

LOADING PILLAR FOR STUFFING TROLLEYS 200L



MAINTENANCE MANUAL

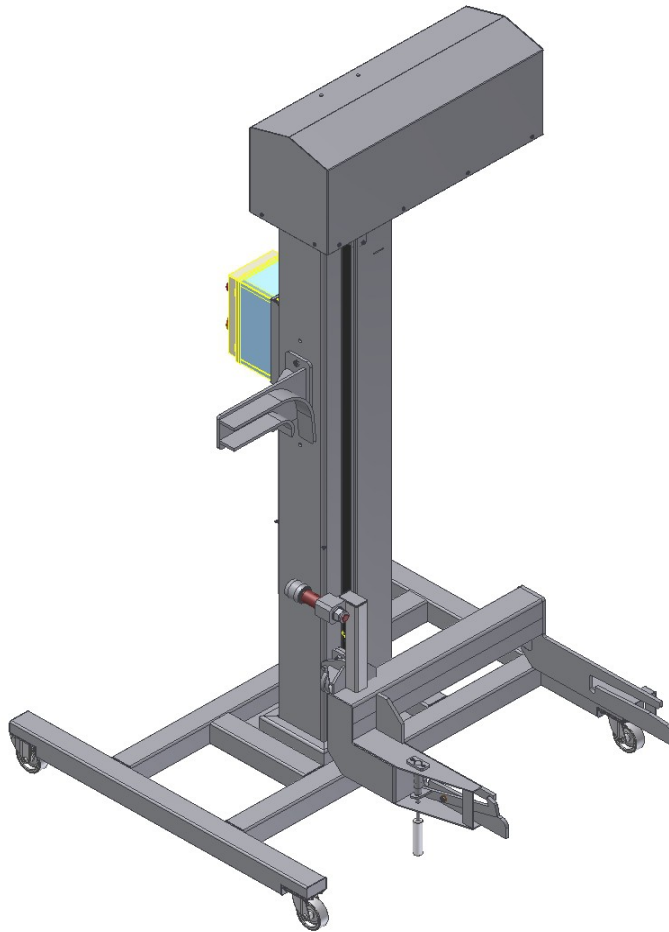


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1. Specification.

Engine power	-	0,75 kW
Power supply	-	3x220V, 60 Hz
Lifting speed	-	4,2 m/min.
Lifting capacity	-	max. 300 kg
Weight	-	~250kg

Serial number

Production year

Due to continual machine improvements, this user manual only applies to the loading pillar, which is included in accordance with the serial number. We guarantee a ten-year period of spare parts supply, from the date of machine manufacturing.

Electrical installation ensures proper operation of all modules with voltage fluctuations in the electric supply system 3x400/220V 10% and frequency \pm of 60 Hz \pm 2%.

2. Spare parts list

BEARING 60052Z -2 pc
BEARING 62092Z -2 pc
BEARING 6204 2Z -2 pc
CHAIN 16B1 -6 lm
CHAIN LINK 16B1 -3 pc
GEAR MOTOR ZS-790/16 -1 pc
HALF CLIP 16B1 -2 pc
SEGER Z45 -1 pc
SEGER W-85 -1 pc
SEGER Z 25 -1 pc
SEGER Z20 -1 pc
SEGER W47 -2 pc
SELF STOPPING NUT M24 -1 pc
SIMMERING 25X47X7 -1 pc
SPROCKET Z12 -1 pc
SPROCKET Z10 -1 pc

3. Technical description

3.1 Purpose

Loading pillar is designed to transport meat being processed and placed in stuffing trolleys U-200 (in accordance with norm DIN-9797) to meat processing machines such as mincers, mixers, stuffers etc. There is possibility to combine the loading pillar with meat processing machine.

3.2 Construction

Loading pillar with base (in option) is a column with slider inside. It moves by means of rollers on internal surfaces of column. For trolley lifting and lowering it uses chain lifter. There is a fork cradle, fixed with connector to the slider, into which a standard stuffing trolley (in accordance with norm DIN-9797) is lead. To turn the device on, there are 2 buttons placed on control cabinet or on control panel (version when pillar is combined with other device) To turn it off in extreme positions of trolley, there are limit switches installed. All external surfaces are made of stainless steel. The fork cradle (catch), can be performed in 2 different versions, according the requirements.

4. Preparation for initial startup

4.1 Machine placement

Placing the machine should take into account dimensions given in the drawings of this manual and user technological requirements.

Leveling the device is made by means of 4 screws M12 located in the basis (not applicable to mobile loading pillar). Sticking out parts of screws, cut off after leveling. Before starting regular exploitation try how the device move the trolley.

- the first attempt to carry out without trolley
- then check the loading pillar with an empty trolley
- we carry out a third test with full load

The tests shall be performed with special precautions and it's not allowed to stay in loading pillar working area.

4.2 Limit switches regulation

Lower limit switch need to be set in the position to turn off the lifter when the fork cradle reach height **h** (fig. no. 1) Height **h** set in the facility to make an easy entrance of stuffing trolley into fork cradle. To do this, remove the cover. Loosen the screws **3**. Set the plate **1** with a limit switch **2**, in the way that after cam no **5** meets lever and fork cradle reaches height **h**, the lifter will switch off. Next, tighten screws **3**. In the same time with setting up the limit switch, need to adjust, by tightening or loosening, bumper no. **4** in the way that hook **6** allow easy entrance of stuffing trolley into fork cradle.

Position of upper limit switch was fixed in factory and doesn't require regulation if height of unloading **h** is suitable (fig. no. 2)

Height of unloading **H**, **is adjustable, according needs, in range** $H_{min}=1250 - H_{max}=1500$ in increments of 75mm. For this purpose, must be mounted guide **7** in new position, keeping

in mind the strong tightening the screws **8**. Then, adjust the upper limit switch (as the lower one) paying attention to the highest position of the slider - the carriage has reach $\sim 40^\circ$ tilt.

Attention:

When changing the settings should pay special attention to the distance between the roll and front of the guide which can not be larger than 140mm. The setting is shown in Fig 2.

BAD SETTING OF SWITCHES MAY CAUSE DAMAGE TO LIFTING MECHANISM !!!

4.3. Chain tension adjustment (Fig. no. 3)

In the case of improper chain tension, it needs to be adjusted.

To do this:

1. Loosen the lock nut A
2. Tension the chain by tightening the bolt B
3. Tighten the nut A

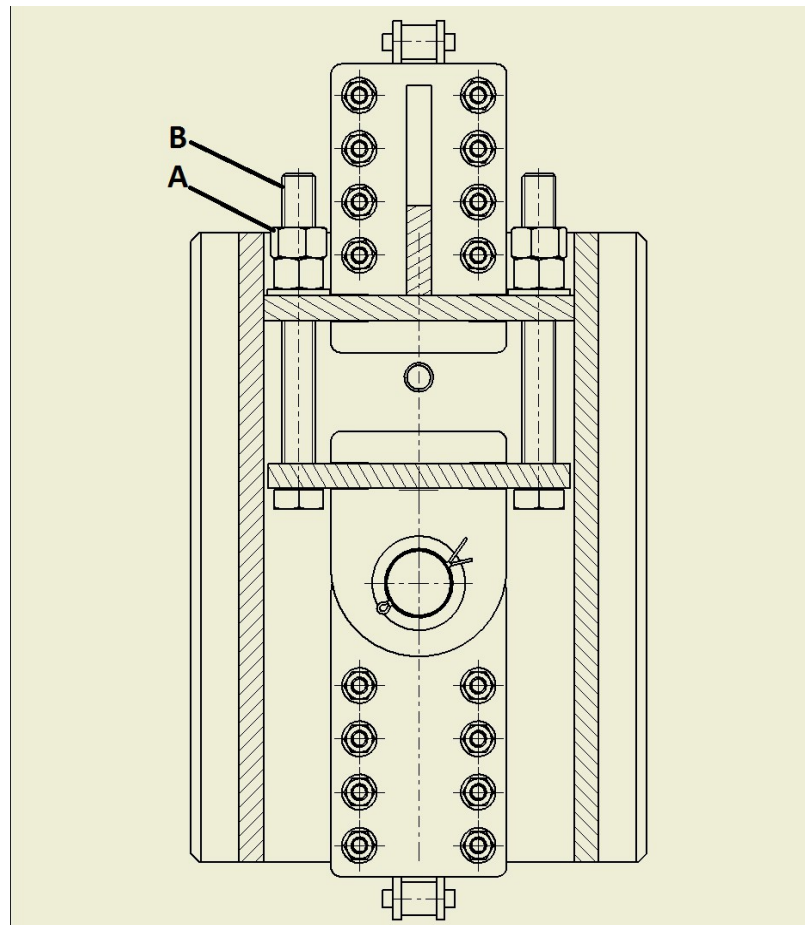


Fig. no. 3. Chain tension adjustment.

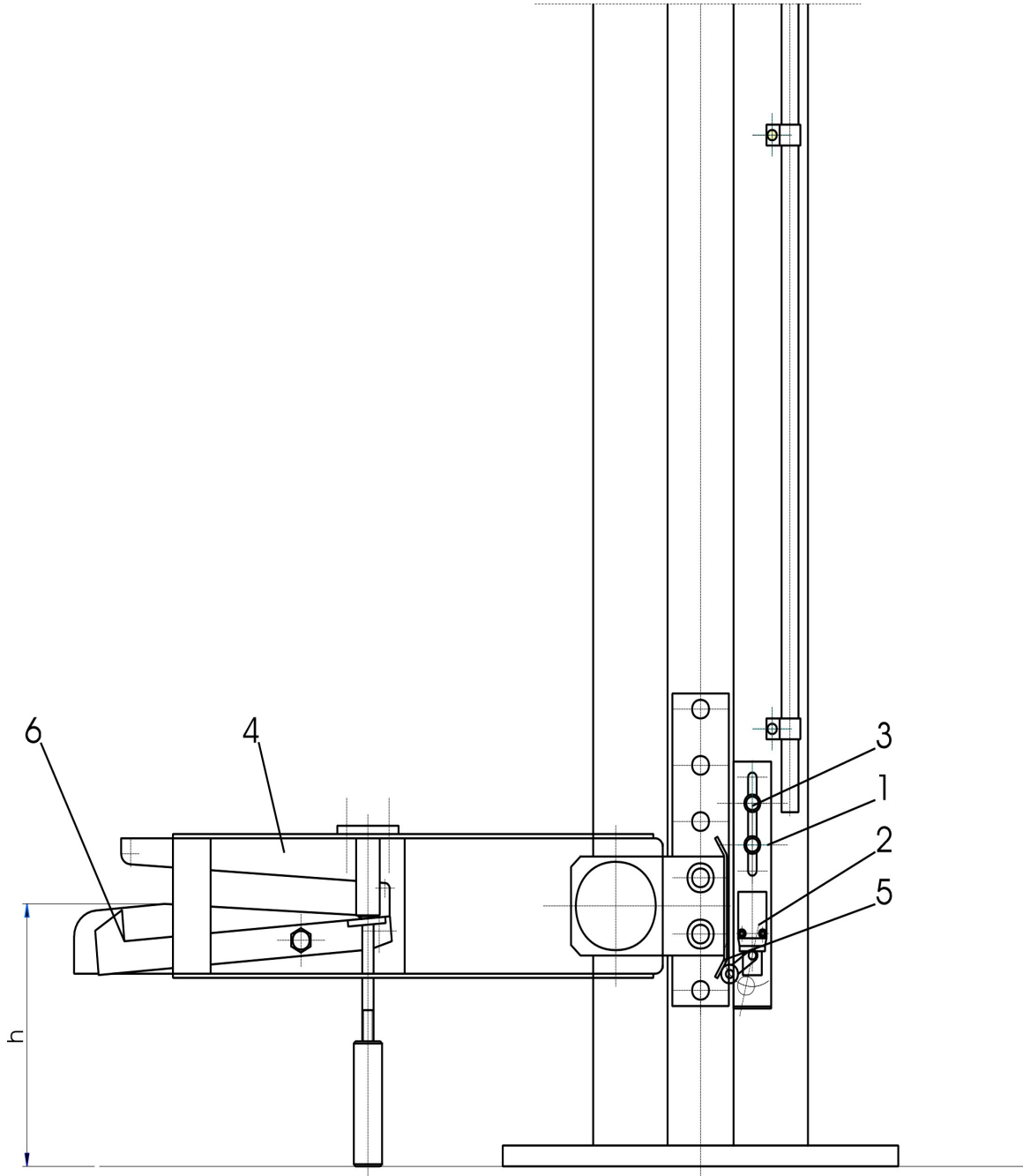


Fig. no 1. Setup of lower limit switch

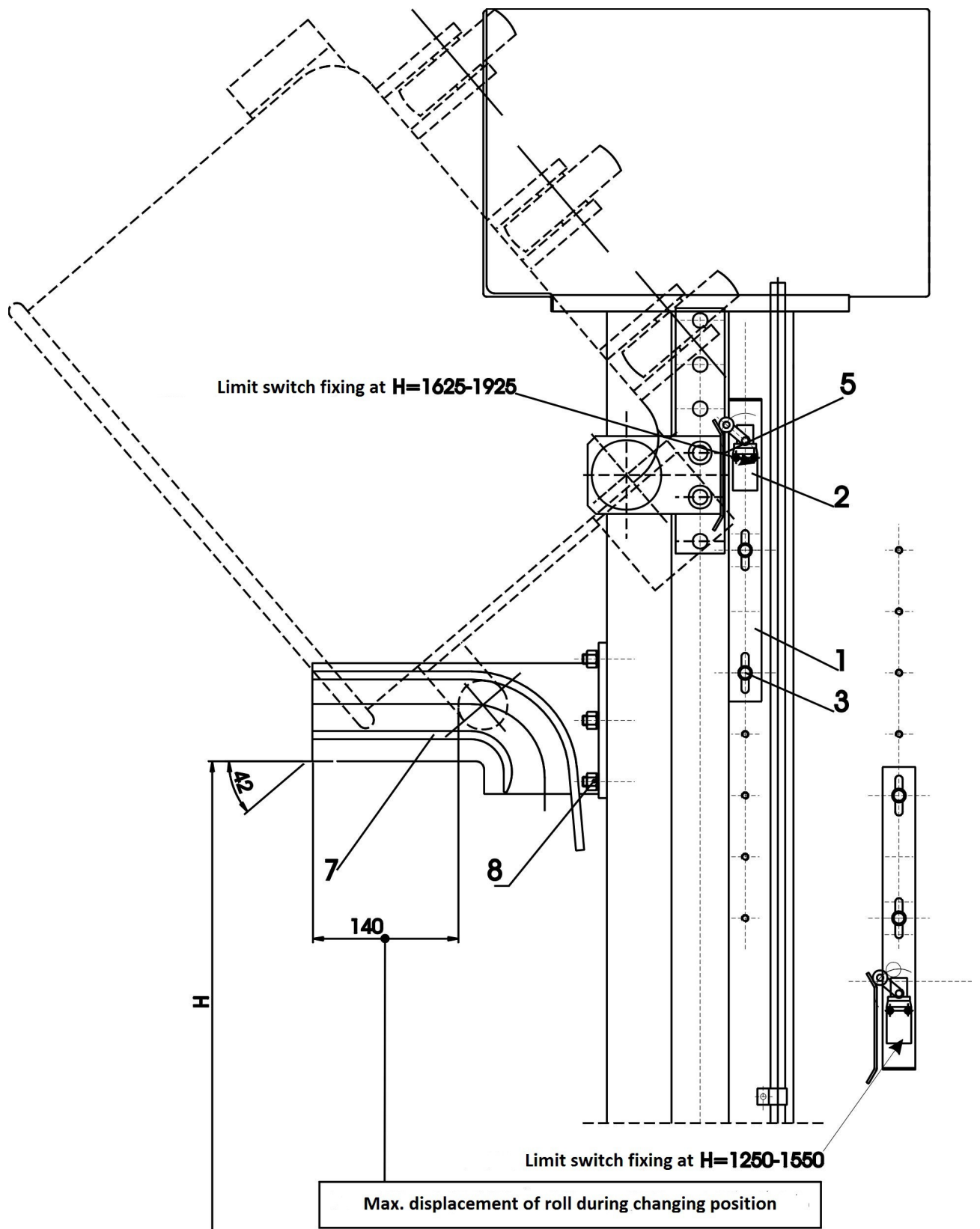


Fig. no. 2. Setup of upper limit switch.

5. Device connection to the mains

ATTENTION!

Work on the electrical system may perform an electrician with the appropriate qualifications and licenses.

Machine connection to power supply need to be carry out by flexible hose OPd 750V or similar 5x1,5mm² (Cu).

Check the effectiveness of zeroing by measuring the resistance of the connections of reset system, which in any section can not be greater than 0,1Ω and should be documented. In case of abnormality, chech and tighten all connections on power strips and clamps.

Check the limit switches. When raising and lowering the fork cradle , when it reach extreme positions, the drive should be turned off. Do not use the machine if drive is not switched off after rea cooperating ching extreme positions. It's possible to combine loading pillar control with cooperating machine control panel. Such connection must be in accordance with the wiring diagram and notes contained there.

6. Safety instruction

LOADING PILLAR CAN BE CONNECTED TO THE MAINS ONLY WITH EFFECTIVE ZEROING. ALL REPAIRS, WASHING, CLEANING, MAINTENANCE SHOULD BE PERFORMED AFTER DISCONNECTING THE DEVICE FROM POWER SUPPLY.

6.1. Observance of guides included in the user manual

- * The basic premise of security is the knowledge of and compliance with health and safety regulations
- * This manual contains important instructions for safe operation.
- * Compliance with this manual, and in particular the safety instructions, applies to all persons employed on the machine.
- * In addition, observe the rules and regulations on the prevention of accidents in force in the place of foundation machines

6.2. User obligation

User is obligated to admission to the machine only personnel who:

- * is familiar with the regulations concerning safety at work and accident prevention and are able to use the machine properly

* were reading the chapters on safety and warnings, accepted them and confirmed by signature.

6.3 Personnel obligation

All persons, who will work with the machine, before start using the machine are obliged to :

- * observe the basic regulations for safety at work and accidents prevention
- * read a chapter about safety at work and warnings in the user manual and confirm it by its own signature that understood.

6.4 Hazards during use of the machine

Loading pillar was made in accordance with technical safety rules. Despite this, danger for body or life of the user or third party, or damage to the machine and other equipment may occur. The device may be use only:

- * in accordance with its purpose
- * technically efficient

Failures which could cause injury should be removed immediately.

6.5 Use in accordance with purpose

Loading pillar is intended for movement of meat placed in trolleys 200L, compliant with standard DIN 9797, to the meat processing machines. Inne lub wykraczające poza ten zakres użycie uznaje się jako użycie niezgodne z przeznaczeniem. Other or not as below use is considered as improper use. For damages resulting from such use, Revic Sp. z O.O. is not responsible.

As a proper use is also considered:

- * compliance with all the operating instructions from user manual
- * deadlines of maintenance works and inspections.

6.6 Checking the safety devices

At first start, check the effectiveness of the safety devices. This refers to check the operation of the limit switches.

Nie dopuszcza się żadnych zmian (przez osoby nieupoważnione) w urządzeniach zabezpieczających. It does not allowed to make any changes (by unauthorized personnel) in safety devices. Possible changes release us from the obligation to guarantee and responsibility.

6.7 Information security measures

- * The operating instructions must be always in the machine workplace
- * In addition to the user manual must have and abide by generally applicable regulations for the prevention of accidents

6.8 Personnel training

- * Only trained and designated personnel can operate the machine.
- * Personnel qualifications on the installation, commissioning, operation and maintenance must be confirmed. New trained personnel may only operate the machine under the supervision of an experienced person.

6.9 Safety measures in normal operation

- * Use the machine only when all protective devices are fully operational
- * To use with loading pillar use only operational stuffing trolleys
- * Before switching on the machine, make sure that the running machine doesn't threaten anyone.
- * Check at least once per shift, whether the machine doesn't show visible damages and protective devices are in working order.
- * Keep in mind that while the device is running, it is not allowed:
 - make immediate repairs and maintenance
 - placing hands into chain working area
 - remaining in trolley workplace area
 - touch voltage cables
 - flush with water or other liquids control board with electrical switches
 - to make a rapid, pulse changes of engine direction, e.g. in order to discharge the remaining pieces of meat. In this case you must manually discharge a meat from stuffing trolley or better before loading it's recommended to pour to the bottom of the trolley small amount of water - it'll prevent it from sticking meat mass to the trolley and facilitates unloading.

- * Comply with the terms inspection and maintenance in accordance with the attached table. Regularly check condition of the chain . Maintenance and repairs can be performed only by maintenance services personnel, having the adequate permissions to this and being familiar with the contents of this manual. Failure in the mentioned above rules frees the manufacturer from any claim for losses arising and accidents at work.

6.10 Electrical shock hazard.

Work on electrical installations may be carried out by appropriately qualified electrician.

- * Electrical equipment should be checked regularly. Loose connections and broken cables removed immediately
- * The control cabinet must always be closed, access to it is allowed only to authorized personell.

6.11 Specific site hazards

- Workspace of raised and lowered stuffing trolley (danger of crushing)
- Workspace of chain and guiding roller (risk of crushing fingers)

7. Operation

Before starting the lift, please read carefully the text of this manual and the technical description.

The entire cycle consists of the following steps:

- * Set the fork in the lower position
- * Place stuffing trolley in the forks till resistance occur and the hooks close on rails on sides of trolley
- * Push the upwards button - release of button causes stop of upwards movement of the trolley
- * After emptying the trolley, press the down button - release of button causes stop of down movement of trolley.
- * Move empty trolley out of fork
- * Next, lifting cycle repeats as described above

8. Maintenance and inspections

8.1 Cleaning

Remove grease and stuffing remains from all surfaces with hot water and proper detergents, everyday after end of work

8.2 Lubrication

Lubrication point	Grease or oil type	Lubrication method and quantity of lubricant	Lubrication interval -supplement
Lubrication of connector bearings	Grease ŁT-43 PN-72/C-36143	Fill max 2/3 of bearing chamber	min. once a year
Internal pillar corners under slider slide	Grease* ŁT-43 PN-72/C-36143	Manual grease gun #	min. once a month
Lower chain sprocket	Grease ŁT-43 PN-72/C-36143	Manual grease gun	min. once a month

Lubrication perform after setting the slider at height of nipples.

ATTENTION:

Inspections and maintenance actions perform in accordance with the attached Inspections and Maintenance Card, and confirm them with authorised personnel registration .

INSPECTIONS AND MAINTENANCE CARD

No.	Czynność	Required interval	Execution date	Name, signature
	2	3	4	5
1	Verification of chain tension and wear	min. once a month		
2	Lower chain sprocket lubrication	min. once a month		
3	Verification of limit switch position and operation	min. once a month		
4	Verification of: -welds of supporting elements -electrical installation	min. once in 6 months		
5	Check oil level in lift transmission	min. once in 3 months		
6	Connector bearings lubrication	min. once a year		
7	Sliders lubrication	min. once a month		

9. Warranty.

The manufacturer guarantees the reliability of the machine work within 12 months from the date of sale.

The warranty does not cover damage :

- mechanical,
- resulting from changes in the structure of the machine,
- resulting from bypassing security devices
- due to improper operation.