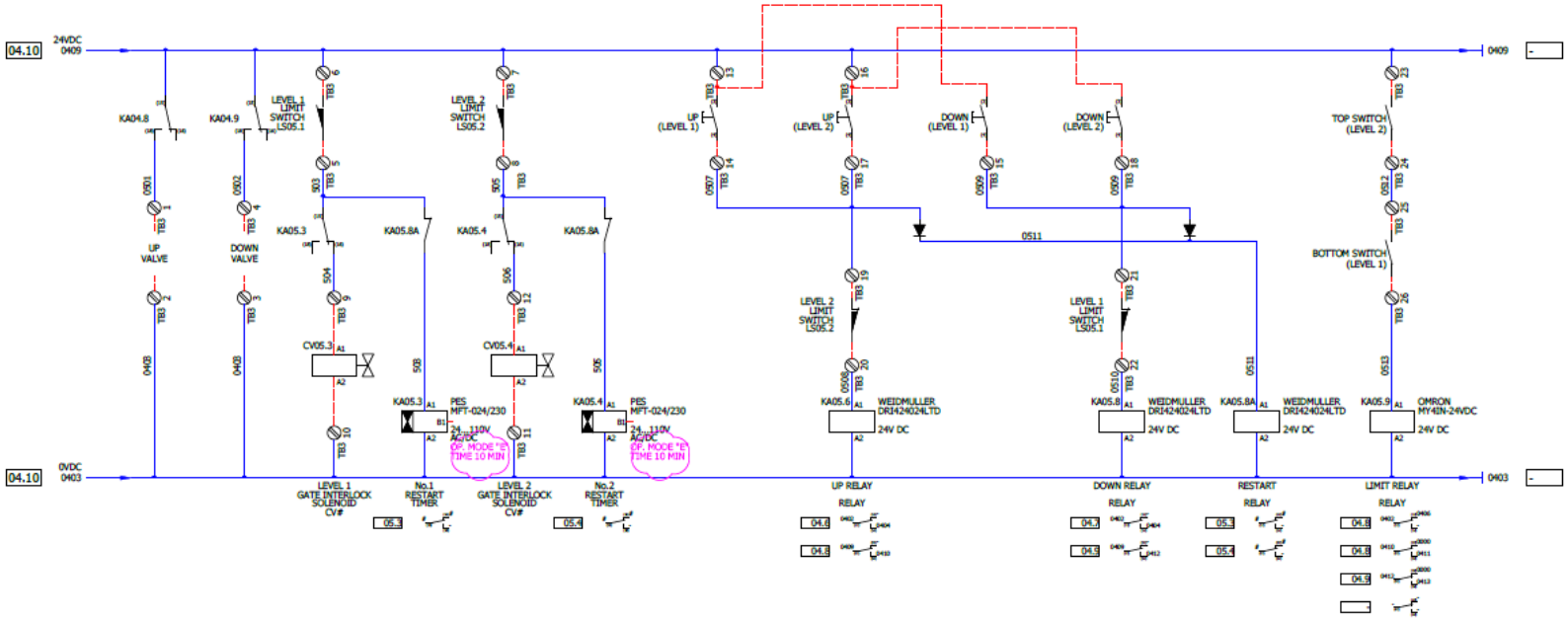


Electrical Diagrams



ALL TERMINALS 4.0mm





EXELL ENGINEERING Ltd.

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Chesterfield, Derbyshire,
S41 - 0DR
Tel/Fax - 01246 220 803
exell.engineering@virgin.net
exellengineering.co.uk

ISO 9001:2015
Certificate Number GB00796

CONTRACT No.
EE/1899
DRAWN BY.
J.E.FOX.
DATE.
04/09/2019
SCALE.
N/A

CUSTOMER.
Penny Hydraulics Ltd.

CUSTOMER ORD. No.
A11029CL

DATE OF ORD.
04/09/2019

PROJECT.
109-000037 Lift Panel.
TITLE
Schematic Of Circuits.

ISSUE.	DATE.
A	04/09/2019
FOR APPROVAL.	

ISSUE.	DATE.
-	-
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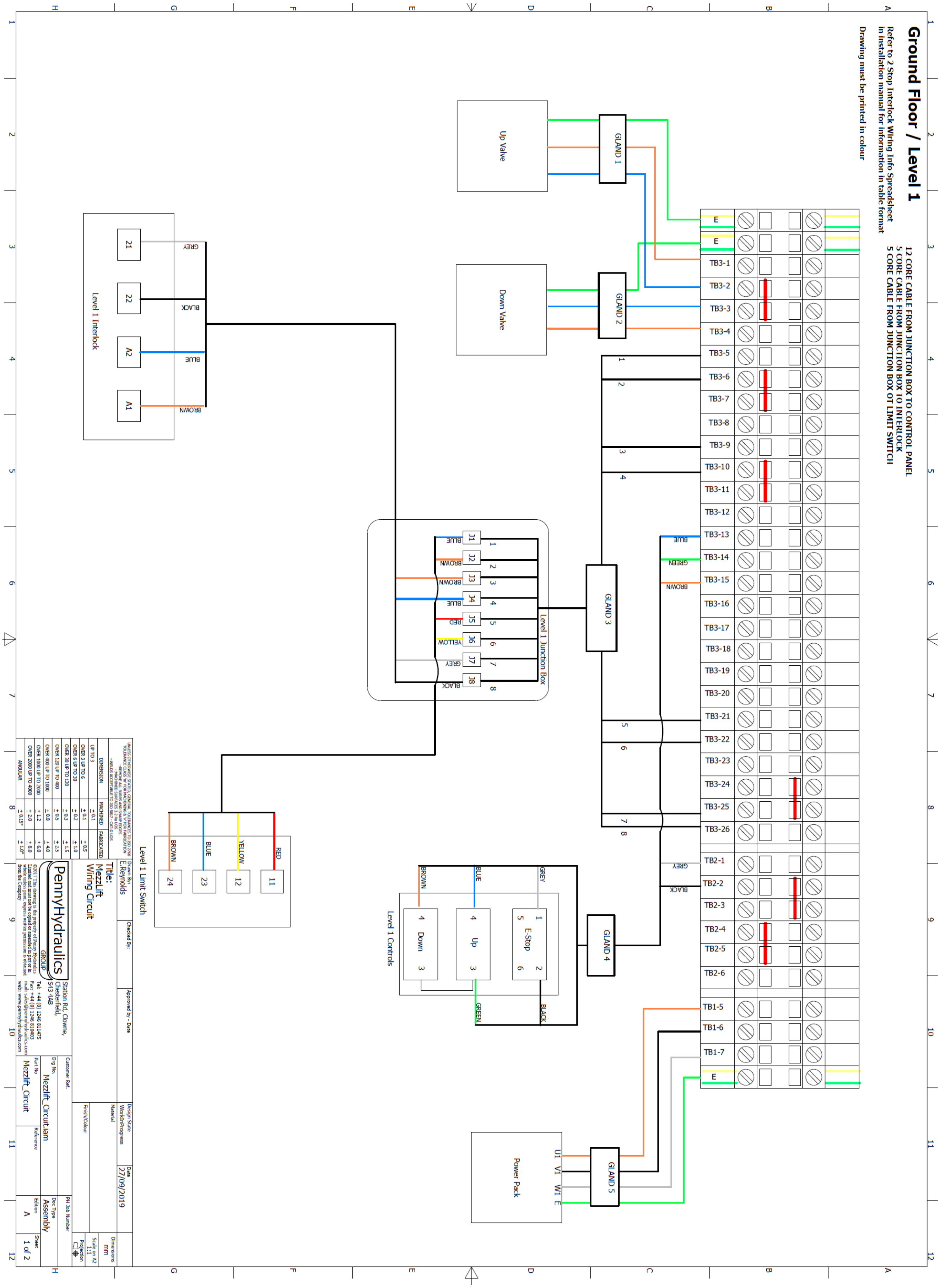
DRG. No.
1899
ISSUE: A
SHEET 05 OF 05

Drawing Size A3

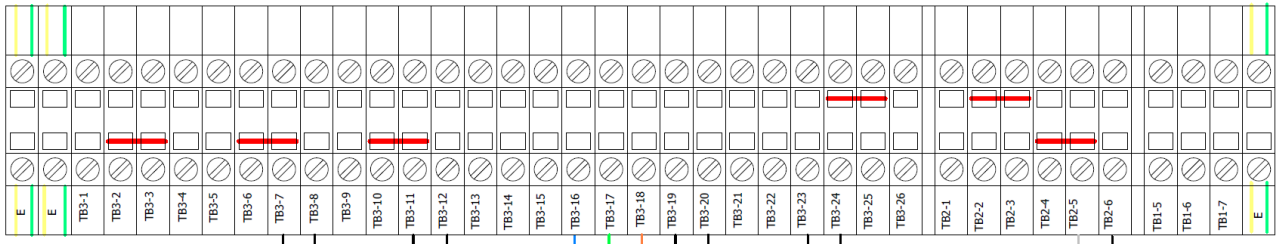

Ground Floor / Level 1
Refer to 2 Stop Interlock Wiring Info Spreadsheet in installation manual for information in table format
Drawing must be printed in colour
12 CORE CABLE FROM JUNCTION BOX TO CONTROL PANEL
5 CORE CABLE FROM JUNCTION BOX TO INTERLOCK
5 CORE CABLE FROM JUNCTION BOX OT LIMIT SWITCH
Up Valve
GLAND 1
Down Valve
GLAND 2
GLAND 3
GLAND 4
GLAND 5
Level 1 Interlock
Level 1 Junction Box
Level 1 Limit Switch
Level 1 Controls
E-Stop
Up
Down
Power Pack
U1 V1 W1 E
E
TB3-1
TB3-2
TB3-3
TB3-4
TB3-5
TB3-6
TB3-7
TB3-8
TB3-9
TB3-10
TB3-11
TB3-12
TB3-13
TB3-14
TB3-15
TB3-16
TB3-17
TB3-18
TB3-19
TB3-20
TB3-21
TB3-22
TB3-23
TB3-24
TB3-25
TB3-26
TB2-1
TB2-2
TB2-3
TB2-4
TB2-5
TB2-6
TB1-5
TB1-6
TB1-7
GREY
BLACK
BLUE
BROWN
GREEN
RED
YELLOW
J1 J2 J3 J4 J5 J6 J7 J8
21 22 A2 A1
24 23 12 11
Drawn By: E.Reynolds
Title: Mezzlift Wiring Circuit
PennyHydraulics GROUP
Station Rd, Clowne, Chesterfield, S43 4AB
Dwg No. Mezzlift_Circuit.iam
Part No. Mezzlift_Circuit
Design State WorkInProgress
Date 27/09/2019
Doc Type Assembly
Edition A
Sheet 1 of 2
Dimensions mm

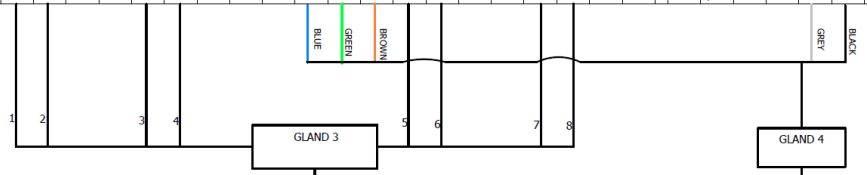
Upper Floor / Level 2

Refer to 2 Stop Interlock Wiring Info Spreadsheet
in installation manual for information in table format

Drawing must be printed in colour

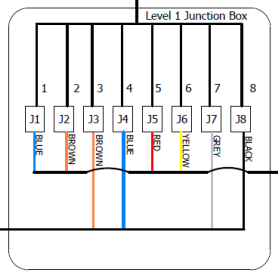
12 CORE CABLE FROM JUNCTION BOX TO CONTROL PANEL
5 CORE CABLE FROM JUNCTION BOX TO INTERLOCK
5 CORE CABLE FROM JUNCTION BOX OT LIMIT SWITCH

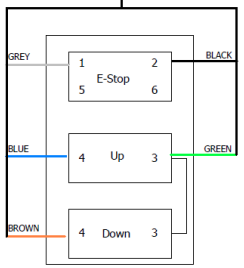




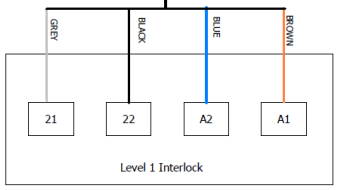
GLAND 3

GLAND 4

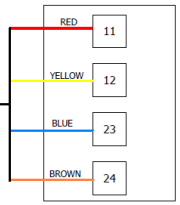




Level 1 Controls



Level 1 Interlock



Level 1 Limit Switch

DIMENSION	MACHINED	FABRICATED
UP TO 3	± 0.1	
OVER 3 UP TO 6	± 0.1	± 0.5
OVER 6 UP TO 30	± 0.2	± 1.0
OVER 30 UP TO 120	± 0.3	± 1.5
OVER 120 UP TO 400	± 0.5	± 2.5
OVER 400 UP TO 1000	± 0.8	± 4.0
OVER 1000 UP TO 2000	± 1.2	± 6.0
OVER 2000 UP TO 4000	± 2.0	± 8.0
ANGULAR	± 0.15°	± 1.0°

Drawn By: E.Reynolds
Checked By:
Approved by - Date
Design State: WorkInProgress
Date: 27/09/2019
Material
Finish/Colour
Dimensions: mm
Scale on A2: 1:1
Projection

Title:
MezzLift
Wiring Circuit

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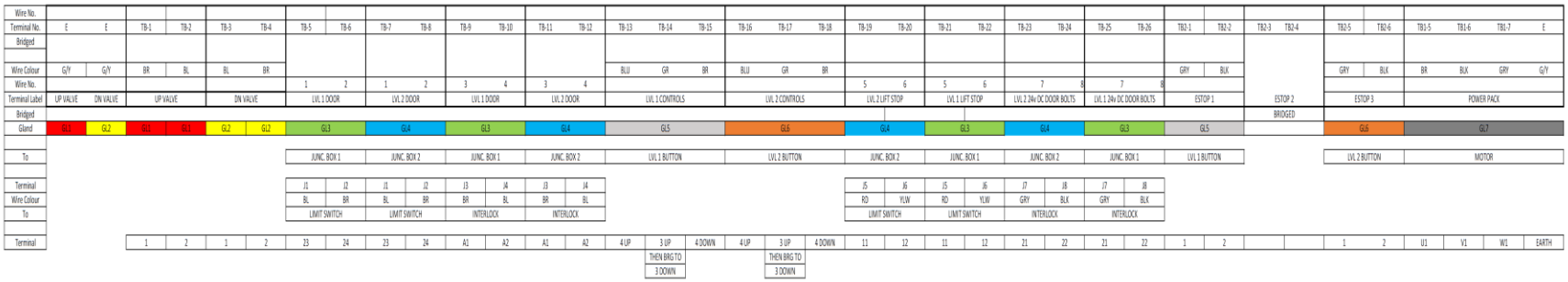
Customer Ref.
Drg No. Mezzlift_Circuit.iam
PH Job Number
Doc Type: Assembly
Part No: Mezzlift_Circuit
Reference
Edition: A
Sheet: 2 of 2



BR	BROWN
RD	RED
GRY	GREY
BLK	BLACK
YLW	YELLOW
BRG	BRIDGE
G/Y	GREEN/YELLOW
GL1	UP VALVE
GL2	DOWN VALVE
GL3	JUNC. BOX 1
GL4	JUNC. BOX 2
GL5	LVL 1 BUTTON
GL6	LVL 2 BUTTON
GL7	MOTOR

LEVEL 1 JUNCTION BOX - GLAND 3

12 CORE CABLE FROM PANEL TO JUNCTION BOX - 5 CORE CABLE FROM JUNCTION BOX TO LIMIT SWITCH / INTERLOCK

TERMINAL	5	6	9	10	21	22	25	26
FROM	PANEL	PANEL	PANEL	PANEL	PANEL	PANEL	PANEL	PANEL
WIRE NO. (12 Core)	1	2	3	4	5	6	7	8
TO TERMINAL	J1	J2	J3	J4	J5	J6	J7	J8
JUNCTION BOX								
FROM TERMINAL	J1	J2	J3	J4	J5	J6	J7	J8
WIRE COLOUR	BLUE	BROWN	BROWN	BLUE	RED	YELLOW	GREY	BLACK
TO	LIMIT SWITCH	LIMIT SWITCH	INTERLOCK	INTERLOCK	LIMIT SWITCH	LIMIT SWITCH	INTERLOCK	INTERLOCK
TERMINAL	23	24	A1	A2	11	12	21	22

LEVEL 2 JUNCTION BOX - GLAND 4

12 CORE CABLE FROM PANEL TO JUNCTION BOX - 5 CORE CABLE FROM JUNCTION BOX TO LIMIT SWITCH / INTERLOCK

TERMINAL	7	8	11	12	19	20	23	24
FROM	PANEL	PANEL	PANEL	PANEL	PANEL	PANEL	PANEL	PANEL
WIRE NO. (12 Core)	1	2	3	4	5	6	7	8
TO TERMINAL	J1	J2	J3	J4	J5	J6	J7	J8
JUNCTION BOX								
FROM TERMINAL	J1	J2	J3	J4	J5	J6	J7	J8
WIRE COLOUR	BLUE	BROWN	BROWN	BLUE	RED	YELLOW	GREY	BLACK
TO	LIMIT SWITCH	LIMIT SWITCH	INTERLOCK	INTERLOCK	LIMIT SWITCH	LIMIT SWITCH	INTERLOCK	INTERLOCK
TERMINAL	23	24	A1	A2	11	12	21	22

LEVEL 1 INTERLOCK

TERMINAL	TO	TERMINAL	TO	TERMINAL
25	PANEL	J7	JUNC. BOX 1	21
26	PANEL	J8	JUNC. BOX 1	22
9	PANEL	J3	JUNC. BOX 1	A1
10	PANEL	J4	JUNC. BOX 1	A2

EARTH WIRES CUT OFF

LEVEL 2 INTERLOCK

TERMINAL	TO	TERMINAL	TO	TERMINAL
23	PANEL	J7	JUNC. BOX 1	21
24	PANEL	J8	JUNC. BOX 1	22
11	PANEL	J3	JUNC. BOX 1	A1
12	PANEL	J4	JUNC. BOX 1	A2

EARTH WIRES CUT OFF

LEVEL 1 CONTROL BUTTONS - GLAND 5

TERMINAL	TO	TERMINAL	FUNCTION	TERMINAL	TO	TERMINAL
TB2-1	PANEL	1 / 5	E-STOP	2 / 6	PANEL	TB2-2
TB-13	PANEL	4	UP	3	PANEL	TB-14
TB-15	PANEL	4	DOWN	3	BUTTONS 1	3 UP

LEVEL 1 LIMIT SWITCH

TERMINAL	TO	TERMINAL	TO	TERMINAL
5	PANEL	J1	JUNC. BOX 1	23
6	PANEL	J2	JUNC. BOX 1	24
21	PANEL	J5	JUNC. BOX 1	11
22	PANEL	J6	JUNC. BOX 1	12

EARTH WIRES CUT OFF

LEVEL 2 LIMIT SWITCH

TERMINAL	TO	TERMINAL	TO	TERMINAL
7	PANEL	J1	JUNC. BOX 1	23
8	PANEL	J2	JUNC. BOX 1	24
19	PANEL	J5	JUNC. BOX 1	11
20	PANEL	J6	JUNC. BOX 1	12

EARTH WIRES CUT OFF

LEVEL 2 CONTROL BUTTONS - GLAND 6

TERMINAL	TO	TERMINAL	FUNCTION	TERMINAL	TO	TERMINAL
TB2-5	PANEL	1 / 5	E-STOP	2 / 6	PANEL	TB2-6
TB-16	PANEL	4	UP	3	PANEL	TB-17
TB-18	PANEL	4	DOWN	3	BUTTONS 1	3 UP

Training Register

Date	Trained Operator	Signature	Trained By	Signature

The latest health and safety legislation requires that all employers ensure every supervisor and/or operator of work equipment has received adequate training in method, risk and safety precautions.

Penny Hydraulics offers nationwide training by qualified instructors for the full range of lifting equipment. Training includes practical and theoretical input from the delegates, with a certificate of competence issued on successful completion of the course.

Record of Revision
Work Record for:

Date	Work Done /Comments	Engineer	Company