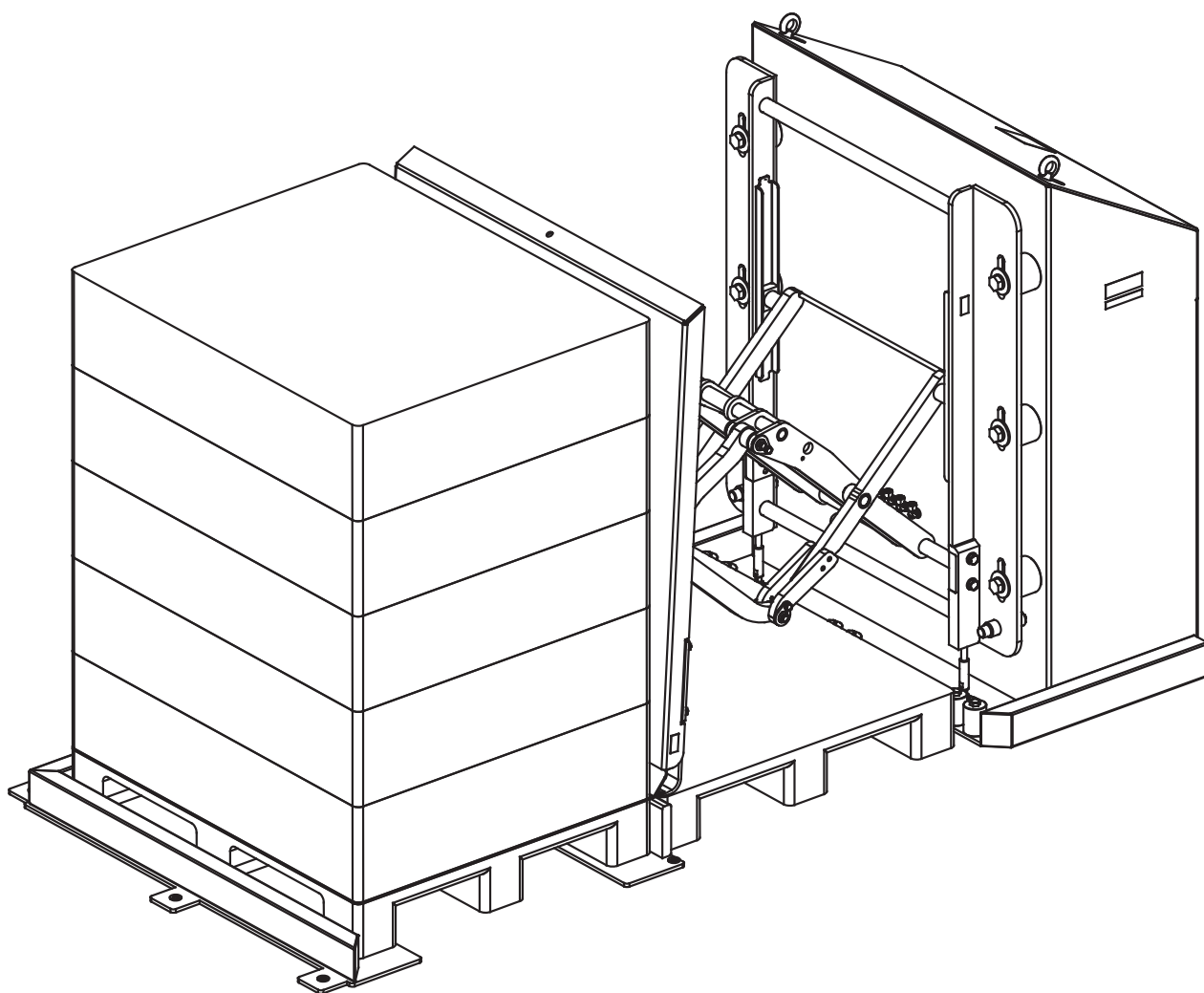


INSTRUCTIONS AND PARTS MANUAL

STATIONARY PULL INSTALLATION STAINLESS STEEL

SPI06-1020 RVS



ORIGINAL INSTRUCTIONS

MANUFACTURER: MEIJER HANDLING SOLUTIONS B.V.
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Introduction

These instructions describe all measures necessary for the safe operation and maintenance of the Stationary Pull Installation Stainless Steel (SPI RVS). The company using the machine must ensure that all users and maintenance personnel have received, read and understood the instructions.

It is not allowed to make changes to the machine without specific authorization of the supplier. If changes takes place without the authorization, all warranties will expire.

For questions, or suggestions for improvement, you can contact the supplier. With technical questions, please mention the serial number, and the production year (see information and graphical symbols on the nameplate).

Information and graphical symbols on the nameplate

#	MODEL NUMBER		OPERATING INSTRUCTIONS
SN	SERIAL NUMBER		QR-CODE
i+	ADDITIONAL INFORMATION	CE	CE MARK
	CAUTION		DATE OF MANUFACTURE
	CENTRE OF GRAVITY		WEIGHT
	MANUFACTURER		HYDRAULIC OIL PRESSURE

Type description SPI:

S	P	I	0	6	/	1	0	2	0	/	RVS
type											
capacity X 100 kilograms											
stroke in millimeters											
RVS= Stainless Steel											

Quality and CE marking

Bureau Veritas Inspection and Certification The Netherlands B.V. declared that the Management System of Meijer Handling Solutions B.V. has been audited and found to be in accordance with the requirements of the following management system standard:

- NEN-EN-ISO 9001:2015 Quality management systems – Requirements

With the CE marking Meijer Handling Solutions B.V. declares that the Stationary Pull Installation Stainless Steel fulfils all the relevant provisions of:

- Machinery Directive 2006/42/EC
- Electromagnetic Compatibility Directive 2014/30/EU

This is confirmed by the EC declaration of conformity. The EC declaration of conformity must be carefully stored and made available to the responsible authorities.

The following (parts of) harmonized norms are used:

- NEN-EN-ISO 12100:2010
Safety of machinery - General principles for design - Risk assessment and risk reduction
- NEN-EN-ISO 13855:2010
Safety of machinery - Positioning of safeguards with respect to the approach speeds of parts of the human body
- NEN-EN-ISO 13857:2019
Safety of machinery - Safety distances to prevent hazard zones being reached by upper and lower limbs
- NEN-EN-ISO 13849-1:2016
Safety of machinery - Safety-related parts of control systems - Part 1: General principles for design
- NEN-EN-ISO 13850:2015
Safety of machinery – Emergency stop function – Principles for design
- NEN-EN-IEC 60204-1:2018
Safety of machinery - Electrical equipment of machines - Part 1: General requirements

Definitions



Prohibition:

Text with the 'prohibition' symbol in front of it (as shown on the left), provides information about actions which are prohibited. These actions can result in serious personal injury, or death.



General warning sign:

Text with the 'general warning sign' (as shown on the left), provides information about actions which may result in injuries or damage.

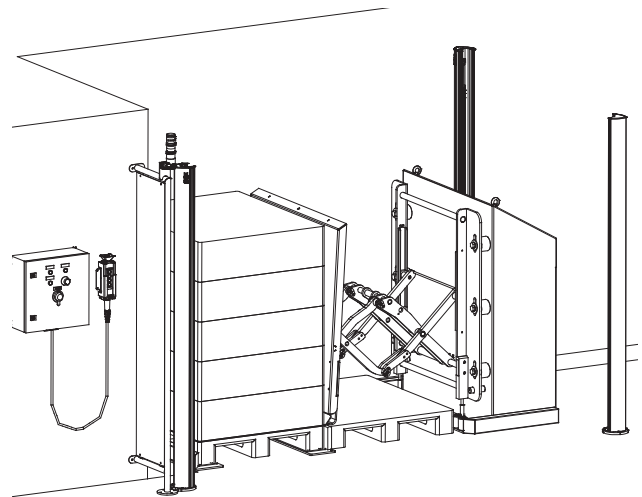
General description

A Stationary Pull Installation provides a mean of transferring loads (placed on a slipsheet) from one load carrier to another. The machine is designed for indoor use, with cleanroom areas as main field of application.

The Stationary Pull Instalation Stainless Steel is specifically designed for the use in a Material Airlock, and to comply with hygiene regulations. It can be used with packaged pharmaceutical products (maximum weight: 600 kilograms), in facilities with a temperature from 2°C to 25°C.

The emission sound pressure level of the machine may exceed the 70 dB(A) level (for a short time only). With a maximum measured emission sound pressure level at workstation of: 76,1 dB(A) (including active sound module during movements), the machine does not exceed the 80 dB(A) level.

Operators of the machine must always be outside the danger zone, and must have sufficient view on the machine and load.



Safety instructions

It is only allowed to transport, install, start-up, test, operate, and maintain the machine by:

- Persons that are adult
- Persons that are authorized & qualified (by training)
- Persons that are using the essential personal protective equipment
- Persons that have read and understand the instructions
- Persons that are aware of the safety and hygiene procedures

It is not allowed to transport, install, start-up, test, operate, and maintain the machine, when:

- Persons are clearly tired, and/or under the influence of alcoholic drinks, drugs, or sedatives
- Changes are made to the machine without specific authorization of the manufacturer

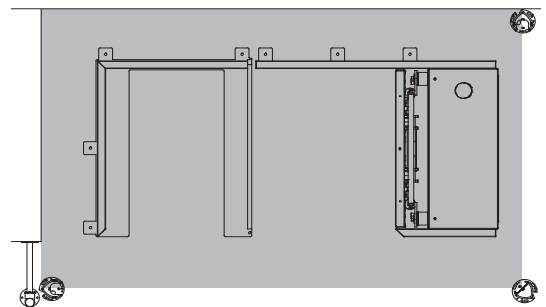
Misuse and residual risks

Meijer Handling Solutions B.V. has carried out a risk assessment, to determine the health and safety requirements which apply to the machinery. Measures are taken to eliminate or reduce any risk throughout the foreseeable lifetime of the machinery.

The machine should only be used as described in the instructions, and should not be used for purposes other than those it was designed for. Meijer Handling Solutions B.V. will not be responsible for accidents involving the machine caused by the failure to comply with the instructions and regulations (either intentionally or carelessly). Despite careful working and compliance with standards and regulations, some residual risk cannot be excluded.

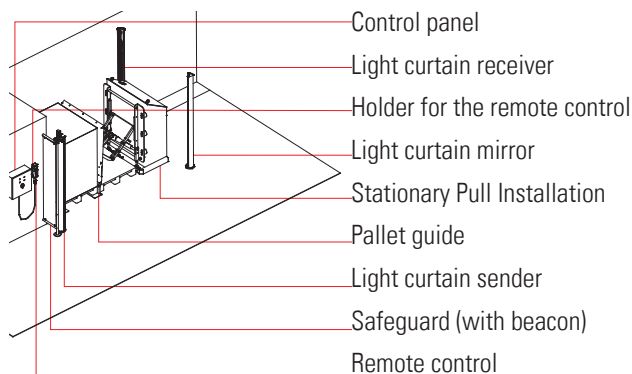
Residual risks may include:

- Human errors
- Unrepaired damage
- Worn components
- Defect components
- Exceeding the maintenance intervals
- Persons in the danger zone (gray area image on the right)
- Carelessness
- Lack of concentration



Transportation

1. Transport and place the machine and its components safely by making use of standard lifting gear
2. Remove the packaging materials, and dispose it properly
3. Check if the main components are available and not damaged

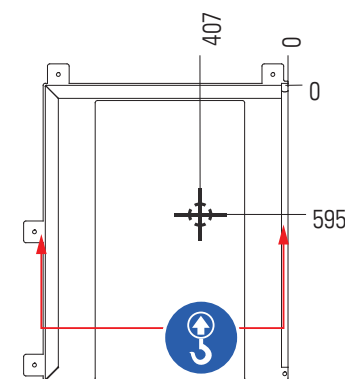


Installation

Placement of the machine

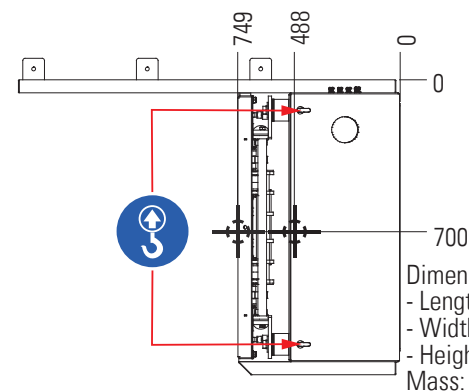
- Standard lifting gear, that has suitable dimensions and sufficient capacity can be used to install the machine.
- The machine must be placed on a stable, flat surface with enough load capacity, and free of water, oil, or any other fluids.
- The machine, and its components must be placed in accordance with the applicable laws and regulations

Installation of the pallet guide



Dimensions:
 - Length: ± 1220 mm
 - Width: ± 1460 mm
 - Height: ± 170 mm
 Mass: ± 115 kilograms

Installation of the Stationary Pull Installation



Dimensions:
 - Length: ± 1764 mm
 - Width: ± 1460 mm
 - Height: ± 1586 mm
 Mass: ± 1014 kilograms

Tools and installation materials for the installation of the machine

- Standard tools, that has suitable dimensions can be used to install the machine.
- Installation materials (fasteners) not included: length and type of materials depending on the customer's specific layout

Recommended installation materials

- Control panel: M8 (4X)
- Light curtain: M12 (9X)
- Holder for the remote control: M8 (4X)
- Stationary Pull Installation: M16 (7X)
- Pallet guide: M16 (6X)
- Safeguard: M12 (4X) & M8 (4X)

Safety notices



Do not install the machine in areas where there is a risk of fire, explosion or corrosion.



Do not install the machine near a wall, or object with less than 400 mm clearance (1000 mm recommended).



Do not start-up the machine before all the packaging is removed completely.



Do not install the machine in areas that are particularly dusty.

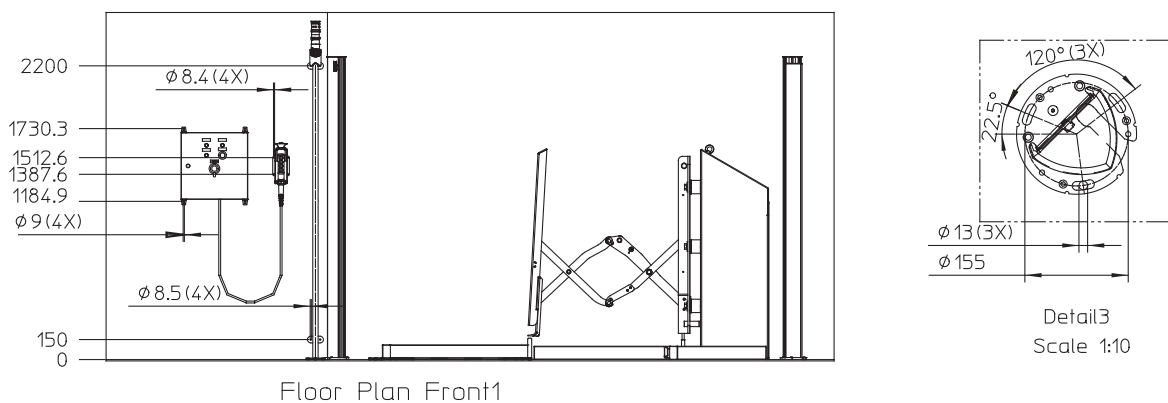
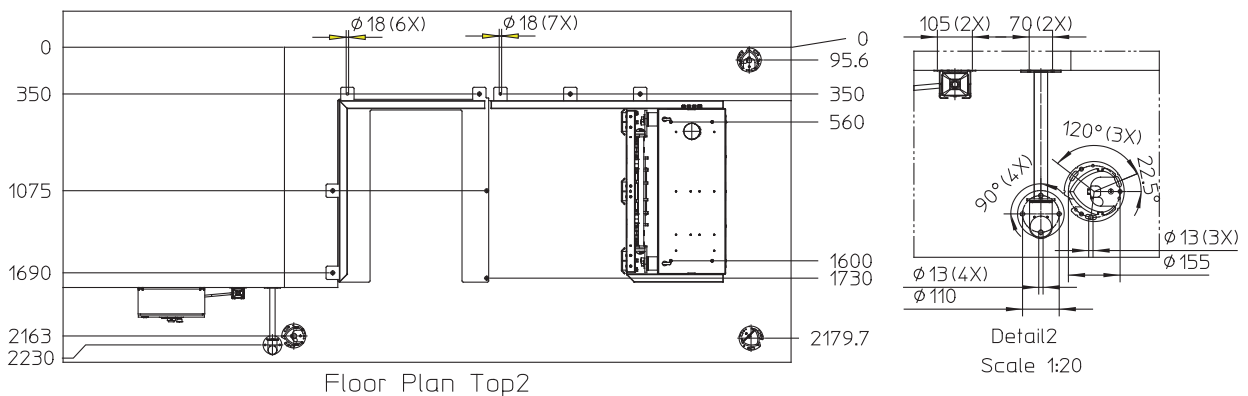
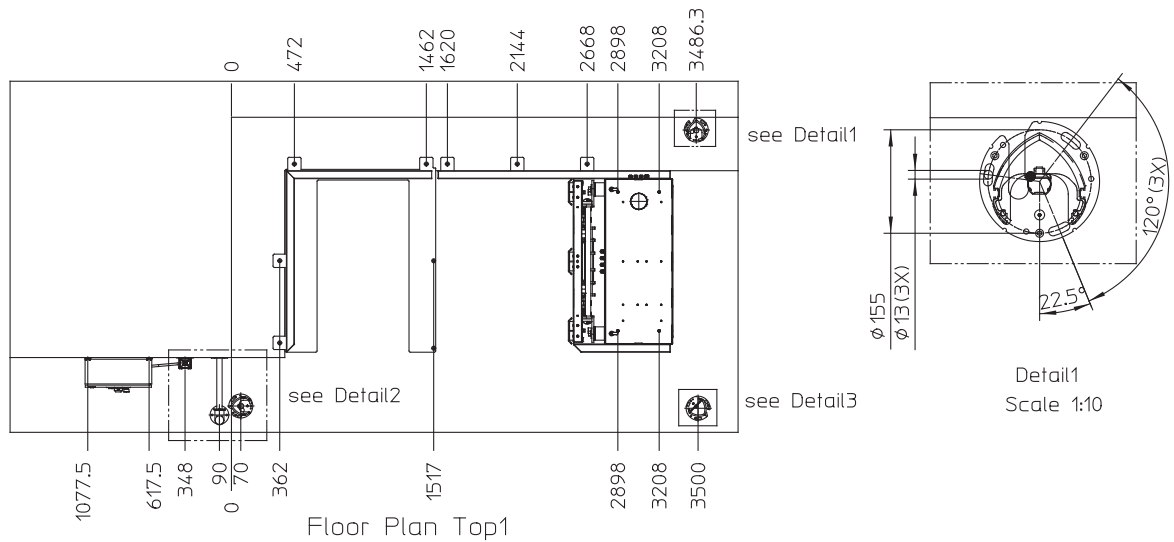


Do not install the machine in areas with temperatures lower than 2°C or higher than 25°C.



Do not install the machine in an outdoor environment.

Floor plan corner layout (customer specific):



General tolerances machine: ± 3 mm

Drawing on request, please refer to: 10114732

It is recommended to install the pallet guide based on the actual faceplate out position (see adjusting the position of the faceplate)

Safety notices



Secure the machine and its components to the floor by making use of chemical anchors/expansion bolts and rings.



Install the control panel and the remote control so that there is enough view on the machine and the load.



Install the safeguard and lightcurtain in accordance with the applicable laws and regulations (NEN-EN-ISO 13855 & 13857).



After the installation of the machine is finished, let an authorized and qualified electrician connect it to the power grid, and test the functionality of the machine.

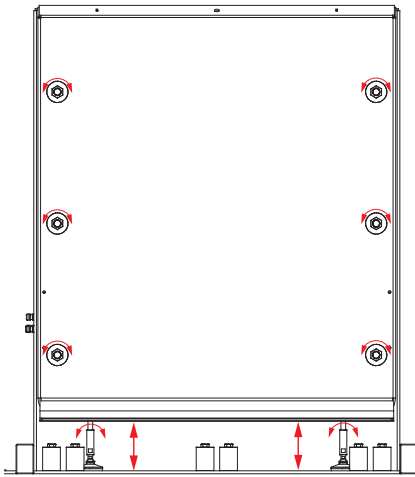


Marking tape & do not walk or stand here stickers are provided separately with the machine. If the use is not restricted because of the hygienic regulations, it can be applied as described (see labeling).

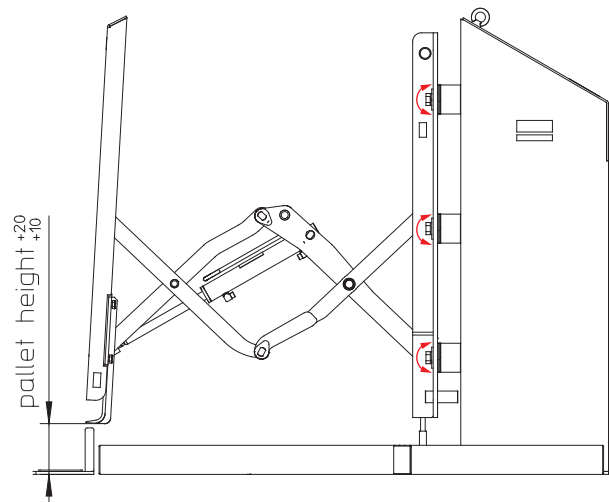


Electrical cables on the floor should be avoided.

Adjusting the height

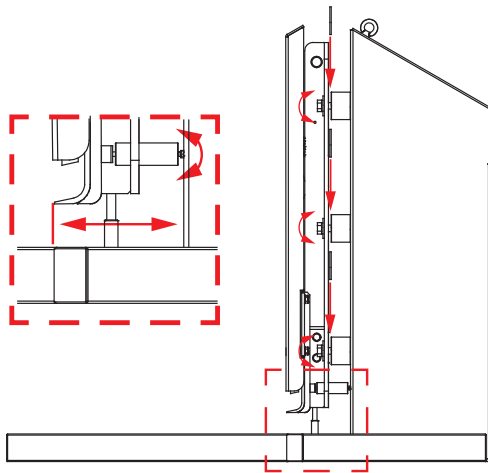


1. Loosen the six M24 bolts.
2. Adjust the height by turning the two levelling feet



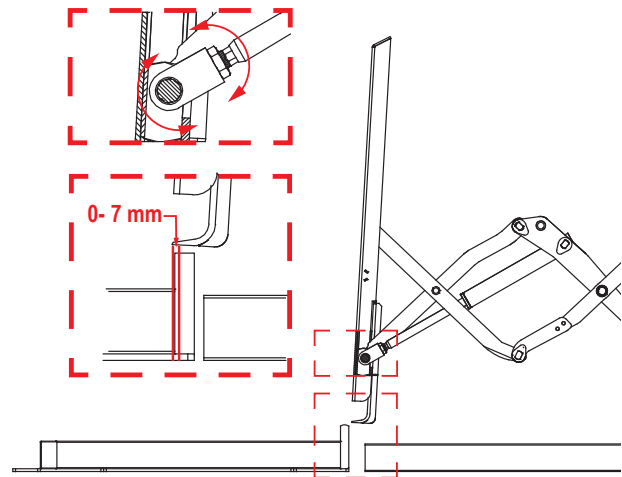
3. Check the height (faceplate out): pallet height + 15 mm
4. Secure the six M24 bolts

Adjusting the position of the faceplate



The position of the faceplate can be adjusted by adding or removing round bars (thickness 5 or 10 mm):

1. Faceplate fully retracted
2. Clamp should be behind the spacers:
 - a. Faceplate forwards: add round bars
 - b. Faceplate backwards: remove the round bars
3. Check if the clamp is behind the spacers
4. Secure the six M24 bolts and two M8 bolts



The position of the faceplate can be adjusted by turning the rod eyes of the main cylinders:

1. Faceplate fully extended
2. Clamp should be behind the front of the pallet separator:
 - a. Faceplate forwards: turn the 2 rod eyes forwards
 - b. Faceplate backwards: turn the 2 rod eyes backwards
3. Check if the clamp is behind and above the pallet separator
4. Secure the two rod eyes with the two M24 nuts

Safety notices



Make sure the bolts are secured after adjusting the height.



Make sure to check the hydraulic hoses after adjusting the height for damage and routing.



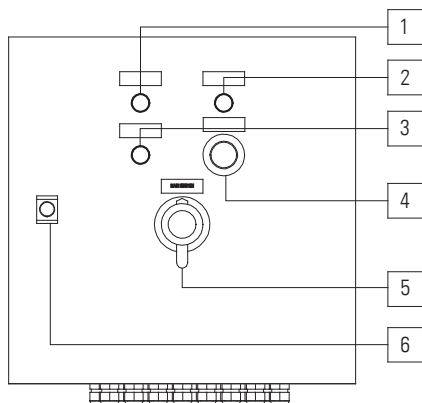
Make sure the bolts are secured after adjusting the position of the faceplate.



Make sure to check the hydraulic hoses after adjusting the position of the faceplate for damage and routing.

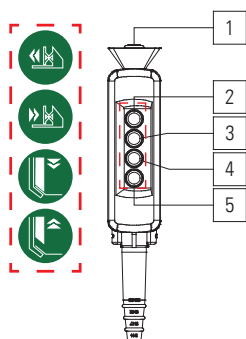
Controls and safety features

Control panel



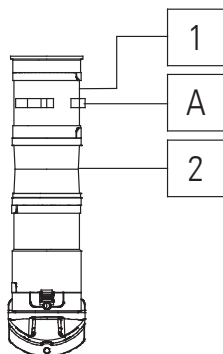
- 1 Red light: malfunction hydraulic pump unit
- temperature
- oil level
- 2 Reset button:
- emergency stop
- light curtain
- 3 Test button beacon:
- light
- sound
- 4 Emergency stop:
- stops all operations
- 5 Main switch:
- power on or power off
- 6 Lock

Pendant remote control



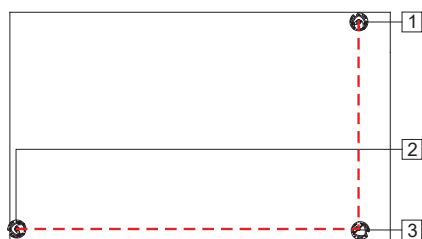
- 1 Emergency stop:
- stops all operations
- 2 Push:
- faceplate out
- 3 Pull:
- faceplate in
- 4 Close clamp:
- clamp down
- 5 Open clamp:
- clamp up

Safety beacon



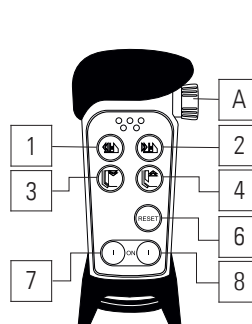
- 1 Sound module:
- on: warning movements
- off: no movements
- 2 Red light:
- on: warning movements
- off: no movements
- A Adjust sound level:
- Left: minimum sound level
- Right: maximum sound level

Light curtain



- 1 Light curtain receiver
- 2 Light curtain sender
- 3 Light curtain mirror
- Light curtain activated: Safe to use the machine
Light curtain deactivated: Check safety conditions

Wireless remote control (optional)



- A Emergency stop
 - 1 Push
 - 2 Pull
 - 3 Close clamp
 - 4 Open clamp
 - 6 Reset
 - 7 On*
 - 8 On*
- Press 7 and 8 to simultaneously

Start-up & testing

Visual checks before start-up & testing:

1. Check the floor and machine for contaminations and leaks:
 - a. No contaminations and fluids: proceed with the next step
 - b. Contaminations or fluids: clean the machine, and/or contact the maintenance department
2. Check the machine for damaged parts
 - a. No damaged parts: proceed with the next step
 - b. Damaged parts (cracks): contact the maintenance department
3. Check the safety guards and beacon
 - a. Properly installed: proceed with the next step
 - b. Damaged parts, loose parts, or not installed parts: contact the maintenance department

Start-up & testing:

1. Release Emergency stops:
 - a. control panel
 - b. remote control
2. Turn Main switch on of the control panel
3. Press Reset button of the control panel
4. Press Test button beacon
5. Test remote control:
 - a. Press Push button until movement stops: faceplate completely extended (see adjusting the position of the faceplate)
 - b. Press Close clamp button until movement stops: clamp completely closed (see operation)
 - c. Press Pull button until movement stops: faceplate completely retracted (see adjusting the position of the faceplate)
 - d. Press Open clamp button until movement stops: clamp completely open (see operation)
 - e. Press Emergency stop
 - f. Release Emergency stop and press Reset button
 - h. Deactivate light curtain
 - i. Activate light curtain by pressing the Reset button
6. Machine is ready for use

Shut-down the machine:

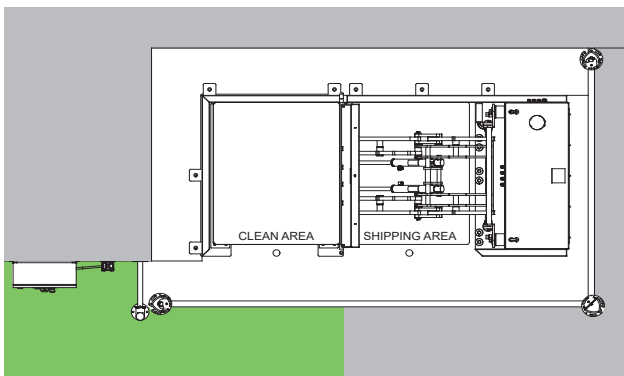
After using the machine (see operation) it can be shut down:

1. Press the emergency stops
2. Turn off the main switch

Operation

The operator can use the machine by means of the remote control. Operators should always operate the machine from outside the danger zone, with full view on the machine and load (green area image below).

Machinery used for pharmaceutical products must meet the essential health and safety requirements, to avoid any risk of infection, sickness or contagion. The machine is designed for packaged pharmaceutical products (see packaging instructions). Cleaning of the machine, and visual checks are part of the start-up, maintenance & cleaning procedures.



Operation position

Safety notices

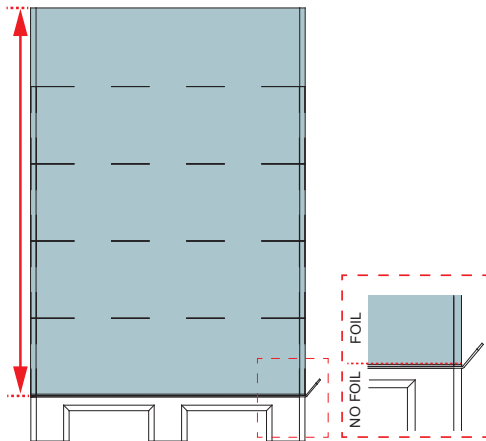


Do not use the machine when it is not completely installed and fastened.



Do not use the machine with any damage, leaks, or deviations that compromise a safe use of the machine.

Packaging instructions



Load:

- Maximum dimensions: 1200mm x 1000mm x 1400mm
- Maximum mass: 600 kilograms
- Foil only around the load (cut loose from pallet if needed)
- No visible damage

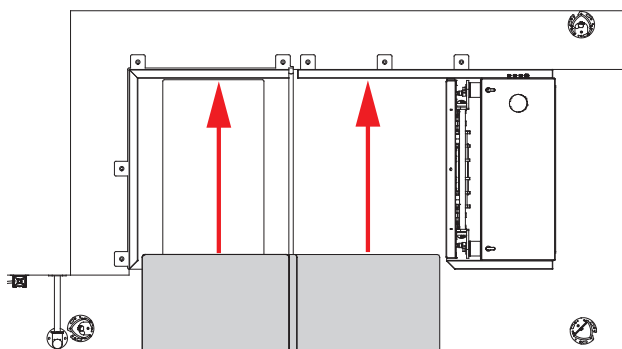
Slipsheet:

- Dimensions: 1200 mm (L) x 1000 mm (W)
- Length of the lip: 50-80 mm

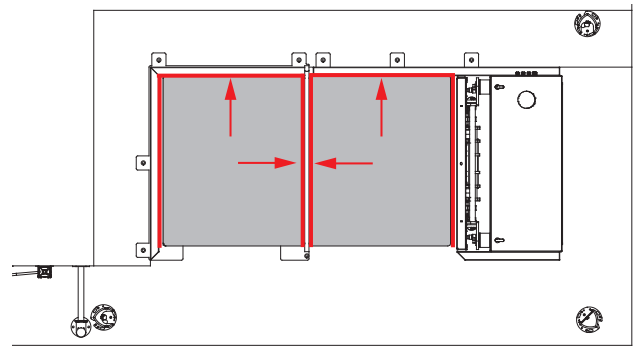
Pallets:

- Dimensions: 1200 mm (L) x 1000 mm (W) x 160 mm (H)

Loading the machine

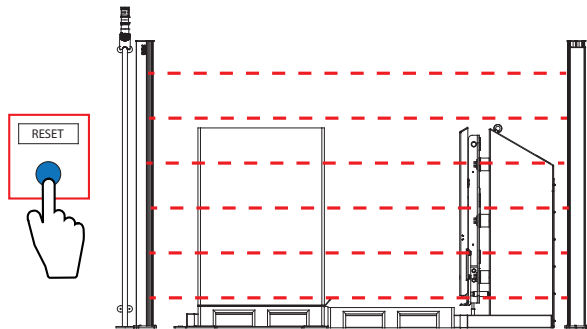


1. Load the machine
 - a. Make use of an electric lifter (or similar device) to place an empty pallet (shipping area).
 - b. Make use of an electric lifter (or similar device) to place the pallet with load (clean area).

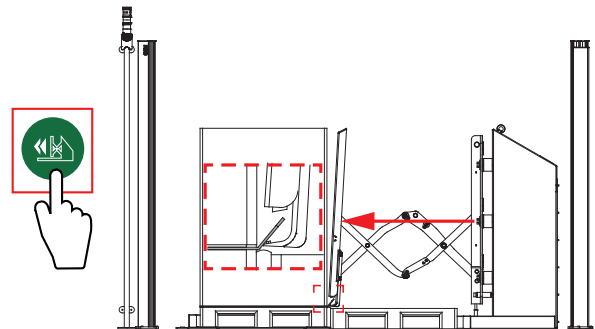


2. Check the position of the pallets:
 - a. Both pallets against the tubes at the back
 - b. Both pallets against the separator

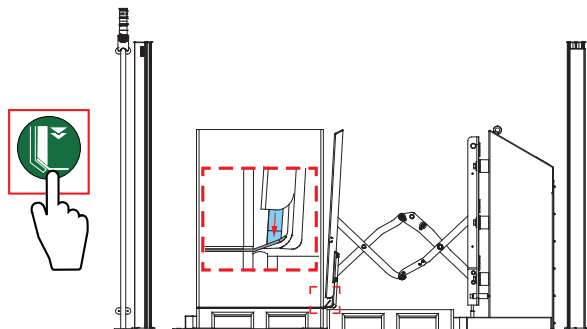
Using the machine



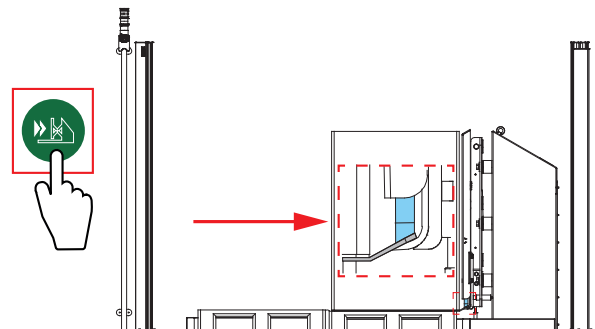
1. Clear the danger zone
 - a. Press Reset button



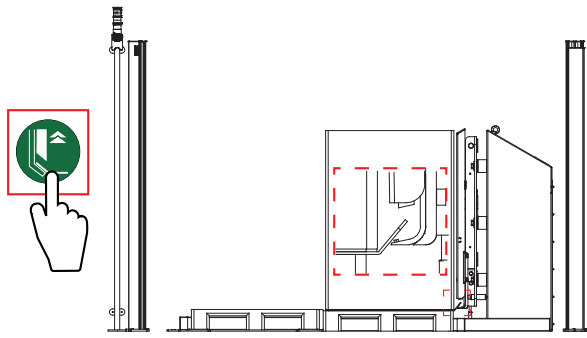
2. Press Push button until movement stops
 - a. Check visually if the lip is in the opening of the clamp



3. Press Close clamp button until movement stops
 - a. Check visually if the lip is clamped properly
 - b. Check if the clean pallet is higher than the shipping pallet



4. Press Pull button until the load is completely on the pallet
 - a. Check visually if the load moves smoothly
 - b. Check visually if the load is completely on the pallet



5. Press Open clamp button (until movement stops)
- Check visually if the lip is not clamped anymore
 - The pallets can be removed

Safety notices



Do not use the machine without successfully completing the start-up procedure.



Do not use the machine when components of the machine are visually damaged.



Do not use the machine before all visible contaminations and fluids are removed.



Do not use the machine when the pharmaceutical product is not packaged properly,



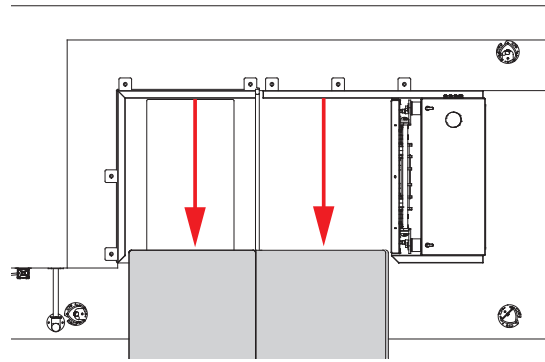
Do not use the machine when the package material is damaged.



Do not use the machine when the slipsheet, or pallets, are positioned incorrectly.



Do not use the machine with insufficient visibility on the moving parts of the machine and/or the load.



6. Make use of an (electric) lifter to unload the machine:
- Shipping area: remove the pallet with load
 - Clean area: remove the empty pallet



Do not use the machine with persons near the machine (within the danger zone).



Do not use the machine to move people or animals.



Do not touch the machine components within the danger zone (during loading and unloading of the machine).



Do not climb and/or stand on top of the machine.



Do not exceed the maximum capacity (WLL) of 600 kilograms.



Do not reuse the empty pallet when it is visually damaged or contaminated



Do not remove the pallet with load when it is visually damaged or contaminated

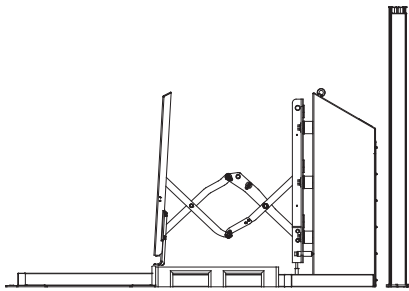
Maintenance & cleaning

The company that uses the machine is responsible for the correct planning and execution of the maintenance and cleaning. When the machine cannot be operated safely, it should not be used until it has been repaired. Scheduled maintenance guarantees an optimum performance during the service life of the machine (12 years).

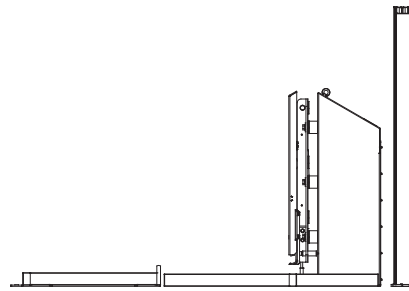
Maintain and clean the machine only in a controlled, open, dry, safe, and clean environment. Extra alertness is required during maintenance and cleaning work, as safety devices may be temporary removed, and machine parts may move unexpected. Damaged, or worn parts need to be replaced by original parts as mentioned in the parts lists. Damaged and contaminated parts during maintenance can be prevented by using clean gloves and tools, and by placing the parts on soft, clean and flat surfaces. It is highly recommended to use food safe (non-toxic) paste or lubricant to (re)assemble bolts and nuts.

Equipment being repaired should be suitably isolated from the surrounding cleanroom operations before proceeding with major repairs or maintenance, and the maintenance personnel should not come into contact with the cleanroom personnel. Alternatively, steps should be taken to ensure that all products under repair have been removed to a suitable location. The machine and its components can be handled and transported safely with standard lifting gear, that has suitable dimensions and sufficient capacity

During maintenance and cleaning work, all necessary safety measures must be taken, to prevent accidents. Make sure to turn off the machine, depressurize the hydraulic system, let the components and hydraulic fluids cool down, and remove the main electric plug. To prevent unforeseen movements the maintenance and cleaning should be carried out in one of the following positions.



1. Completely out (with empty pallet in shipping area)



2. Completely in (without pallets in both areas)

Maintenance and cleaning personnel should always use the essential personal protective equipment. Due to difference in height maintenance and cleaning personnel can fall. Training should be provided for any personnel performing the maintenance and cleaning operations. Specialized cleaning personnel should be assigned to prevent contaminations, and meet the strict hygienic regulations of the cleanroom.









The operators of the machine are assigned to inspect the machine before use, and clean the surfaces daily (removing foreign matter, and surface contaminations). There is no need for frequent operator intervention into the danger zone. It is recommended to use mild (food safe) cleaning products and a soft, lint-free cloth. When necessary also other products can be used for cleaning, disinfecting, and rinsing, to meet the strict hygienic regulations of the cleanroom. These products should be compatible with the materials of the machine (see parts lists), and should always be used according the directions of use.

When maintenance and cleaning is complete, reinstall and test all parts and safety devices, and verify that all contaminations are removed, such as oil, chemicals, and dust. Consumables that remain after maintenance and cleaning must be collected properly, and stored/disposed of in accordance with the applicable national regulations.

Product end-of-life instructions

When the machine has reached its end of life, the company that uses the machine is responsible for the proper disposal of the machine. To ensure that the disposal of the machine meets the applicable national regulations, it is recommended to contact an authorized and qualified company for the disposal of the machine. The materials used for the components of the machine can be looked up in the parts lists.

Maintenance schedule

Maintenance tasks: inspection, repair, and replacement (Always use food safe (non-toxic) paste or lubricant to (re)assemble bolts and nuts)	Daily (8 hours)	Every 100 hours	Every 520 hours
For inspection before use (daily inspections), see start-up & testing of the machine.			
Check visually for signs of leaks, cracks, wear, and damage: - Tightening leaking connections - Replace worn or damaged parts			
Check all bearings, slide pads, and sliding strips: - Replace when damaged or worn out - Recommended to replace the bearings, slide pads, and sliding strips yearly (2080 hours)			
Check all hydraulic hoses: - Tightening leaking connections - Replace kinked, abraded, or damaged hoses - Recommended to replace the hoses yearly (2080 hours)			
Check the bolts: - Tighten if necessary			
Check the hydraulic system: - Top up hydraulic oil if necessary - Recommended to replace the oil yearly (2080 hours) - Recommended to replace the seals yearly (2080 hours)			
Check the electronics: - Replace damaged electrical cables or connections			
Check the position of the labels: - Replace damaged or missing labels			

Safety notices



Do not start the maintenance and cleaning before taking all the necessary safety measures.



Do not damage the cables during maintenance and cleaning activities.



Do not maintain or clean the machine without wearing the appropriate protective clothing and equipment.



Do not clean the machine with high pressure water, or spray electrical components/covers directly with water.



Do not place body parts between the moving, and fixed parts of the machine.



The chemicals used to clean and disinfect can be hazardous, always follow the instructions of use.



Do not wear jewelry and/or watches during maintenance work.



Do not place rubbish and/or loose parts on the machine



Do not make changes/welds to the machine without specific authorization of the manufacturer.



Do not use the machine without completing successfully the scheduled maintenance and cleaning.



Do not use toxic (non-food safe) products for maintenance and cleaning.



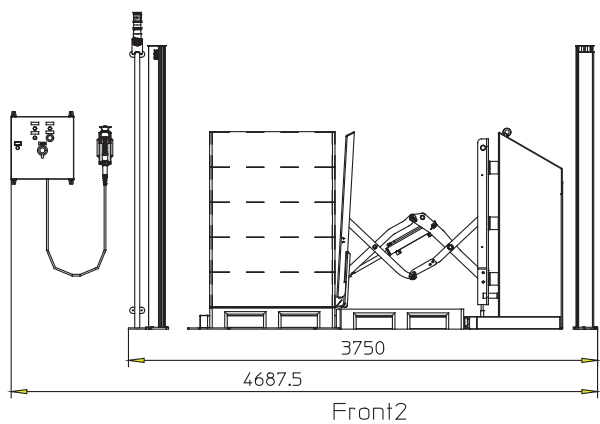
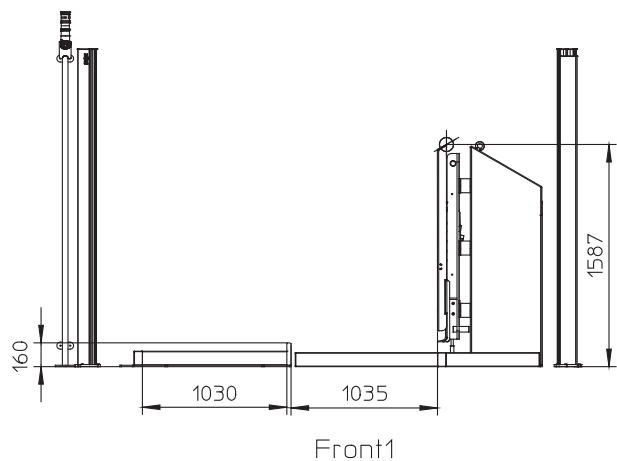
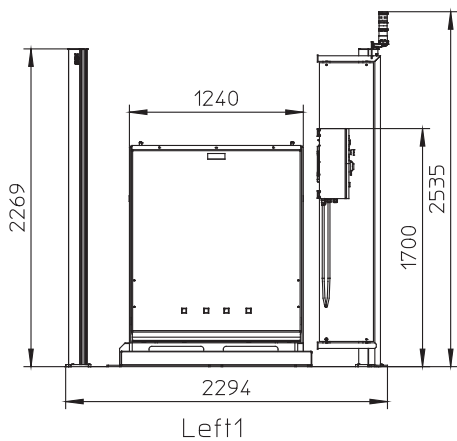
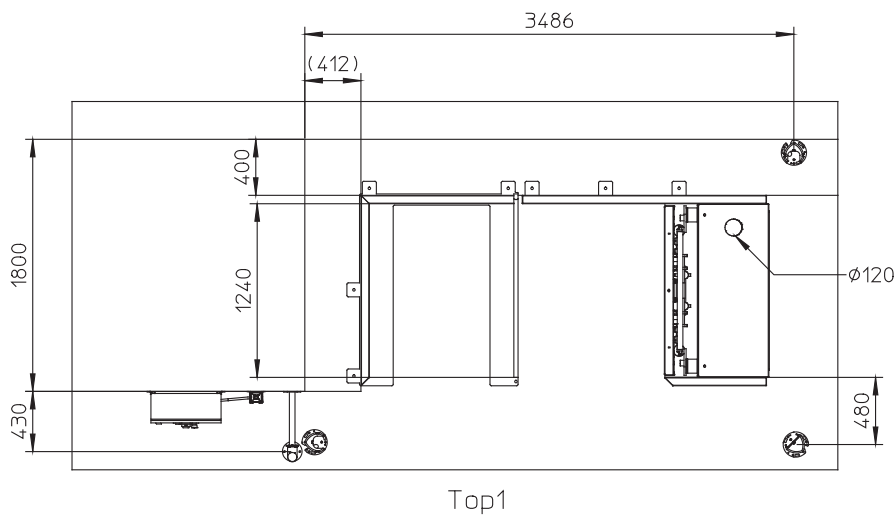
Do not make use of contaminated tools.

Malfunction, fault-finding, and trouble-shooting

Observation	Symptom	Possible cause	Possible solution
(Emergency) stop	Machine is stopped during movements of the machine	Releasing the button	Press the button again
		Emergency stop	- Check conditions - Release emergency stop - Press reset button
		Light curtain deactivated	- Check conditions - (Clean sender, mirror, receiver) - (Realign light curtain) - Press reset button
		Slipsheet not clamped properly	- Open the clamp - Realign the slipsheet - See using the machine (step 3)
		<i>Remote control out of range (only applies to wireless remote)</i>	- Move closer to the machine - Check conditions - Reactivate remote control
Machine does not work	No movements after pressing the buttons of the remote control	Machine is not connected to the main energy network	Connect the machine to the main energy network
		The machine is switched off	Turn on the main power switch
		Emergency stop active	Reset the emergency stop
		The motor safeguard has been switched off	Set rotary knob to the ON position
		A fuse is broken	Replace the broken fuse (see electronic circuit scheme)
		Insufficient hydraulic oil in the reservoir	Top up the reservoir with food save hydraulic oil
		The maximum capacity is exceeded	Remove the load
		Burst hoses	- Replace the hoses. - Top up the reservoir. - Check and test the machine
		Oil leakage hydraulic components	- Replace the components. - Top up the reservoir. - Check and test the machine
		<i>Empty batteries of the remote (only applies to wireless remote)</i>	<i>Replace the batteries</i>
		<i>Remote control has been taken outside the range of the receiver.</i>	- Move closer to the machine - Check conditions - Reactivate remote control
	Faceplate starts moving, but stops before maximum position	Pallet too high	- Replace the pallet - Adjust the height
		Load or faceplate gets caught behind an obstruction	- Check movements of the machine. - Remove obstructions
Machine moves irregular	Movement slows down, and accelerates to normal speed	Air trapped in the hydraulic system	Bleed system moving the faceplate in and out several times without a load
	Faceplate moves out a little, without pushing a button		
Machine makes noises	The machine vibrates during movements	Scraping surfaces	- Remove obstructions. - Check and test the machine
		Worn parts	- Replace the worn parts - Check and test the machine

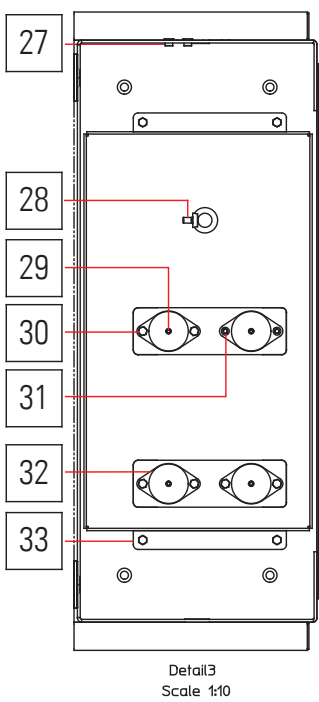
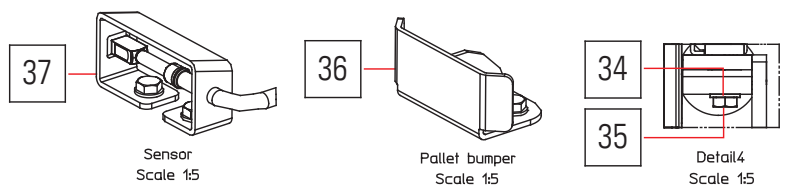
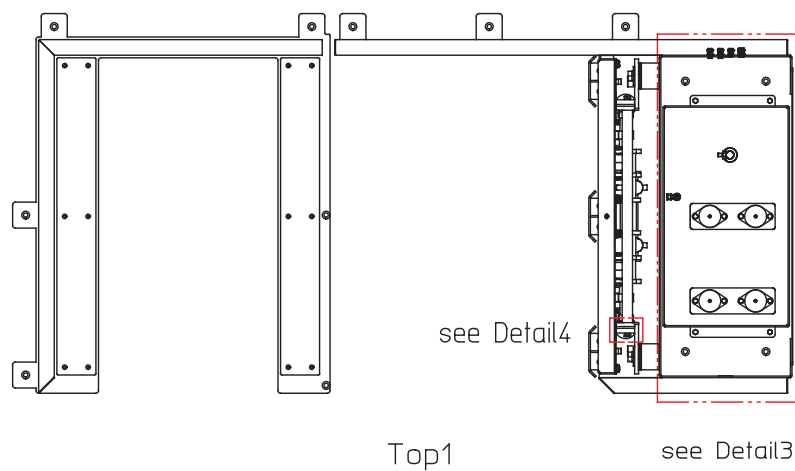
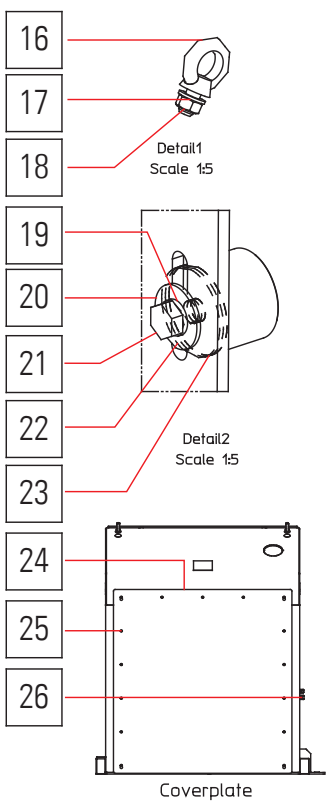
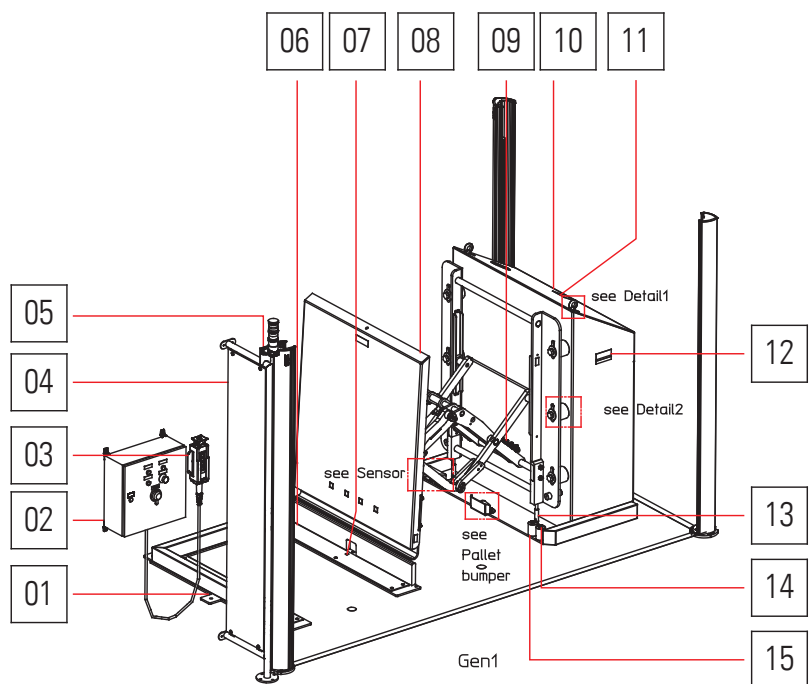
Load damaged (during moving)	The load topples over	Faceplate moves too fast	<ul style="list-style-type: none"> - Reduce the speed (adjust the valve) - Check and test the machine (see start-up and testing)
	The load is crushed	Pallet too high	<ul style="list-style-type: none"> - Replace the pallet - Adjust the height
		Faceplate extends too much	<ul style="list-style-type: none"> - Adjust the position of the faceplate - Check and test the machine (see start-up and testing)
	The slipsheet tears	Bad quality slipsheet/ slipsheet gets caught	<ul style="list-style-type: none"> - Open the clamp - Remove the pallets and load - Repack the load
	The foil tears	Load packed incorrectly	<ul style="list-style-type: none"> - Repack the load
Fluids on the machine/ fluids on the floor	Oil leakage	Damaged or worn hose(s)	<ul style="list-style-type: none"> - Replace hose(s) - Top up the oil reservoir
		Damaged coupling(s)	<ul style="list-style-type: none"> - Replace coupling(s) - Top up the oil reservoir
		Damaged valve	<ul style="list-style-type: none"> - Replace the valve - Top up the oil reservoir
Red light control panel	No movements after pressing the buttons of the remote control	High temperature HPU	Let the HPU cool down
		Low oil level HPU	Top up the oil reservoir
		Wire break sensor	Replace sensor
Blue light control panel	No movements after pressing the buttons of the remote control	Emergency button activated	<ul style="list-style-type: none"> - Release emergency stop - Press reset button
		Light curtain deactivated	<ul style="list-style-type: none"> - Press reset button
No sound signal during movements	No sound during pressing the buttons of the remote control	Incorrect settings	Adjust settings
		Sound module damaged	Replace sound module
No light signal during movements	No light during pressing the buttons of the remote control	Incorrect settings	Adjust settings
		Light module damaged	Replace light (module)

Technical specifications



Model: SPI06-1020 RVS	
Weight:	1380 Kilograms
Main dimensions:	4688 mm x 2294 mm x 2535 mm (customer-specific layout)

Parts list - SPI06-1020 RVS



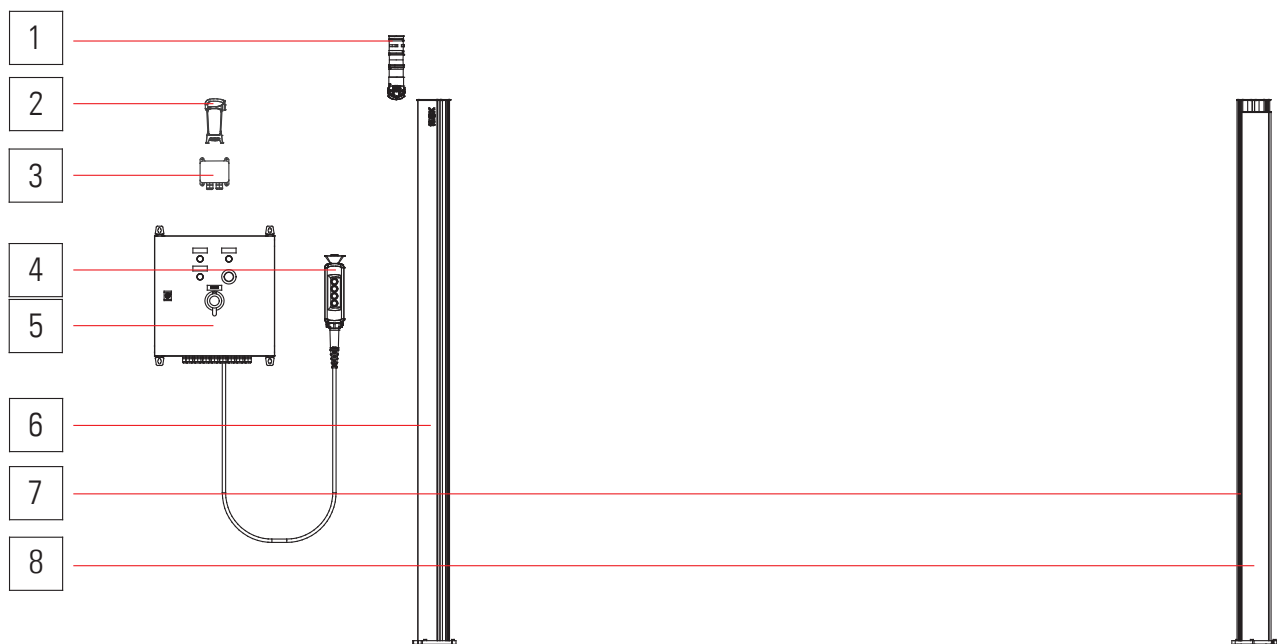
##	Description	Article	Materials	Quantity
01	Pallet guide	10114832	AISI 316L	01
02	Electronics	10115513	Various materials	01
03	Holder pendant control	10117717	AISI 316L	01
04	Safeguard	10114769	Various materials	01
05	Cylinder head screw M5x12	10115611	A4 70 (stainless steel)	03
06	Top plate pallet guide 05	10116265*	AISI 316L	02
07	Hexagon socket countersunk screw M8x12	10116266*	A4 80 (stainless steel)	12
08	Pusher/puller	10114993	Various materials	01
09	Hydraulics	10115515	Various materials	01
10	Frame	10114857	AISI 316L	01
11	Nameplate 120X120	10117821	Stainless steel	01
12	Labels	10117826	Various materials	01
13	Levelling foot M16x190	10114813	AISI 304, rubber base (NBR), rubber seal (silicone) - detailed information on request	02
14	Hexagon head screw M16x90	10114851	A4 80 (stainless steel)	06
15	Spacer D60	10114836	AISI 316L	06
16	Lifting eye bolt M16 - WLL 700 KG	10114846	A4 70 (stainless steel)	02
17	Plain washer M16	10114842	A4 70 (stainless steel)	15
18	Hexagon nut M16	10114849	A4 80 (stainless steel)	02
19	Spring lock washer M24	10116742	A4 70 (stainless steel)	06
20	Plain washer M24	10116198	A4 80 (stainless steel)	06
21	Hexagon head screw M24x60	10116203	A4 80 (stainless steel)	06
22	Round bar D100x05	10114839**	AISI 316L	12
23	Round bar D100x10	10114838**	AISI 316L	06
24	Cover plate frame 03	10114854	AISI 316L	01
25	Hexagon socket button head screw with flange M6X10	10114848	A4 70 (stainless steel)	15
26	Cable glands		V4A (stainless steel), insert (PA), sealing	
	- M20	10116335	(silicone), O-ring (silicone)	01
	- M16	10116334	detailed information on request	05
27	Hexagon socket screw plug with collar M16X1.5	10119491	A4 70 (stainless steel)	02
28	Lifting eye bolt M12 - WLL340	10119578	A4 80 (stainless steel)	02
29	Hexagon socket set screw M10X30	10114847	A4 70 (stainless steel)	04
30	Hexagon head screw M10X12	10114850	A4 70 (stainless steel)	08
31	Nord-Lock ring M10	10114844	A4 70 (stainless steel)	08
32	Damper RAEM 125-M10	M00039518	Zinc plated steel, natural rubber	04
33	Spill tray	10118949***	Stainless steel	01
34	Nord-lock washer M16	10114843	A4 70 (stainless steel)	04
35	Hexagon head screw M16x40	10115098	A4 80 (stainless steel)	04
36	Pallet bumper 10-40	10119724***	Stainless steel	03
37	Pallet detection sensor	10119725***	Various materials	01

* The top plates and hexagon socket countersunk screws can be used to raise the pallet with 5 millimeters.

** The round bars can be used to adjust the position of the faceplate.

*** The Spill tray, Pallet bumpers, and/or Pallet detection sensor are optional, and are only included when selected with the order.

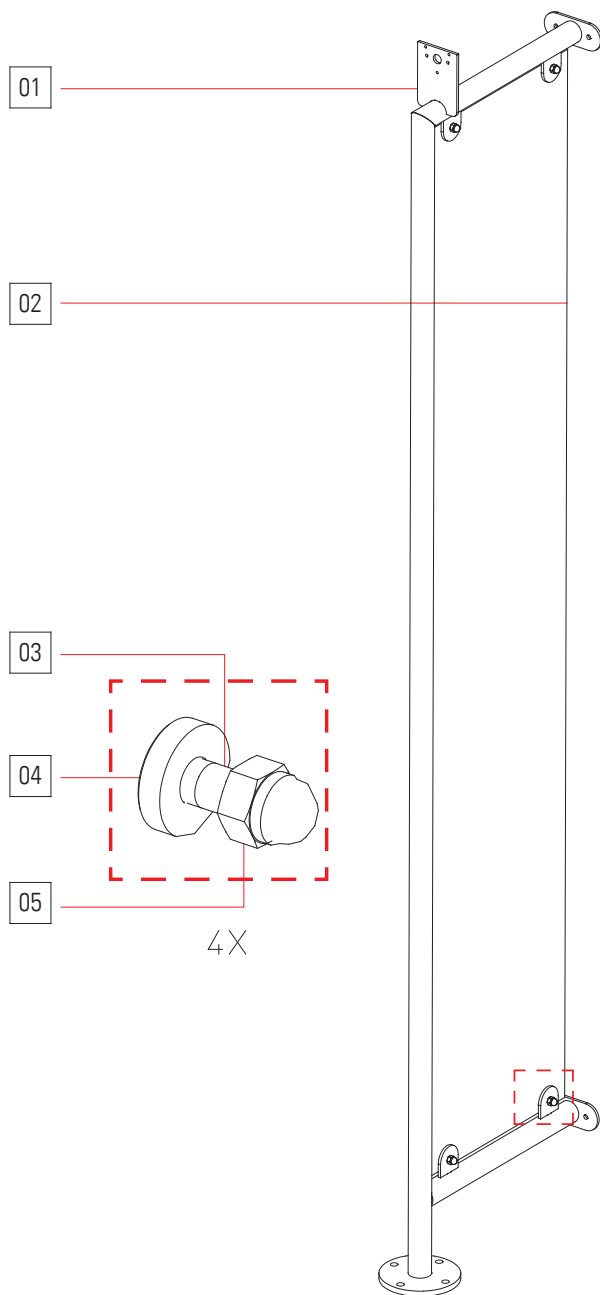
Parts list - Electronics



##	Description	Article	Quantity
01	SE Beacon	10117758	1
02	Wireless remote control	10111854*	1
03	Wireless receiver	10111954*	1
04	Pendant remote control	10117642	1
05	Control panel	10120771	1
06	Light curtain sender		
	- receiver	10115615	1
	- column	10115612	1
07	Light curtain mirror	10115613	1
08	Light curtain receiver		
	- receiver	10115614	1
	- column	10115612	1
* Wireless remote control, and wireless receiver are optional			

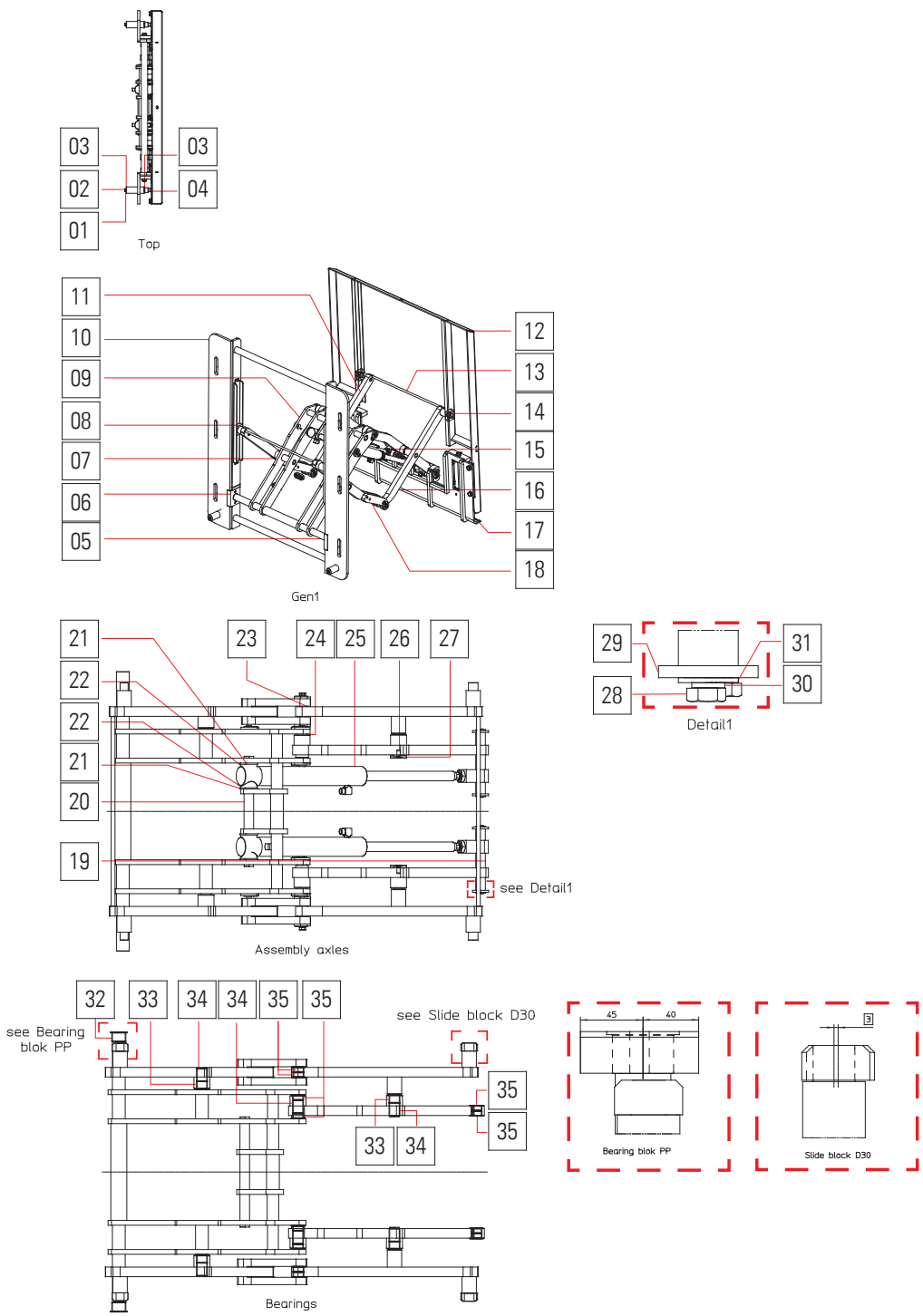
Electronics	
Main fuse:	16A
Main Power:	400 VAC - 50/60 Hz
Control power	24 VDC
The electronic circuit diagram and specifications are provided with the machine (project number: 254561)	

Parts list - Safeguard



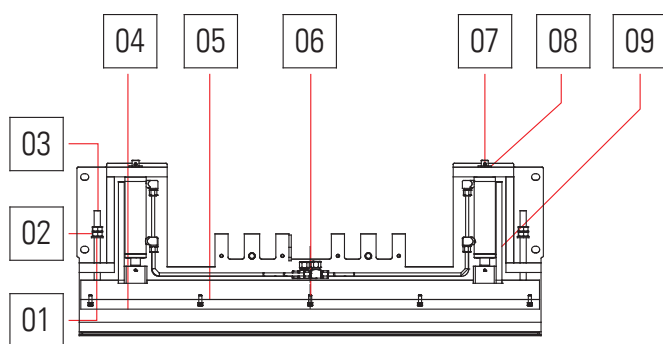
##	Description	Article	Materials	Quantity
01	Safeguard	10114770	AISI 316L	1
02	Plate 1990x0385x05	10114765	PC	1
03	Hexagon socket countersunk head screw M8x25	10115292	A4 70 (stainless steel)	4
04	Finishing Washer M8	M00039604	PA6	4
05	Hexagon domed cap nut M8	10115293	A4 70 (stainless steel)	4

Parts list - Pusher / Puller

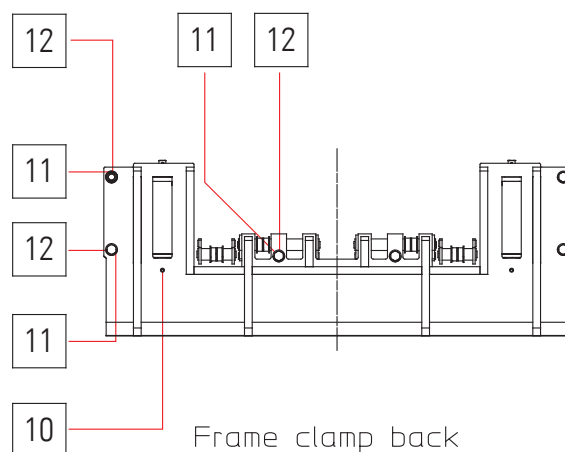


##	Description	Article	Materials	Quantity
01	Hexagon nut M8	10118662*	A4 80 (stainless steel)	4
02	Hexagon head screw M8x30	10115220*	A4 80 (stainless steel)	2
03	Plain washer M8	10115520*	A4 70 (stainless steel)	16
04	Vibration damper D32 L22 M8 I30	10118651*	AISI 304, Silicone rubber	2
05	Arm back bottom	10115138	AISI 316L, Duplex 1.4462	1
06	Bearing block	10115097	AISI 316L	2
07	Arm back top R	10115184	AISI 316L, Duplex 1.4462	1
08	Slide block D25	10115162	Iglidur® A350	2
09	Arm front bottom R	10115197	AISI 316L, Duplex 1.4462	1
10	Frame PP	10114959	AISI 316L, Duplex 1.4462	1
11	Arm front top R	10115202	AISI 316L, Duplex 1.4462	1
12	Frame faceplate	10114992	AISI 316L, Duplex 1.4462	1
13	Round bar D12 L623	10115177	AISI 316L	2
14	Slide block D30	10115163	Iglidur® A350	2
15	Arm front bottom L	10115195	AISI 316L, Duplex 1.4462	1
16	Arm front top L	10115201	AISI 316L, Duplex 1.4462	1
17	Frame clamp	10115027	Duplex 1.4462	1
18	Arm back top L	10115183	AISI 316L, Duplex 1.4462	1
19	Axle D30 Faceplate	10115028	Duplex 1.4462	2
20	Axle D30 L345	10115132	Duplex 1.4462	1
21	Plain washer M30	10116515	PA6	4
22	Round bar D25	10116516	AISI 316L	4
23	Axle D30 L092	10115213	Duplex 1.4462	2
24	Axle D30 L118	10115139	Duplex 1.4462	2
25	Hydraulics PP	10115619	Various materials	1
26	Hexagon socket countersunk screw M10x20	10115211	A4 70 (stainless steel)	2
27	Round bar D50 B8 M10	10115212	AISI 316L	2
28	Hexagon head screw M10x25	10115718	A4 70 (stainless steel)	28
29	Locking plate D30	10115030	AISI 316L	14
30	Nord-Lock ring M10	10114844	A4 70 (stainless steel)	24
31	Plain washer M10	10115031	A4 70 (stainless steel)	14
32	Flange bearing A350FM 40 30	10115085	Iglidur® A350	2
33	Flange bearing A350FM 30 26	10115159	Iglidur® A350	4
34	Sleeve bearing A350SM 30 40	10115161	Iglidur® A350	6
35	Flange bearing A350FM 30 16	10115158	Iglidur® A350	12
* The position and the usage depends on the position of the faceplate				

Parts list - Frame clamp



Frame clamp front



Frame clamp back

##	Description	Article	Materials	Quantity
01	Plain washer M16	10114842	A4 70 (stainless steel)	2
02	Hexagon nut M16	10114849	A4 80 (stainless steel)	4
03	Threaded rod M16	10115048	A4 80 (stainless steel)	2
04	Clamp profile L1190	10115052	AISI 316L, PU	1
05	Frame clamp 02	10115075	AISI 316L, Duplex 1.4462	1
06	Hexagon socket head cap screw M8x20	10115047	A4 80 (stainless steel)	5
07	Parallel pin 06x45	10115071	A4 80 (stainless steel)	4
08	Plain washer M18	10115046	A4 70 (stainless steel)	2
09	Wear strip	ME-2605200959PA6		4
10	Hexagon socket set screw M12x10	10115557	A4 70 (stainless steel)	2
11	Nord-lock washer M16	10114843	A4 70 (stainless steel)	6
12	Hexagon head screw M16x40	10115098	A4 80 (stainless steel)	6

Installation of the frame clamp

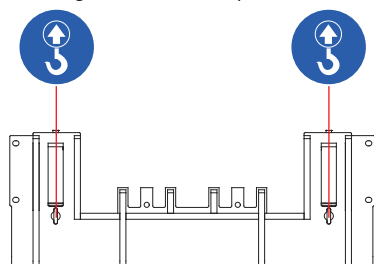
Removing the frame clamp:

- 1- Remove both hexagon socket set screws M12x10
- 2- Apply both lifting eye bolts M12
- 3- Apply standard lifting gear with suitable dimensions and sufficient capacity (see handling the frame clamp)
- 4- Remove the M16 Nord-lock washers and hexagon head screws (6X)

Replacing the frame clamp

- 1- Apply the M16 Nord-lock washers and hexagon head screws (6X)
- 2- Remove the standard lifting gear (see handling the frame clamp)
- 3- Remove both lifting eye bolts M12
- 4- Apply both hexagon socket set screws M12x10

Handling the frame clamp



Dimensions:
 - Length: ± 1210 mm
 - Width: ± 85 mm
 - Height: ± 454 mm
 Mass: ± 144 kilograms

Safety notices

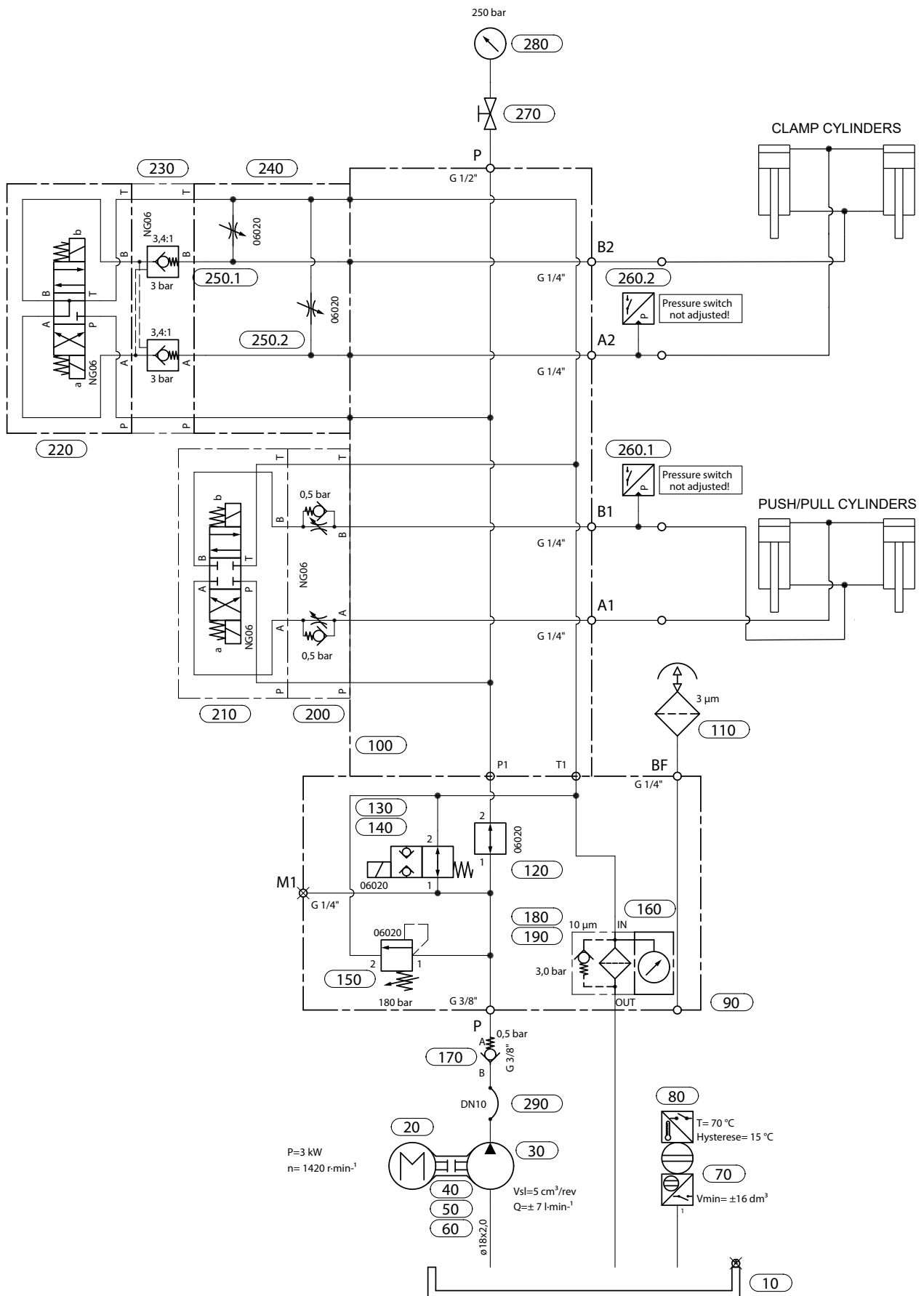


Do not use the machine without removing both M12 lifting eye bolts

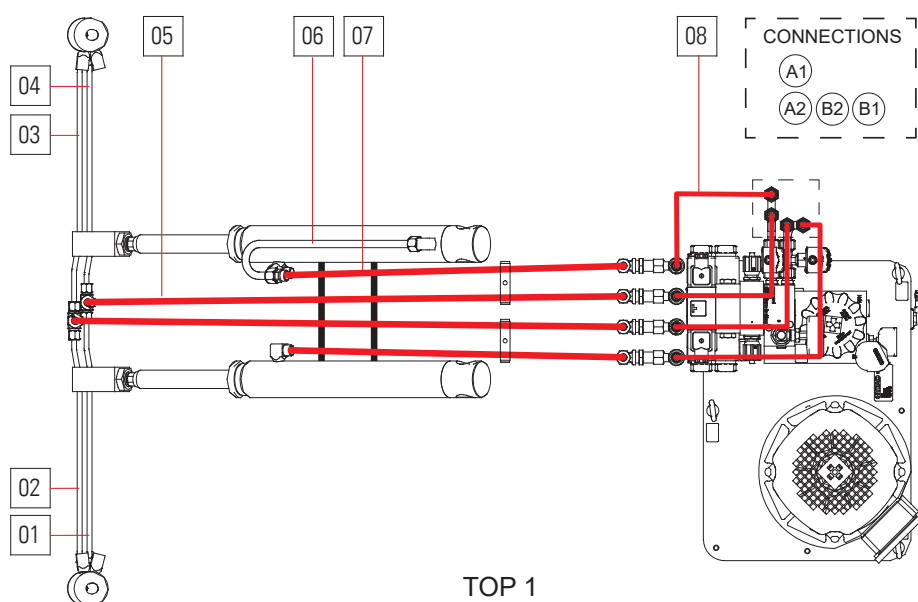


Do not use the machine without replacing the frame clamp and its components

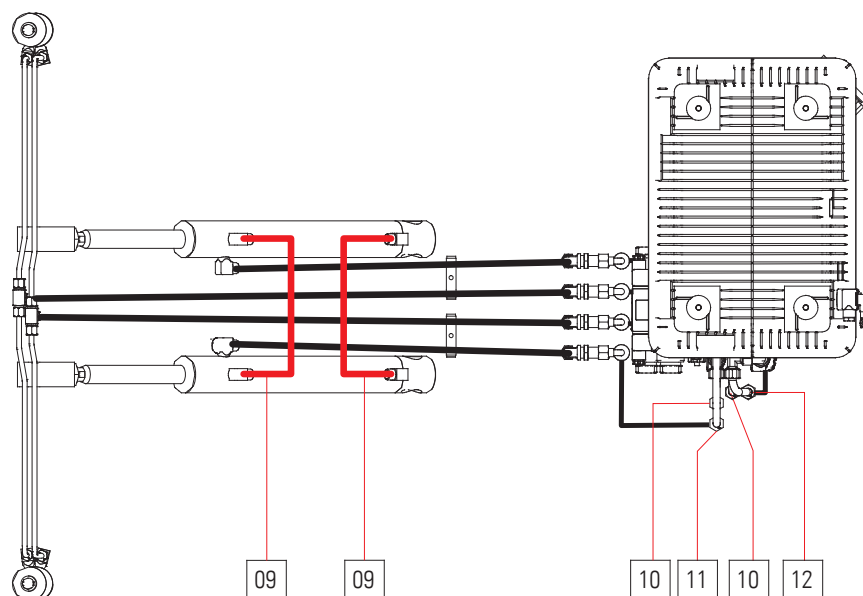
Hydraulic circuit diagram



Parts list - Hydraulic hoses and tubes



TOP 1

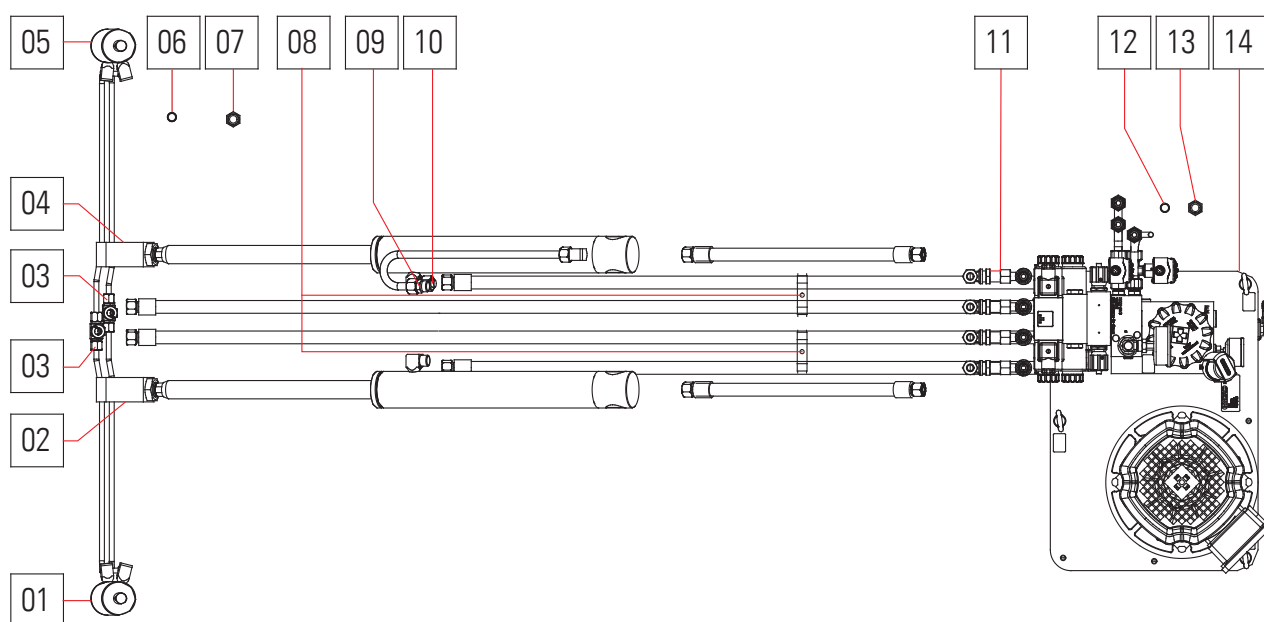


BOTTOM 1

#	Description:	Article:	Materials:	Quantity
01	Tube 8L PP DW 4	10115532	AISI 316L	1
02	Tube 8L PP DW 1	10115529	AISI 316L	1
03	Tube 8L PP DW 3	10115531	AISI 316L	1
04	Tube 8L PP DW 2	10115530	AISI 316L	1
05	Hydraulic hose RVS 3-8 12L L1710	10115587*	PTFE, FKM, AISI 316L, AISI 304	2
06	Tube 12L PP	10115565	AISI 316L	1
07	Hydraulic hose RVS 3-8 12L L1160	10115588*	PTFE, FKM, AISI 316L, AISI 304	2
08	Hydraulic hose RVS 3-8 12L 90 180 L620	10115586*	PTFE, FKM, AISI 316L, AISI 304	4
09	Hydraulic hose RVS 3-8 12L L0420	10115589*	PTFE, FKM, AISI 316L, AISI 304	2
10	Tube 12L 030-90-060 RVS	10115582	AISI 316L	2
11	Tube 12L 060-90-110 RVS	10115583	AISI 316L	1
12	Tube 12L SPI06 014-90-030-25-066 RVS	10119707	AISI 316L	1

* detailed information on request

Parts list - Hydraulic components



#	Description	Article	Materials	Quantity
01	Cylinder DW 45 25 110.5 L	10114125*	Duplex 1.4462, AISI 329, AISI 316, CuNiAl, EPDM,	01
02	Cylinder DW 50 30 259 L	10114123*	Duplex 1.4462, AISI 329, AISI 316, CuNiAl, EPDM, Iglidur® A350	01
03	Complete T-fitting 8L-12L-8L	10115528	AISI 316L	02
04	Cylinder DW 50 30 259 R	10114124*	Duplex 1.4462, AISI 329, AISI 316, CuNiAl, EPDM, Iglidur® A350	01
05	Cylinder DW 45 25 110.5 R	10114126*	Duplex 1.4462, AISI 329, AISI 316, CuNiAl, EPDM	01
06	Cutting ring 8L	10115567	AISI 316L	04
07	Nut 8L	10115566	AISI 316L	04
08	Pipe clamp	10115571*	PP, PA, AISI 316	02
09	Straight coupling 12L	10115581	AISI 316L	05
10	Blanking plug 12L	10115574	AISI 316L	01
11	Bulkhead elbow 12L	10114855	AISI 316L	04
12	Cutting ring 12L	10115572	AISI 316L	10
13	Nut 12L	10115573	AISI 316L	11
14	Hydraulic pump unit	10115514*	Various materials	01

* detailed information on request

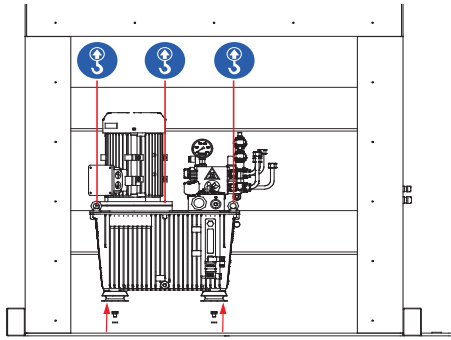
Hydraulic Power Unit					
Q	7.0 L/min		Tank capacity	30 liters	
P _{max}	180 bar		Type of oil	NEVASTANE AW 46	
Motor - FCA 100LB 4/PHE					
V	Hz	kW	r/min	A	COS φ
Δ 230 / Y 400	50	3	1435	10.47/6.02	0.82
Δ 265 / Y 400	60	3.6	1722	10.69/6.16	0.82

Parts list - Spill tray (optional)

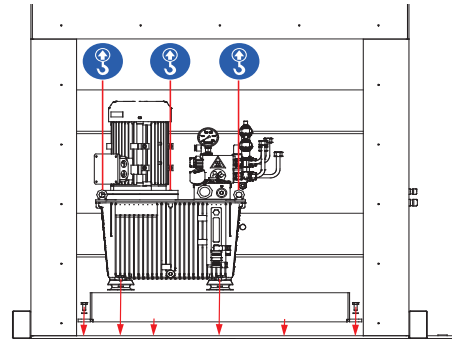
Spill trays are an essential part of spill control and site safety measures, and can ensure that regulations are complied with. Also spill trays can reduce the risk of oil being present on the workfloor, reducing the risk of personal injury due to slipping.

A spill tray can be mounted inside the frame of the SPI06-1020 RVS for the containment of oil drips, leaks or spillages. The spill tray can accommodate ± 40 liters of oil, and is made from stainless steel.

Installation:

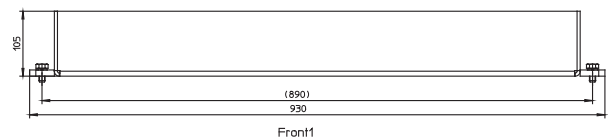
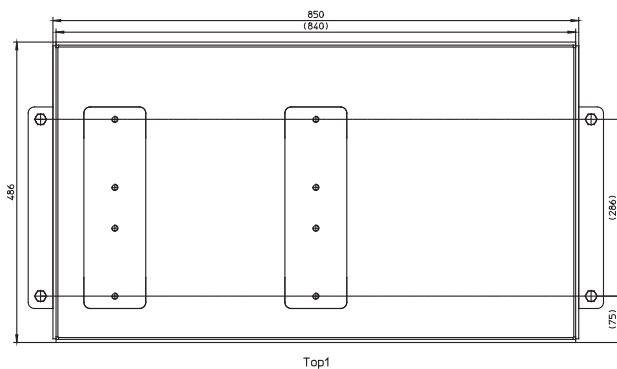


1. Remove the M10 screws and washers (8X)
2. Remove the hydraulic pump unit

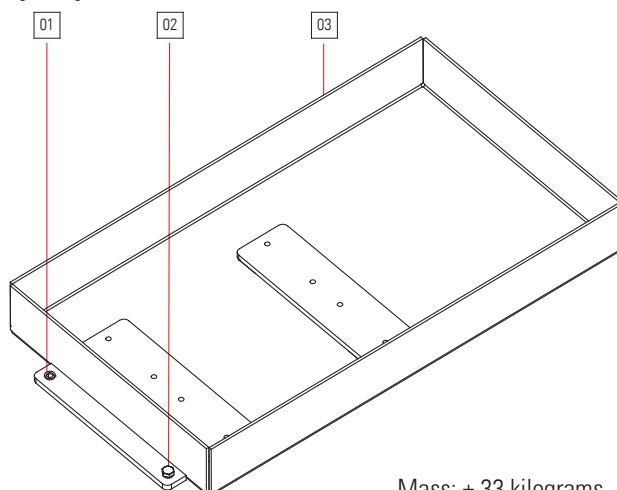


3. Place and secure the spill tray with the M10 screws and washers (4X)
4. Place and secure the hydraulic pump unit with the M10 screws and washers (8X)

Dimensions:



Spare parts:



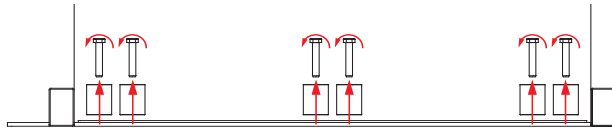
Mass: ± 33 kilograms

##	Description:	Article:	Materials:	Quantity
01	Nord-lock washer M10	10114844	A4 70 (stainless steel)	4
02	Hexagon head screw M10x22	10118964	A4 70 (stainless steel)	4
03	Spill Tray HPU RVS	10118859	AISI 304	1

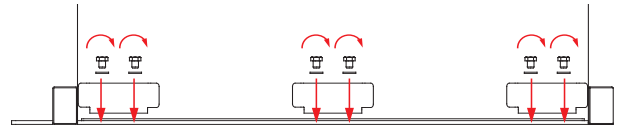
Parts list - Pallet bumper (optional)

Adjustable pallet bumpers can be used to minimize the space between the pallet guide and the machine. The pallet bumpers are made of stainless steel and will replace the spacers.

Installation:

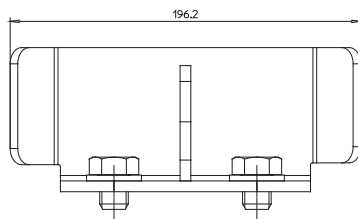


1. Remove the M16 screws (6X)
2. Remove the spacers (6X)

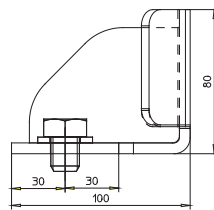


3. Place and adjust the pallets bumpers (3X)
4. Secure the M16 screws and washers (6X)

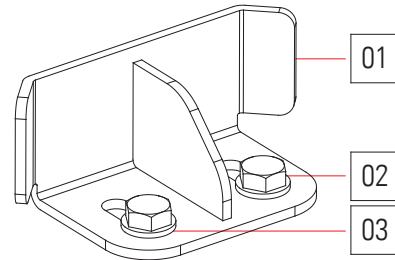
Dimensions and spare parts:



Front1



Right1



Gen1

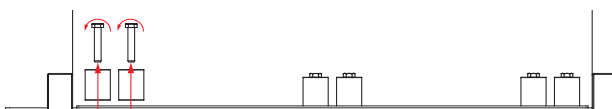
Mass: ± 2 kilograms

##	Description:	Article:	Materials:	Quantity
01	Pallet bumper 10-40 W	10119723	Aisi 316L	1
02	Hexagon head screw M16x19	10117710	A4 80 (stainless steel)	2
03	Nord-lock washer M16 SP	10114843	A4 70 (stainless steel)	2

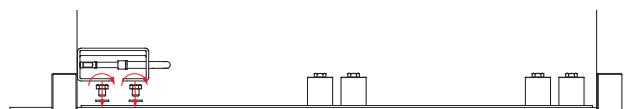
Parts list - Pallet detection sensor (optional)

A pallet detection sensor can be used to detect if a pallet is present at the shipping area. The pallet detection sensor is made of stainless steel mainly, and can be installed instead of the two spacers closest to the cable glands.

Installation:

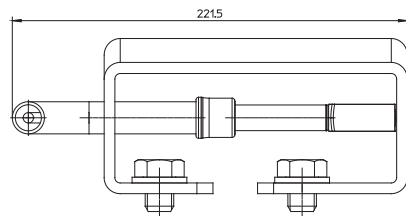


1. Remove the M16 screws (2X)
2. Remove the spacers (2X)

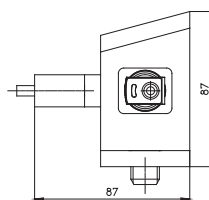


3. Place and adjust the pallet detection sensor
4. Secure the M16 screws and washers (2X)

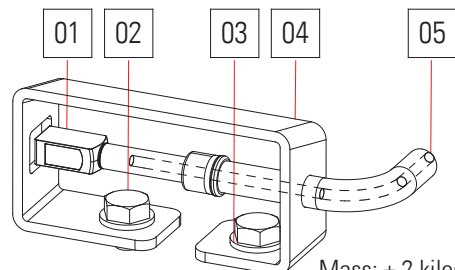
Dimensions and spare parts:



Front1



Right1



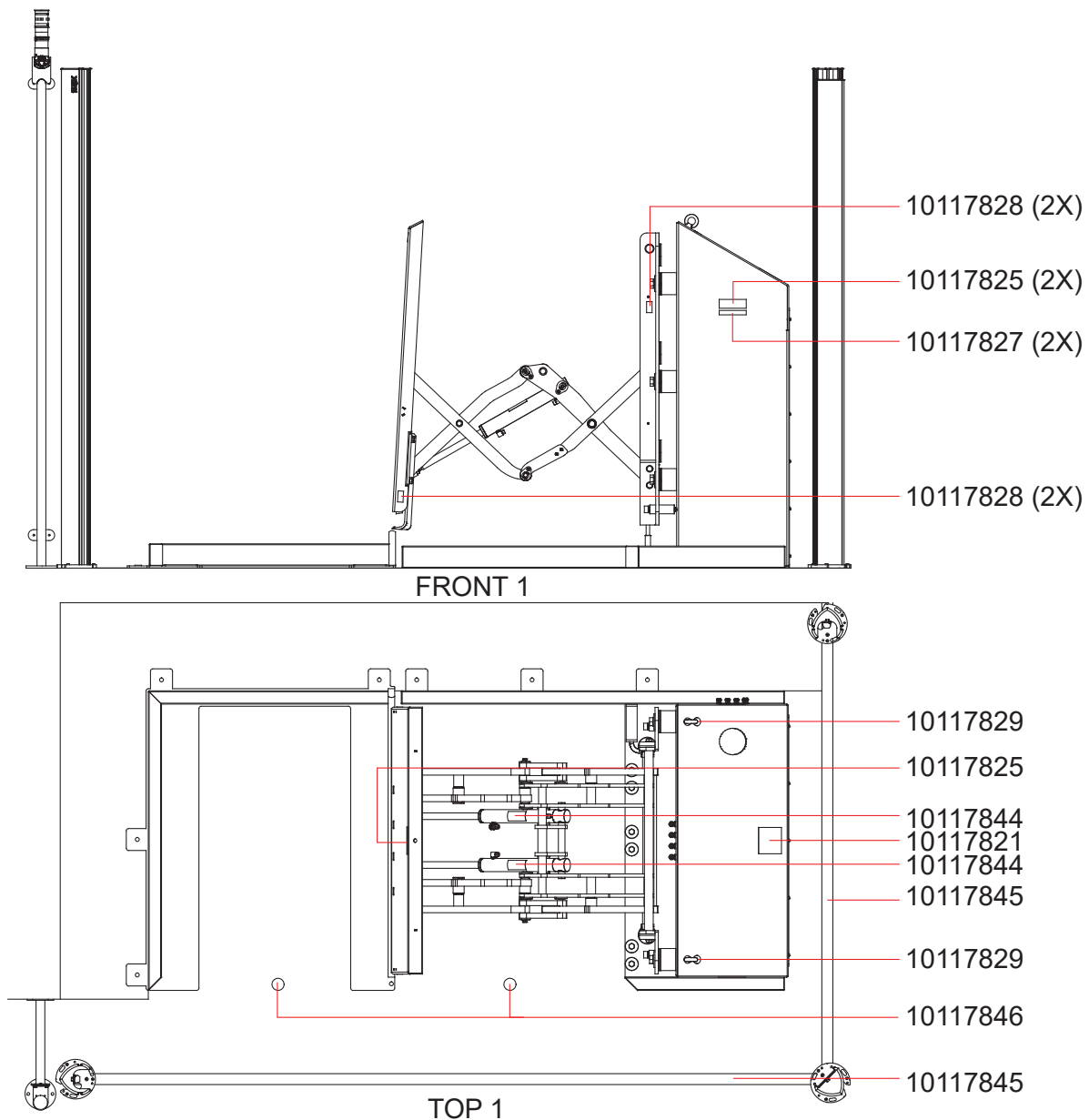
Gen1

Mass: ± 2 kilograms

##	Description:	Article:	Materials:	Quantity
01	Photoelectric sensor	10117707*	Various materials	1
02	Hexagon head screw M16x19	10117710	A4 80 (stainless steel)	2
03	Nord-lock washer M16 SP	10114843	A4 70 (stainless steel)	2
04	Pallet detection sensor W	10117711	Aisi 316L	1
05	Connector and cable	10117706*	Various materials	1

* detailed information on request

Position of the labels and nameplate



Description:	Article:	Quantity:
Nameplate	10117821	1
Caution no hand hold 25X50	10117828	4
Caution no hand hold 62X93	10117844	2
Do not stand here*	10117846	2
Lift point	10117829	2
MHS logo	10117825	3
WLL 0600 KG	10117827	2
Marking tape black and yellow**	10117845	1
Warning 400V***	10120796	1

* Do not walk or stand here stickers are provided separately with the machine, if the use of these stickers are not restricted because of the hygienic regulations, it can be applied as described.

** Black and yellow marking tape is provided separately with the machine, if the use of the tape is not restricted because of the hygienic regulations, it can be applied as described.

***Warning 400V stickers are placed on front of the door of the control panel, on the Perspex covers (inside control panel), and the trunking (inside the control panel)

Recommended spare parts

To minimize the downtime of the machine, Meijer Handling Solutions B.V. recommends the following spare parts.

Description:	Article:	Quantity:
Pendant remote control	10117642	01
Hydraulic hose RVS 3-8 12L 90 180 L620	10115586	04
Clamp profile L1190	10115052	01
Cylindrical vibration damper D30x20	10115516	02
Flange bearing A350 3034 16	10115158	12
Flange bearing A350 3034 26	10115159	04
Flange bearing A350 4044 30	10115085	02
Cylinder DW 50 30 259 L RVS	10114123	01
Cylinder DW 50 30 259 R RVS	10114124	01
Cylinder DW 45 25 110.5 L RVS	10114125	01
Cylinder DW 45 25 110.5 R RVS	10114126	01
Hydraulic hose RVS 3-8 12L L0420	10115589	02
Hydraulic hose RVS 3-8 12L L1160	10115588	02
Hydraulic hose RVS 3-8 12L L1840	10115587	02
Pipe clamp LNGF	10115571	02
Plain washer M30 PA	10116515	04
Sleeve bearing A350SM 3034 40	10115161	06
Slide block D25	10115162	02
Slide block D30	10115163	02
Wear pad	ME-2605200959	04
Plate 1990x0385x05	10114765	01
Hydraulic oil - NEVASTANE AW 46 (20L)	10118546	01
Labels (see position of the labels)	10117826	01
Nord-lock washer M16	10114843	06
Hexagon head screw M16x40	10115098	06
<i>Wireless remote control*</i>	<i>10111854</i>	<i>01</i>
<i>Detection sensor*</i>	<i>10117709</i>	<i>01</i>

** only recommended spare parts when this option is selected with the order*

MEIJER

HANDLING SOLUTIONS

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