

Basics Manual Semi-automatic English



matco
INTERNATIONAL

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1 Foreword

These operating instructions for the pallet wrapping machine are made so:

- It is safe to use;
- One is able to make settings;
- One can perform maintenance.

Additionally included in this basic manual are:

- Machine specific manual
- CE declaration

SERVICE

In the event of a malfunction, contact:

Matco International.
Tel: +31 (0) 850 49 49 00
E-mail: service@matco-international.com

SPARES

Order spare parts at:

Matco International
Nering Bögelweg 125,
7418 HJ Deventer, Nederland
Tel: +31 (0) 850 49 49 62
E-mail: sparepartsdeventer@matco-international.com

2 Safety

2.1 Safe use

We use the following symbols to warn about dangers and possible sources of risk. Get to know them well! Ignoring a warning can lead to personal injury and/or damage to this equipment or other machinery.



Attention:

Failure to observe warnings may result in a fatal accident, personal injury or damage to equipment.



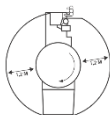
Attention:

Live electrical components. Failure to observe warnings may result in a fatal accident, personal injury or damage to equipment.



Attention:

Danger from rotating parts



Prohibited:

Risk of entering a dangerous area. Prohibited for unauthorised personnel!



Attention:

Heat hazard, burn hazard

2.2 Qualified personnel

Our definition of "qualified personnel" in this context is "personnel with a thorough knowledge of the equipment itself and how to operate and maintain it safely". Qualified personnel must be physically fit enough to perform the necessary tasks, have a good knowledge of all the relevant safety precautions and be trained to install, operate and/or maintain the equipment safely. The company using the equipment is responsible for ensuring that the personnel comply with these conditions.

2.3 Accident prevention

1. Before starting to work with the installation, the manual must first be studied.
2. *Use of the installation by unauthorised personnel is prohibited.*
 -
3. *Never allow persons to use the equipment if they are under the influence of medication that may impair reaction times or are not in physically fit condition for operating the installation.*
4. *Ensure at all times that work / maintenance / service on the installation is done safely and without voltage. Make sure that the installation cannot be switched on accidentally by locking the main switch.*
5. *Safety guards must be checked before starting the machine – they may not be loose or removed. This also applies to the foot protection under the film carriage.*
 -
6. *If it is necessary to remove any safety device to allow installation, repairs or maintenance, the safety device must be replaced immediately after completing the task.*
 -
7. *Keep limbs and clothes away from rotating parts. Do not wear neckties or loosely hanging clothes when using or maintaining machines with rotating parts. Remove wristwatches, chains and similar jewellery. Cover or tie up long hair before carrying out any task on or with the machine.*
 -
8. *Only machines with a suitable protection rating may be used in humid conditions.*
 -
9. *Do not use the equipment in an area with risk of explosion.*
 -
10. *Always use the equipment in a well-ventilated space.*
 -
11. *If a pneumatic hold-down plate is used, the supply air line will remain under pressure when entering the danger zone. Other parts will become voltage / energy-free.*

Dangerous situations may result from failure to comply with the conditions listed above.

3 Use

3.1 Intended use

The fully automatic wrapping machine, hereinafter also referred to simply as “the installation”, may only be used for wrapping pallets of the suitable products that meet the data as stated in the description. In case of doubt, the manufacturer must be consulted for permission.

Using the installation in any way other than specified in the description can lead to danger, e.g. it can damage the wrapping machine and/or threaten the safety of operator or other persons near the installation.

To ensure safety, all personnel must read these operating instructions thoroughly before commissioning the installation, troubleshooting or performing maintenance.

We would like to call your attention to chapter 2 Safety, which specifies the intended use and the unsafe situations that cannot be prevented through the design and manufacture of the machine.

3.2 Improper use

The installation may not be used in the following situations:

- *When it is in poor condition*
- *In an environment with risk of explosion (unless the machine is specially adapted)*
- *With unsuitable materials and consumables*
- *Without full compliance with the values specified under "Technical data".*
- *In a humid environment*

The following materials may not be processed in the installation:

- *Materials presenting a risk of explosion or fire*
- *Caustic and corrosive materials*
- *Foodstuffs (unless the machine is specially adapted)*

3.3 Intended use

The installation is intended for industrial applications.

3.4 Other risks

In terms of design and construction, everything has been done to protect users from possible dangers. However, some risks cannot be entirely eliminated. Users must be aware of the following:

- *The risk of entering a dangerous area*
- *Control line cylinder pressure plate remains under pressure in all cases*
- *Control line of the film clamp remains under pressure (for turntable winder with 90 ° infeed or outfeed).*

The risk of entering a dangerous area

It is possible to enter dangerous areas when loading and unloading products.



Attention: Prohibited for unauthorised personnel!
Risk of entering a dangerous area.

3.5 The scope of this manual

This manual is only valid in combination with all the other documentation included in the user manual. For special versions, this manual may be supplemented with extra specifications and/or additional documentation.

The images only show the installation's essential parts.

4 Installation



Attention:

Only allow qualified personnel to perform the following tasks. Observe all the safety instructions in this manual and all other relevant documentation.

4.1 Unpacking

Unpack the installation carefully and check for any transport damage. Retain the pallet, fixings and wrapping material for possible future transport or dispose of it in accordance with the appropriate waste handling regulations.

4.2 Transport

- For weight specifications check the "Machine specific manual". Only use suitable lifting gear.
- Protect the installation from damage, damp and dust, using suitable packing materials.
- Avoid bumps and shocks.

4.3 Storage

Do not store the installation outdoors! Protect it against dust and fluctuating temperatures (condensation formation).

4.4 Waste disposal

When the installation reaches the end of its working life or there is no further use for it, the equipment should be handled according to the currently valid waste disposal regulations.

4.5 Installing

Only install the installation in a location that conforms to the stated safety classification. Install the installation in a well-ventilated space. Do not put it in an area with any risk of explosion!

Protect the installation against vibration. Remove transport protection materials (when present).

Make sure there is enough free room, especially above the installation. Check the "Machine specific manual" for dimensions.

4.6 Electrical connection



Attention:

Hazardous electrical voltage. Failure to observe warnings and safety measures may result in a fatal accident, personal injury or damage to equipment.

- Connecting to a power source:
 - The preferred way to connect the installation is via a power cable with a plug, connected to an earthed mains socket that is protected by a circuit breaker or fuse.
 - The power supply must, in principle, comply with applicable requirements regarding acceptable voltage variations, ripple, attenuation of higher harmonics, etc.

4.7 Mounting



Attention:

All of these activities may only be performed under the supervision of qualified personnel from the manufacturer or an authorised representative!

- The concrete floor must be completely flat and horizontal within the tolerances set by the installation
- Anchor machine parts to concrete floor.

5 Maintenance



Attention:

- Switch off the main switch and secure it with a padlock before performing any maintenance on the installation.
- Ensure that no one else can switch on the installation.
- Ensure that safety guards and suchlike are installed when the installation is activated.

5.1 General

Preventive maintenance will ensure that the installation has a longer working life. This means that the condition of various parts of the installation must be inspected on a weekly, monthly or annual basis. The environmental conditions will affect the service life. The specified maintenance frequency applies to normal operational conditions (8 hours per day, 5 days per week, at 20°C, in a clean environment). When subjected to more demanding conditions we recommend performing maintenance more frequently. Ensure that moving parts are free of dirt.

Please refer to the maintenance schedule in section 5.2.1 Maintenance schedule for information about the maintenance frequency required for the different systems and parts.

5.2 Spare parts

The parts lists for the machine parts describe the parts used, which can be ordered as spare parts. Bij bestelling van onderdelen dient op het volgende gelet te worden:

- 1 Provide the machine's serial number.
- 2 For electrical parts, provide the (schematic) position number, description, article number and manufacturer's name.
- 3 For mechanical parts, provide the drawing number, position number, article number and description.

To facilitate the rapid repair of a possible malfunction, we recommend keeping a number of spare parts in stock.

5.2.1 Maintenance schedule

Maintenance frequency	8 hours	40 hours	100 hours	200 hours	500 hours	1000 hours	2000 hours
Clean daily	X						
Check cutting wire	X						
Check cutting blade	X						
Clean photocell lens			X				
Chain under turntable				3			
Sprockets turntable				X			
Timing belt pulley for pre-stretch						X	
String for pre-stretch						X	
Bearings						X	
Running wheels film carriage						X	
Running wheel turntable						X	
Limit-/proximity switch						X	
Gearmotors						X	1
Electrical system						X	

The numbers in the maintenance schedule refer to the applicable products as shown in the lubricants table.



Attention:

Check safety/instruction stickers. If they are damaged or missing, they must be replaced.

5.2.2 Lubricants

SYMBOL	LUBRICANT					
	SHELL	BP	ESSO	MOBIL OIL	TEXACO	GLEITMO
1	OMALA 220	ENERGOL GR-XP 220	SPARTAN EP 220	MOBILGEAR 630	MEROPA 220	
2	OMALA 680	ENERGOL GR-XP 680	SPARTAN EP 680	MOBILGEAR 636	MEROPA 680	
3	TONNA T68	MACCURAT 68	FEBIS K 68 EP220	VACTA.4	WAX LUBRICANT X68	
4	ALVANIA R	ENERGREASE L2	BEACON 2	MOBILUX 2	MULTIFAK EP2	
5	TELLUS 46	HPL 46	NUTCO H46	DTE 26	RANDO HD46	
6	TORCULA 32	ENERGOL RD-E 80	AROX EP 56	ALMOBIL 1	ARIES 32	
7	TELLUS 15				RANDO HDZ 15	
8	RETINAX WB				STARPLEX PREMIUM 1 (depends on the application)	
9						FIN GREASE OG
10			UNIREX EP			

5.3 Inspections



Attention:

Only allow qualified personnel to perform the following tasks. Observe all the safety instructions in this manual and all other relevant documentation.



Attention:

Tracing faults can possibly require checking while the installation is under power. Take care to observe the safety regulations concerning working on live equipment (active parts). Ignoring them can lead to danger of electric shock.

Inspections	Tasks
Electrical system	<ul style="list-style-type: none"> - Check the switches, emergency stops and other operating buttons to ensure they are working correctly. - Check the indicator lights. - Check and test the thermal protection devices. - Check the contactors and relays for burned contacts and humming. - Check the cabling and connections. - Check the photocells and reflectors to ensure correct operation and adjustment (lenses must be clean). - Check the limit and proximity switches for correct operation and adjustment.
Motors/gear units	<ul style="list-style-type: none"> - Check the fan. - Check that the fan cover is undamaged. - Check the oil level in the gearbox (top up if required). - Check that the fastening bolts are tightened and tighten them when required. - Check and lubricate moving parts if required.
Turntable	<ul style="list-style-type: none"> - Check the tooth flank wear of the chain wheels / sprocket / slewing bearing - Check and lubricate the chain wheels / sprocket / slewing bearing - Check whether the drive gear on the motor shaft has expired. If necessary, align and secure with the locking bolts.
Column	<ul style="list-style-type: none"> - Checking the lifting strap for wear. If wear is visible, the tire should be replaced
Film carriage	<ul style="list-style-type: none"> - Check that there are no film residues in the brake system. - Check the conductivity of the film carriage in the mast via running wheels. - The running wheels must have a max. clearance of 2mm in relation to the guide. Replace if necessary due to wear. - The guiding construction for the film carriage in the mast must NEVER be lubricated! - Check the parallel running of the film carriage. - The film carriage may max. 2 - 3mm at an angle - Check the timing belt pulley and the timing belts of the front rack for wear. Replace if necessary.
AW (implementation)	
Pneumatic system	<ul style="list-style-type: none"> - Regularly check that the filter is clean. If required, clean or change. - Regularly drain any accumulated condensation - Check hoses, cylinders, hose connections and valves for leaks
Film inlay-unit	<ul style="list-style-type: none"> - Check the condition of the rubber of the film inlay jaws. These must not have become too hard and / or damaged. Replace if necessary. - Check that the film inlay jaws close properly. These must close properly over the entire length. Readjust or replace if necessary. - Check that the sides on which the film slides are smooth and without damage. Update or replace as necessary. - No film residues in the film inlay. These can prevent proper operation.

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Cutting wire construction (for A700 AW machine)	<ul style="list-style-type: none"> - Check the condition of the glow / cutting wire - Check, and if necessary adjust the cutting wire to the correct tension. - Check whether the cutting wire is clean of dust or impurities - Check that the cutting wire does not come into unwanted contact with other parts (such as cables and air hoses)
Cutting blade construction (for A900 AW machine)	<ul style="list-style-type: none"> - Check the band tension of the band cylinder. - If the band is not tight on the cylinder, the band must be readjusted or replaced. Adjust or replace in accordance with the regulations of the supplier. - Check the condition of the band. The ribbon must not be damaged. Replace if necessary. - Check the condition of the cutting blade. The cutting knife should cut and cut through the foil. Replace if necessary. - Check free height space between the bottom of the cutting blade fixation arm and the conveyor track construction. The bottom of the cutting blade fixation arm must remain at least 5mm above the top of the conveyor track. Adjust if necessary.

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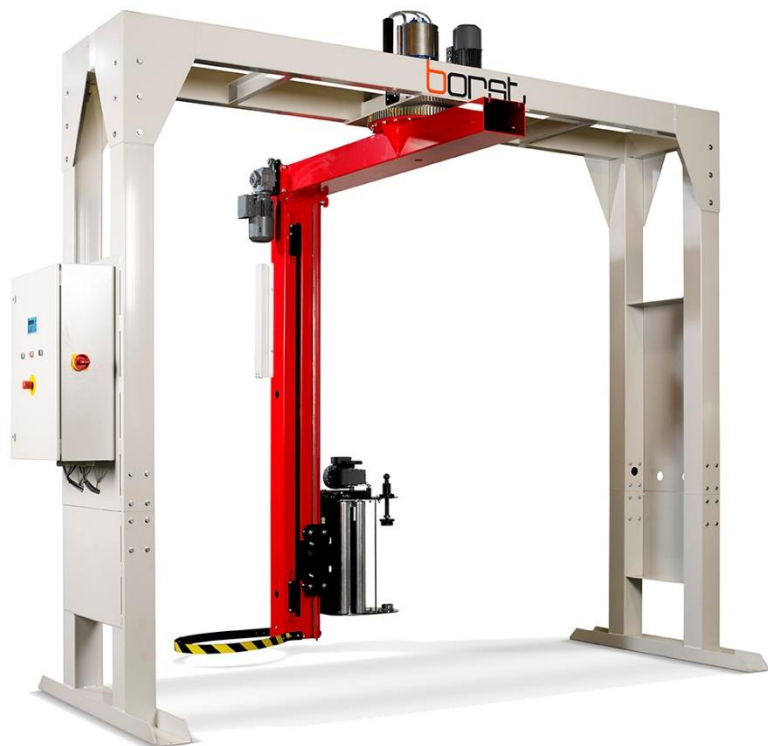


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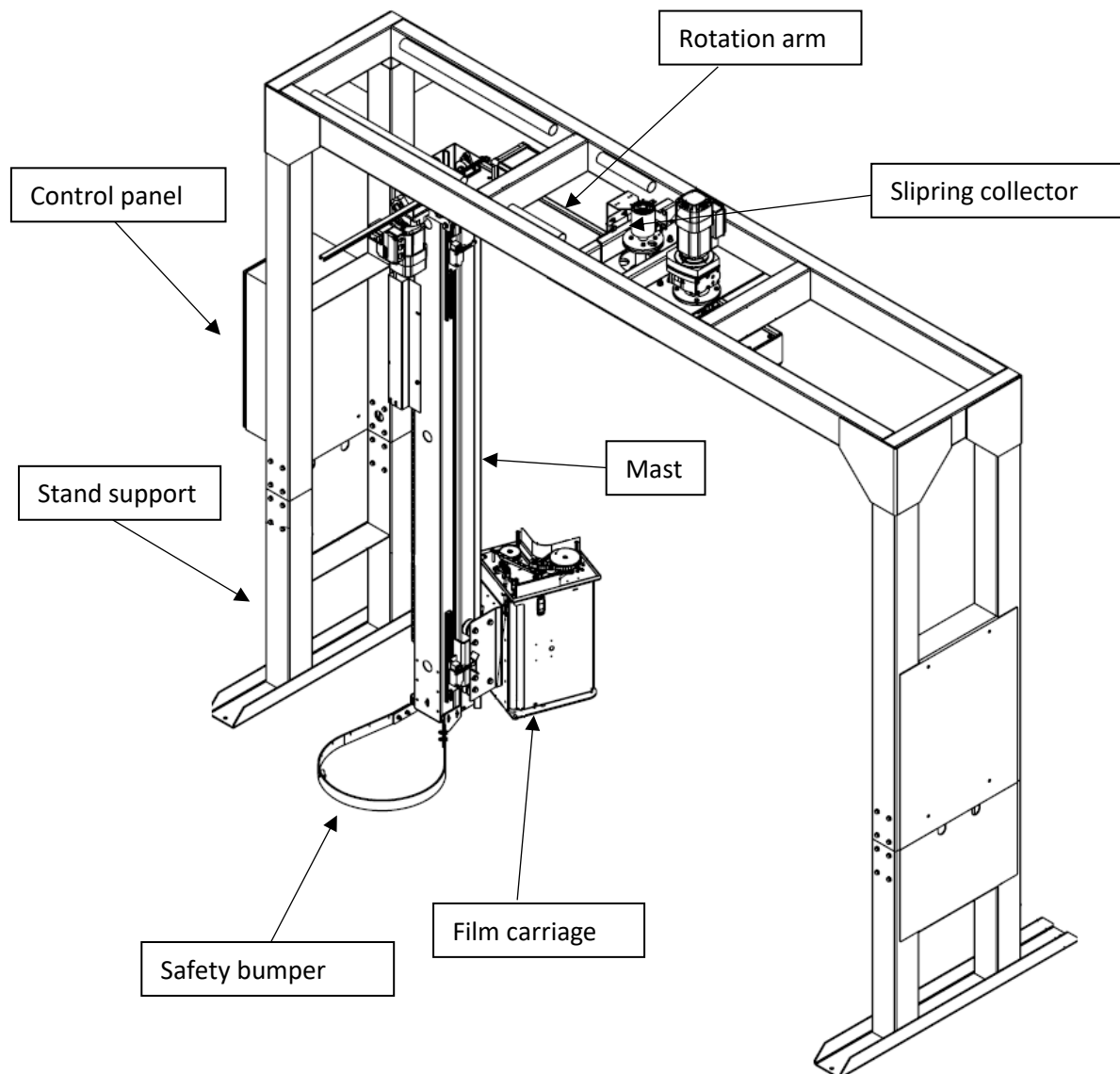
1 Operation

1.1 Essential components

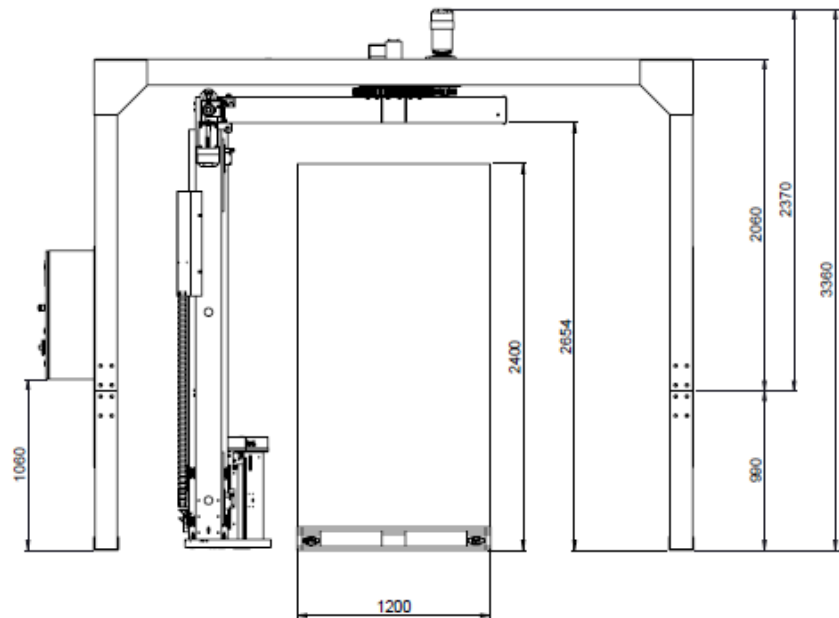
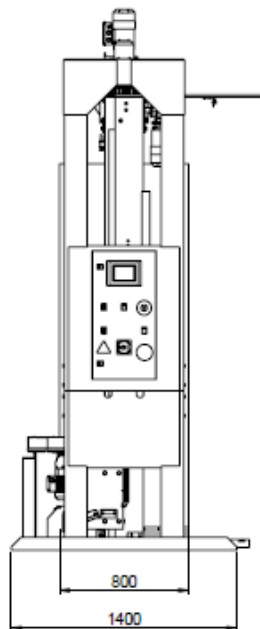
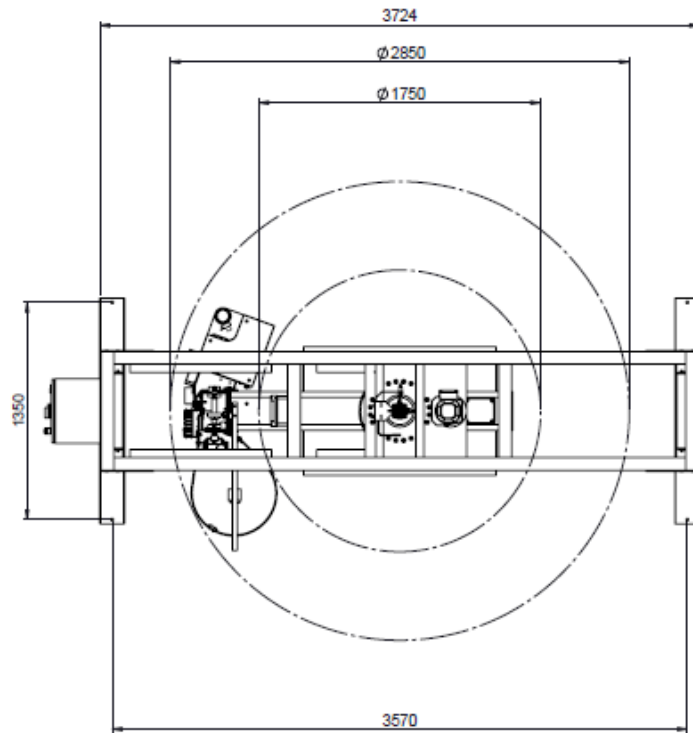


Caution:

The machine may not be used if protective covers are not present.



1.2 Dimensions



2 Technical Data

2.1 Machine

Speed	12 revolutions per minute
Clearance height	Min. 4000 mm
Environment	Clean, dry, non-aggressive
Operating temperature	0 to +30 °C

2.2 Electric

Connection	1x230 VAC - 50 Hz, with protective ground
Installed power	2.5 kW
Insulation class	IP 54

2.3 Dimensions and weight

Weight	Approx. 900 kg (Depending on model and version)
Dimensions (L x W x H)	3724x1400x3360 mm, outer turning circle Ø2850 mm (Depending on model and version)
Product dimensions	1200x1000 mm
Loaded height	Min. 500 mm / max. 2400 mm
Weight loaded pallet turntable	Min. 200 kg
Foil width to be processed	500 mm
Foil width	17 – 35 µ

3 Operation

3.1 Inserting film roll

- 1 – Insert new film roll (direction of unwinding depends on the side of the cling).
- 2 - Apply film according to the illustration below.

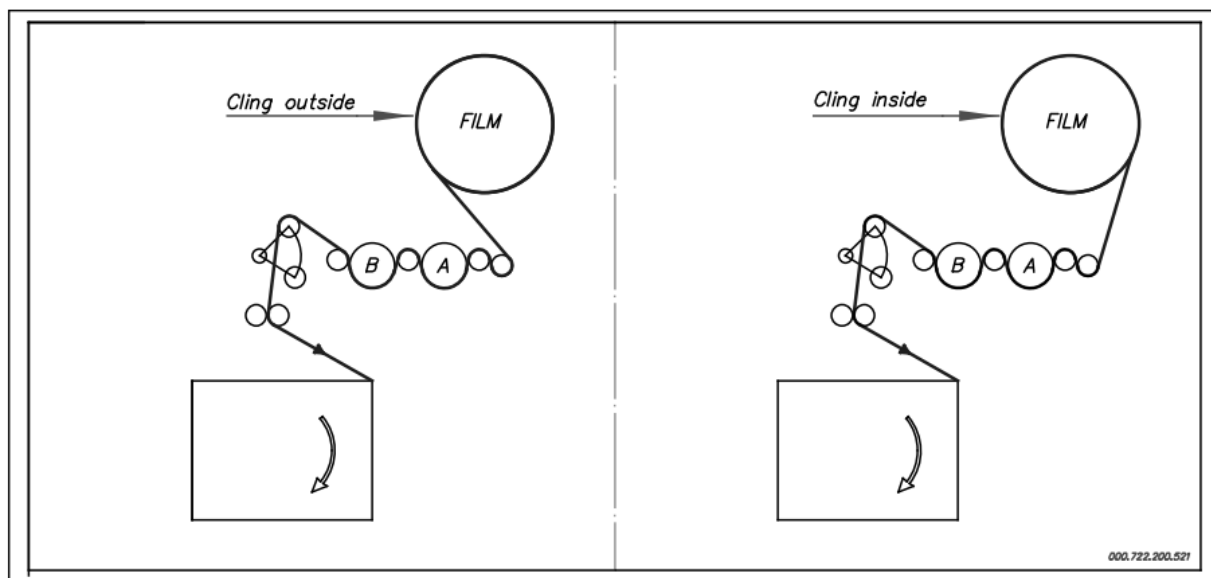
CI = CLING INSIDE (adhesive side inside)

This is how the film has to be placed in the braking system if the adhesive side is on the inside of the foil, when unwinding it from the film roll.

CO = CLING OUTSIDE (adhesive side outside)

This is how the film has to be placed in the braking system if the adhesive side is on the outside of the film, when unwinding it from the film roll.

Film	
Film diameter	Max. 230 mm
Sleeve diameter	76.4 mm (3 inch)
Film width	Max. 500 mm
Thickness	17 - 35 μm

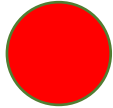


3.2 Control panel

The push / switch buttons below can be found on the control panel of an A900.



This button starts the automatic winding programme.



This button stops the automatic winding programme.



This button resets the automatic winding programme.

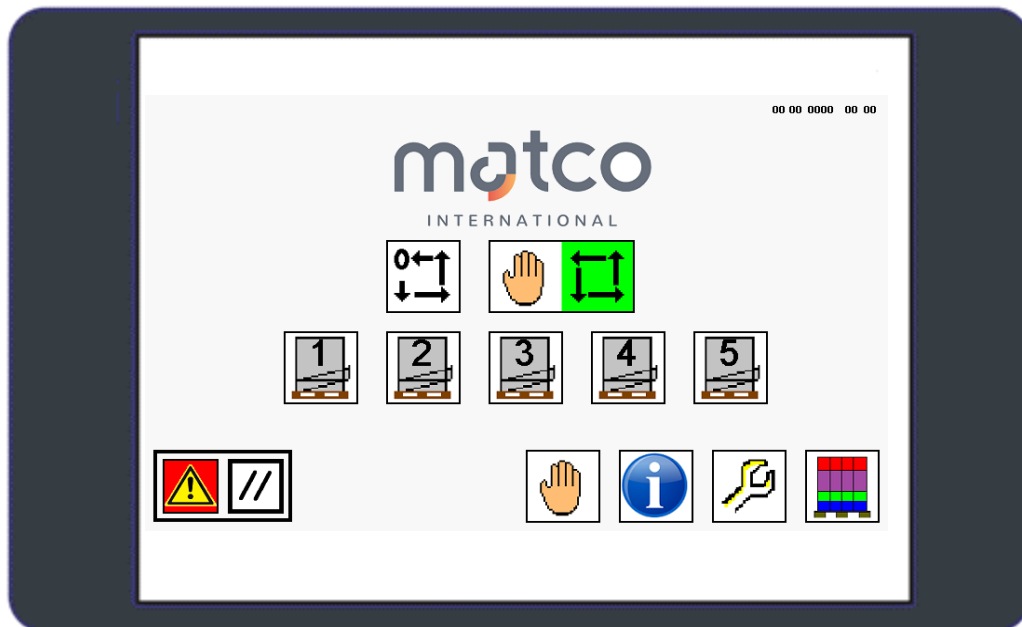


With the main switch / emergency switch, the power supply for the whole machine is switched on and off.

3.3 Control screens

The control panel is a so-called "Touch panel". The various functions as described in this manual can be operated by touching the screen.

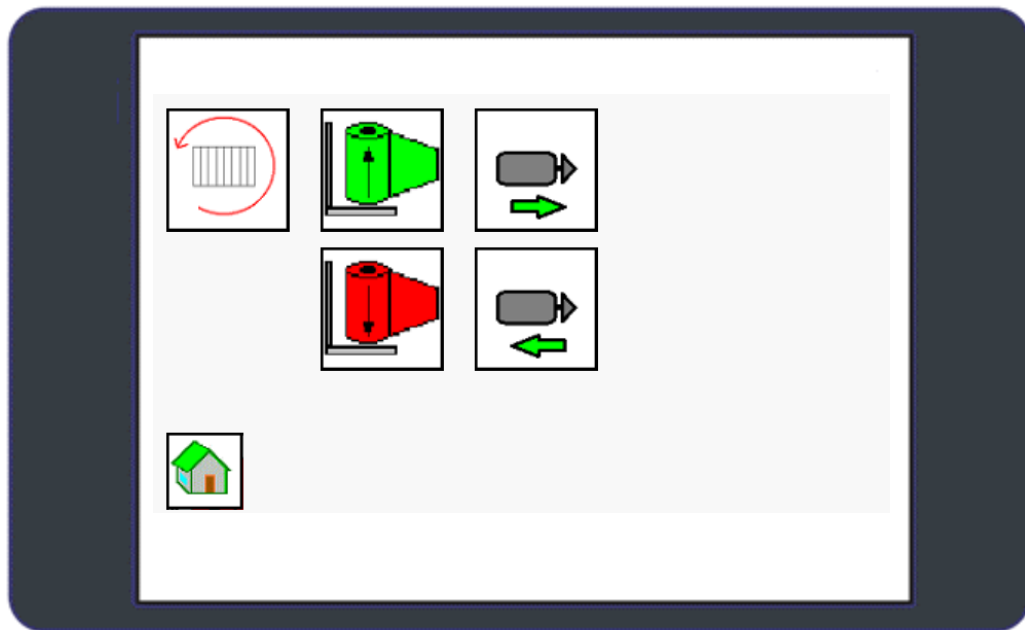
3.3.1 Main menu








Via this screen, you can switch to all underlying screens by using the buttons.

	Selection button between manual and automatic operation. The green illuminated selection is active.		Programme parameters
	Manual operation		Messages
	Reset to home position (hard reset)		Supplier information
	Programme choice, there is a choice of programme 1 to 5		Service / System data
	Reset messages		

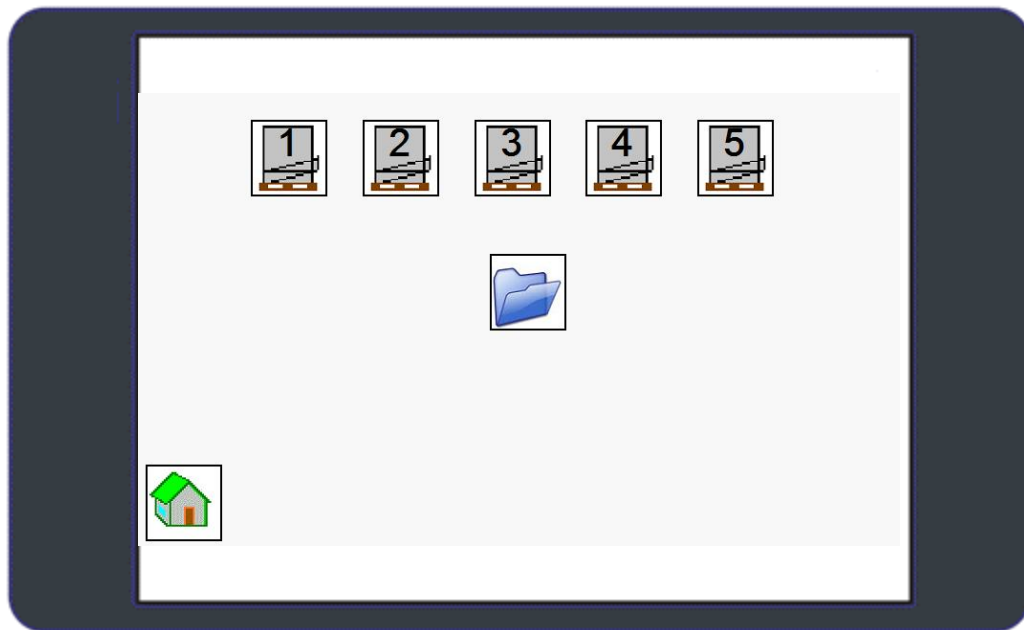
3.3.2 Manual operation



This is the menu for manual operation of the winding machine.

-  Operation of rotation arm.
-  Film carriage goes up.
-  Film carriage goes down.
-  Back to the main menu.
-  Next/previous menu.

3.3.3 Programme parameters



Enter parameters per programme.

A login code is required to make changes to the winding programmes:

Username: operator

Password: 111

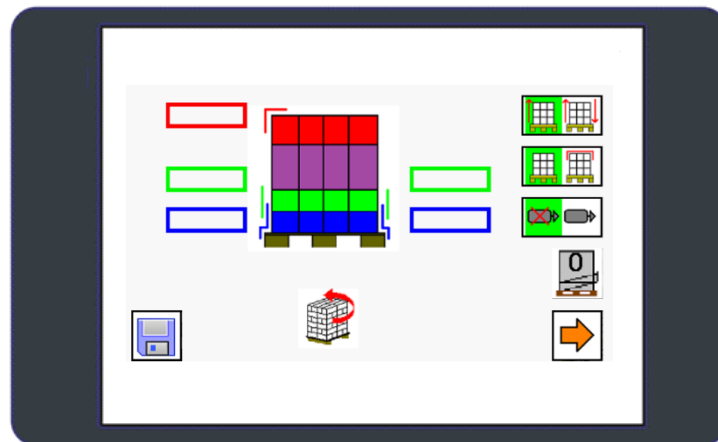


Programme selection, select programme for changes.
Active function is green.






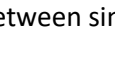
Open selected programme menu.

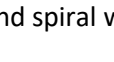
3.3.3.1 Winding parameters

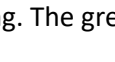


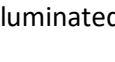
Adjustable parameters per programme: windings (left field up / right field down)

-  **Windings at the underside:** number of windings at the underside of the pallet.
 -  **Reinforcement windings:** number of windings at a specific height. These windings allow you to apply extra windings at a specific place.
 -  **Windings at the top:** number of windings at the top of the pallet.

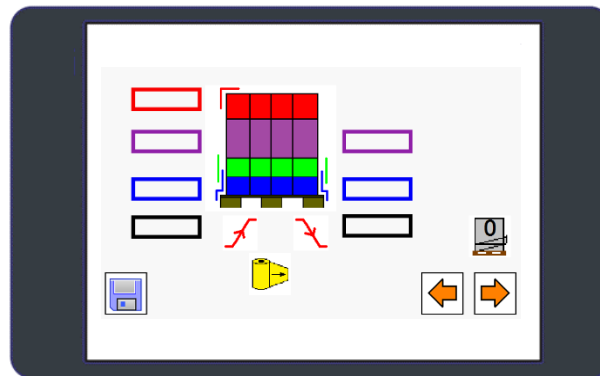
 This button is the option button between single and spiral winding. The green illuminated selection is active)

 This button is the option button between winding with or without top layer. The green illuminated selection is active





 This button is for saving the parameters. The changes are stored and return to the "Programme parameters" menu

 Representation of selected programme.

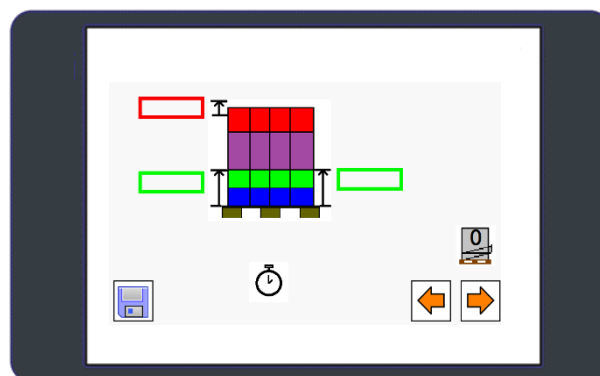
3.3.3.2 Film release parameters





Adjustable programme parameters: film tension (left field up/right field down)

-  Required film release in case of acceleration/deceleration of the winding machine.
100% = tight / 0% = loose (variable setting)
-  Required film release at the underside of the pallet.
-  Required film release during the upward or downward stroke.
-  Required film release at the top the pallet.

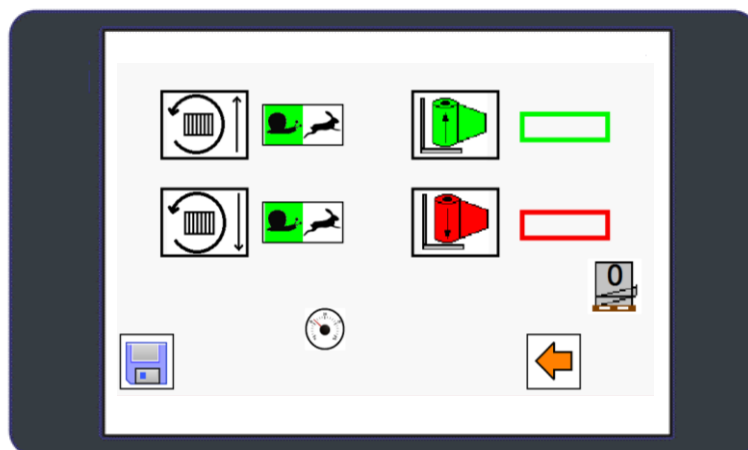
3.3.3.3 Time parameters



Adjustable programme parameters: times (in 0.1 s)

-  Required time for the reinforcement windings. The set time determines the height at which you want to apply reinforcement windings.
-  Required time for the overlap, to determine how long the film carriage has to move over the top of the pallet.

3.3.3.4 Speed parameters



Adjustable programme parameters: speed



Required speed of the rotation arm release during the upward stroke of the film carriage.



Required speed of the rotation arm release during the downward stroke of the film carriage.



Required speed (snail represents low and the hare high speed).
(The green illuminated selection is active.)



Required speed of the film carriage during the upward stroke, 100% = maximum, 0% = minimum (variable setting)



Required speed of the film carriage during the downward stroke.

3.3.4 Messages



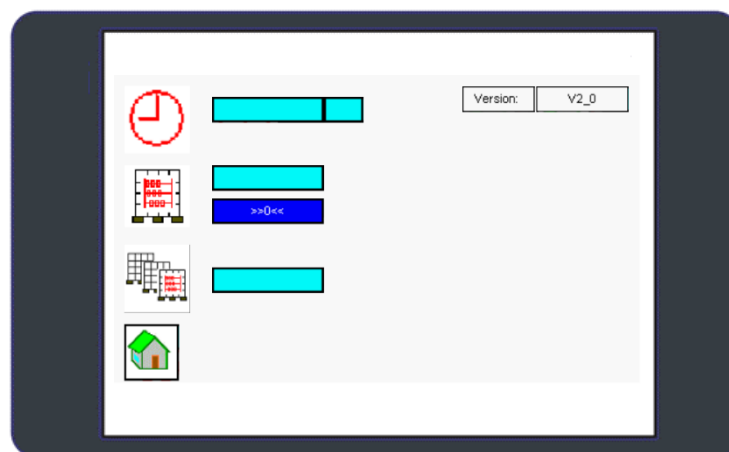
This screen shows malfunctions. They need to be resolved before the machine can be restarted.

Message symbol	Error message	Solution
	Machine position not at zero, Film carriage, turntable or sweeping arm	Press and hold the home position button until all components are back in the basic position and the start button flashes.
	Machine position not on automatic	In the main menu, set the position to automatic operation.
	Foil breakage or film roll finished	Insert new roll or fix reason for film breakage
	Safety bumper is broken	Remove obstruction in turning circle
	Fault of freq. controller	Reset controller on HMI. If this does not work, turn off the machine for 1 minute and restart it. In case of no result, call Matco International.

3.3.5 Supplier information



3.3.6 Statistics



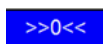
Installation statistics



Operating hours counter: The field next to this graphic representation shows how many hours the machinery is in operation.



Day counter: The field next to this graphic representation shows how many pallets have been wound that day.

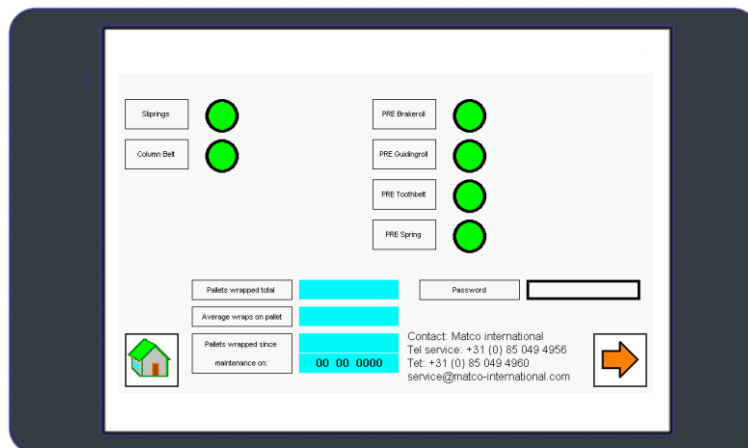


Reset day counter: This allows you to reset the previously mentioned day counter per day or at the desired time.



Pallet counter: The fields next to this graphic image shows how many pallets the machine has wound in total.

3.3.7 Service / System data



The service screens. These screens describe various wear and tear parts. A service advice is also given for these parts. This advice depends on the weight of the pallets and on the operating environment.



Indication lamp for lifespan of component. When there is 10% of the advised lifespan left, it will turn orange. At 0%, it will change to red.

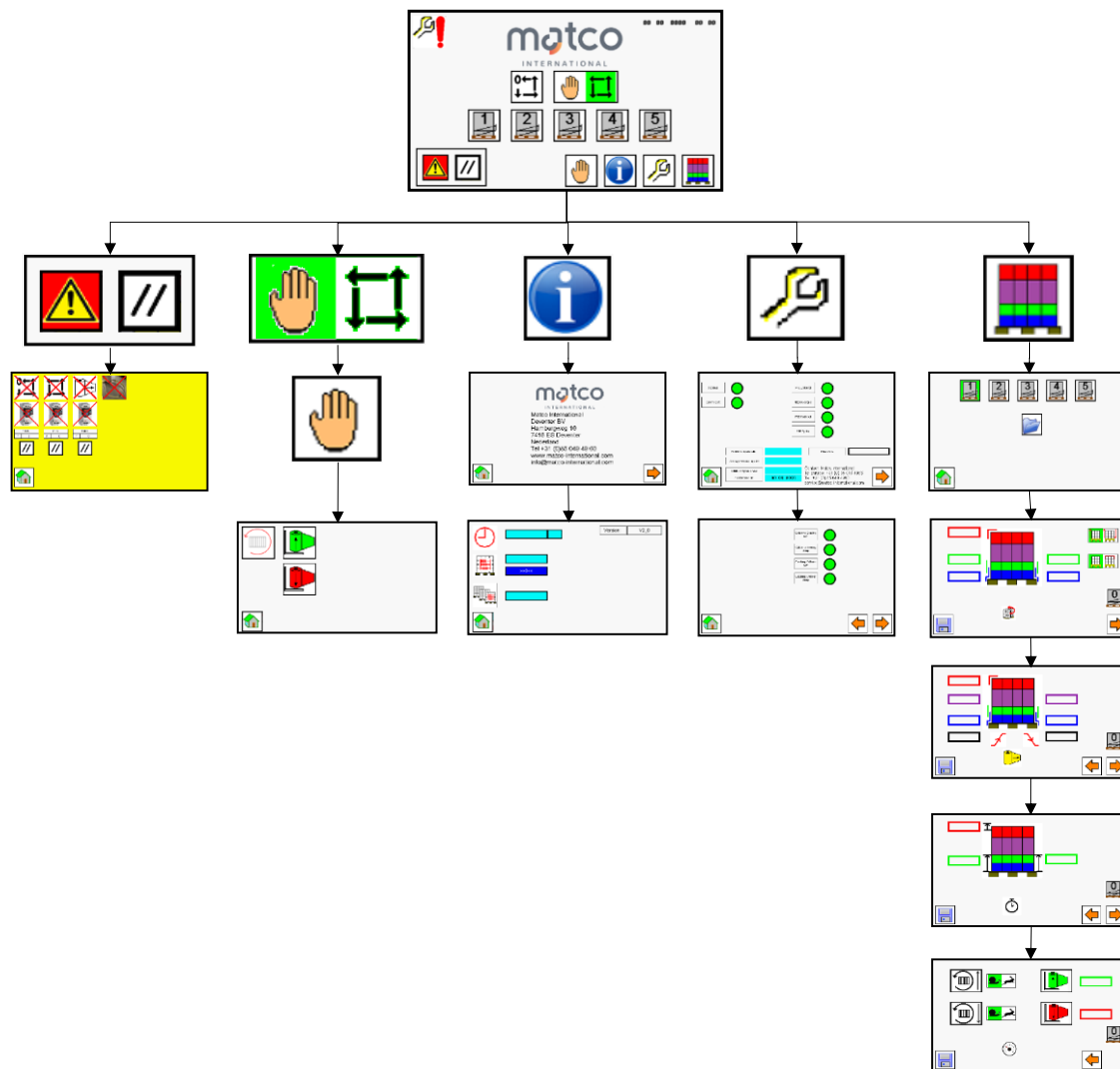


Service message main menu. The message becomes visible when service is required. When this becomes visible, please contact the service of Matco international, so that they can help further.



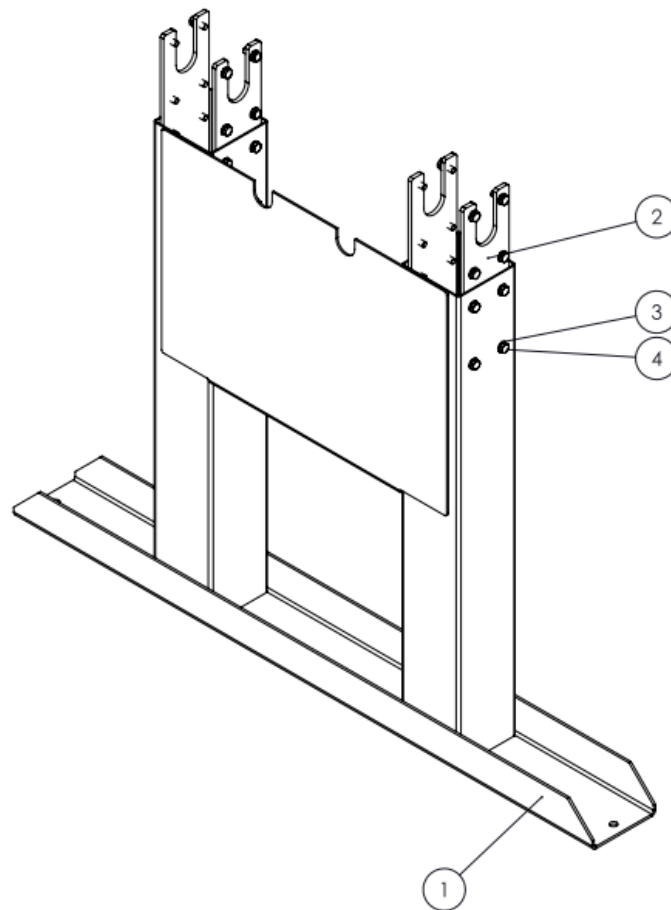
To continue, a login code is required.

4 Tree diagram of menus



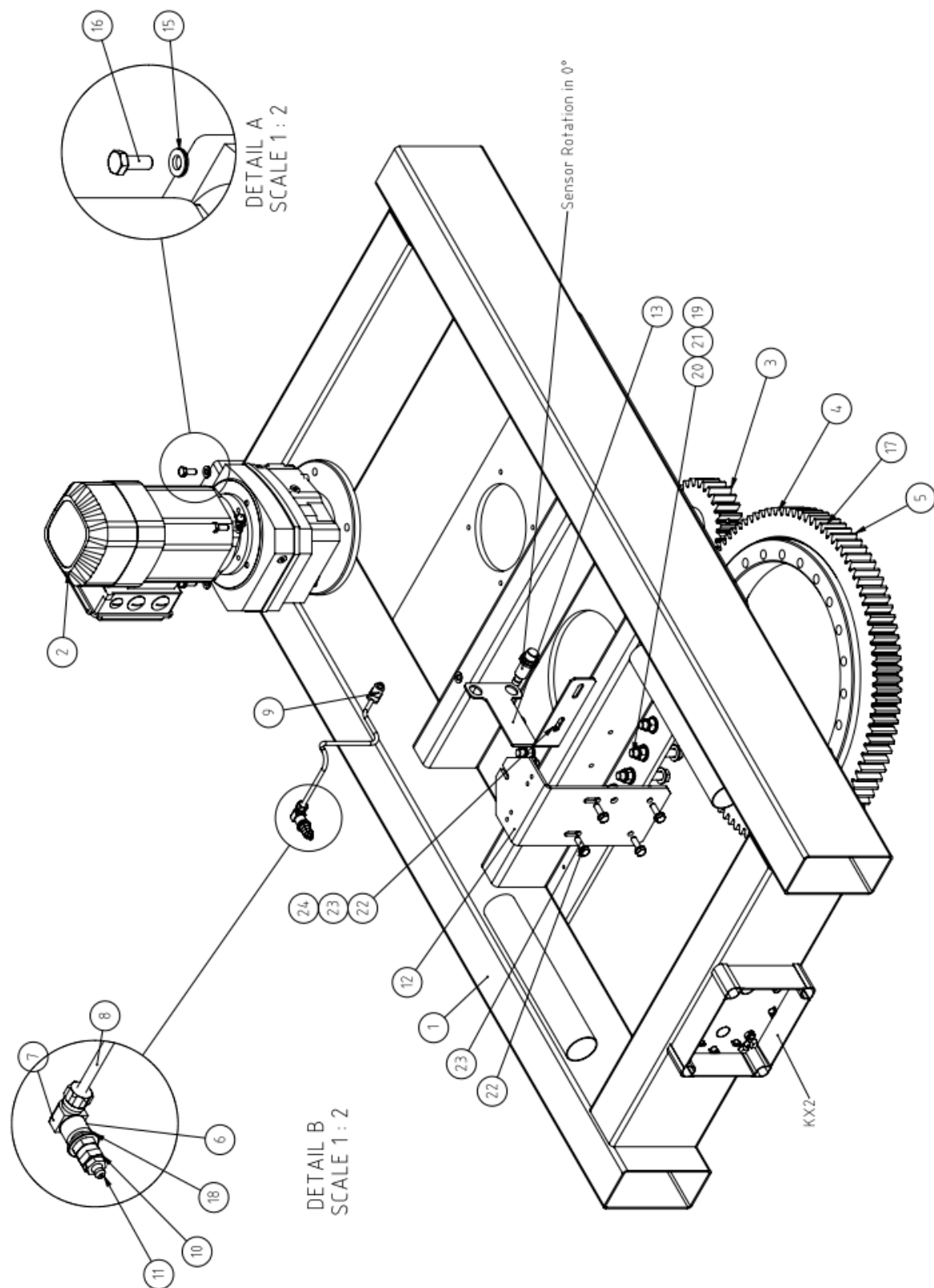
5 Components

5.1 Stand support



NO.	QTY.	Part number	Description
1	1	10001000	Foot frame
2	4	10001001	Nut plate
3	32	10000028	Washer M10
4	32	10000502	Hex Bolt Screw M10x25

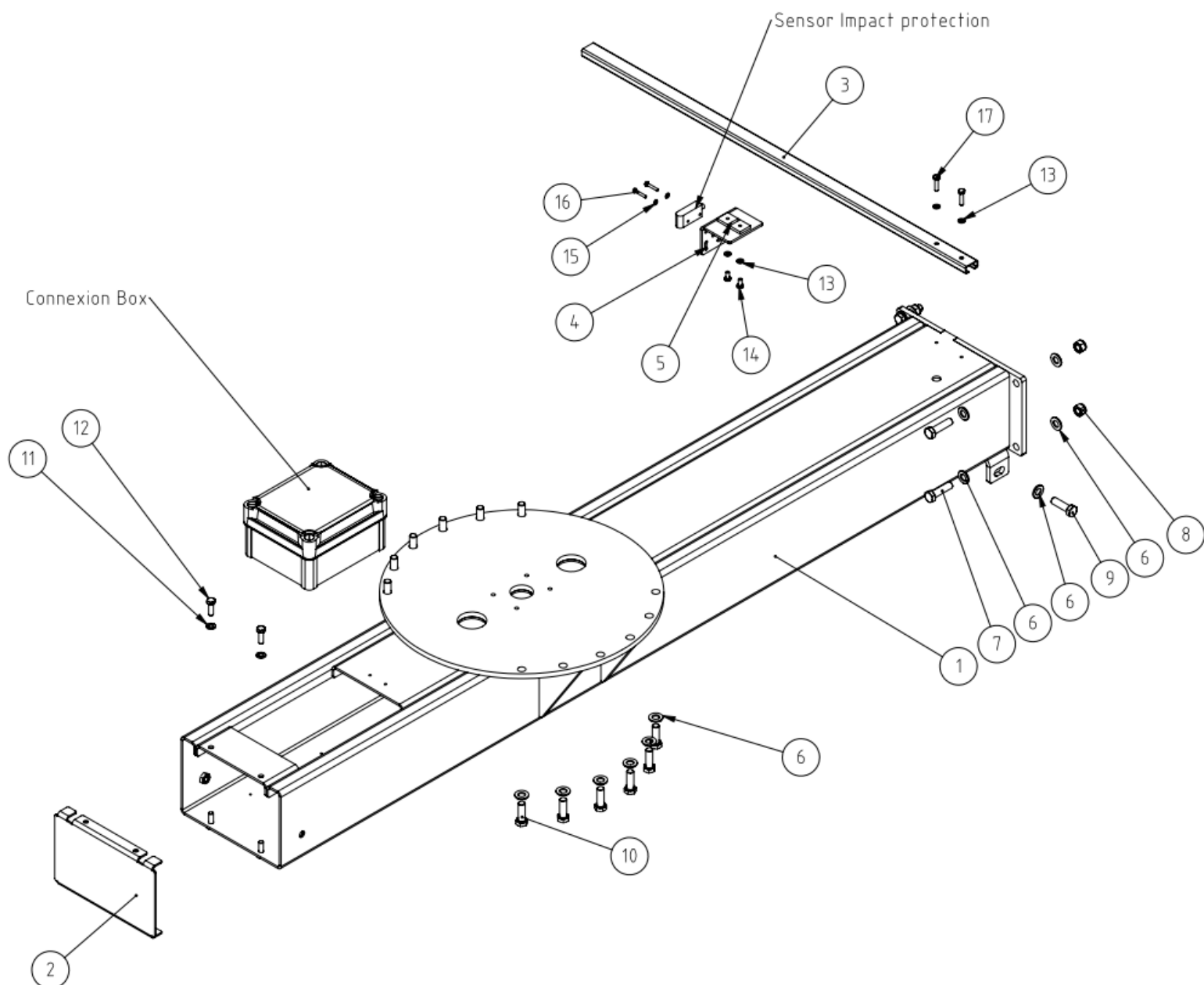
5.2 Portal



Manual Borst P17

NO.	QTY.	File	Description
1	1	10001007	Top Frame P17 (Pallet=1400x1400)
2	1	10000013	Motor reductor 0,55kW n=37
3	1	10000014	Pinion m=5 z=27
4	1	10000015	Ring for Pinion
5	1	10000016	Slewing Bearing - m=5 z=99
6	1	10000019	Grease Nipple - Frame Side
7	2	10000020	L-shape G1/8 1/6
8	1	10000021	Air Hose (Lubrication)
9	1	10000022	Grease Nipple - Slewing Bearing
10	1	10000534	Straight Fitting 1/8
11	1	10000287	Grease Nipple
12	1	10000261	CollectorTorque Bracket
13	1	10000263	Sensor Bracket
14	3	10000971	Tube end cap d=55
15	4	10000289	Nord-Lock Washer M8
16	4	10000031	Hex Bolt Screw M8x20
17	1	10000032	Countersunk Screw M10x25
18	1	10000028	Washer M10
19	32	10000029	Washer M12
20	16	10000025	Hex Tapped Bolt M12x80
21	16	10000026	Self Locking Nut M12
22	7	10000027	Washer M8
23	4	10000024	Hex Bolt Screw M8x25
24	2	10000034	Self Locking Nut M8

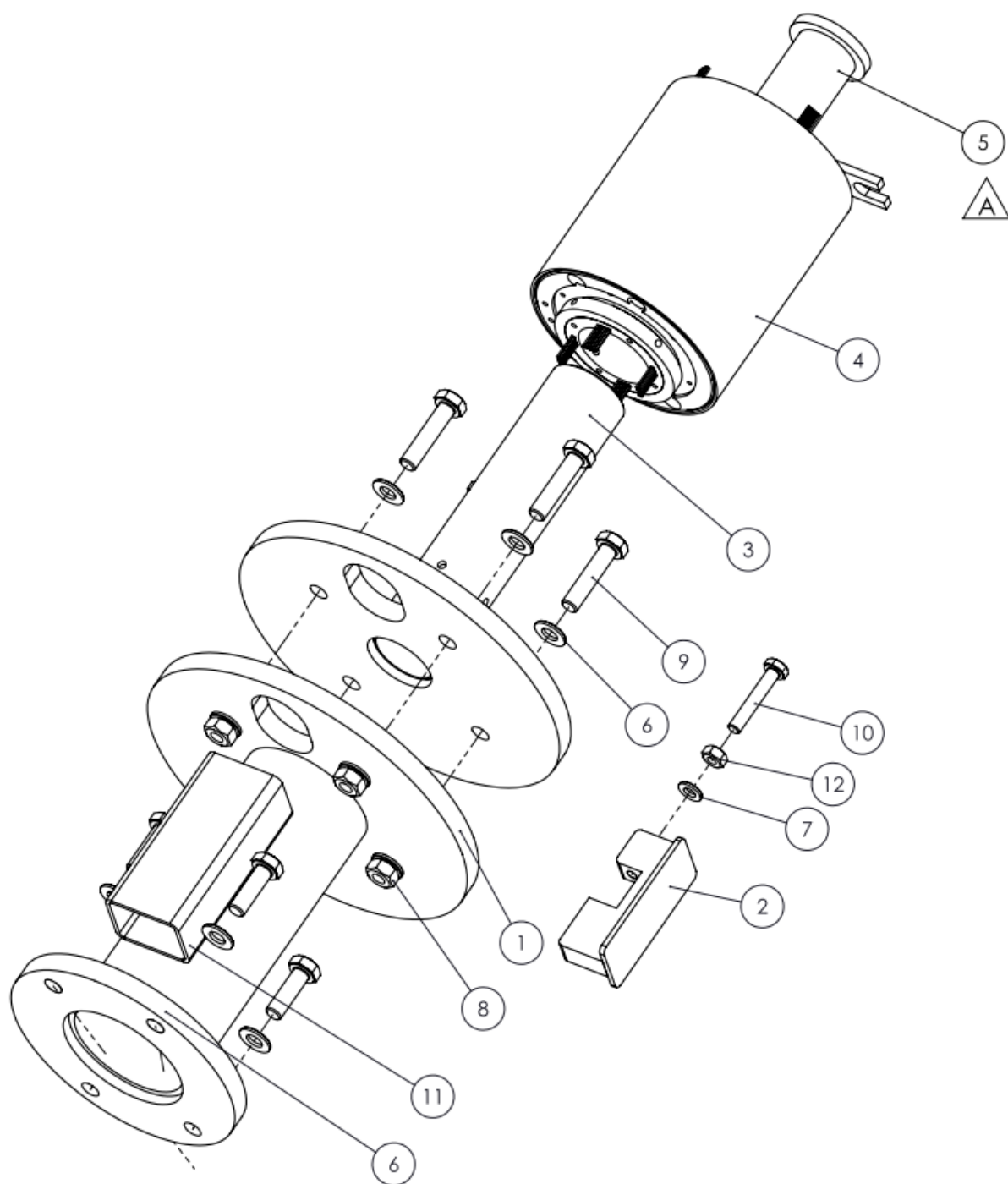
5.3 Rotation arm



Manual Borst P17

NO.	QTY.	Part number	Description
1	1	08143713	Horizontal Arm Frame
2	1	10000376	End Cover
3	1	08130720	C-Profile
4	1	08130869	Photocell Bracket
5	2	000.729.600.201	Gliding Nut 25x25x5 (M6)
6	24	10000029	Washer M12
7	4	10000071	Hex Tapped Bolt M12x45
8	6	10000069	Self Locking Nut M10
9	2	10000366	Hex Bolt Screw M12x40
10	12	10000070	Hex Bolt Screw M12x35
11	4	10000027	Washer M8
12	4	10000024	Hex Bolt Screw M8x25
13	4	000.180.125.060	Washer M6
14	2	000.180.933.155	Hex Bolt Screw M6x12
15	2	000.180.125.040	Washer M4
16	2	000.180.933.060	Hex Bolt Screw M4x25
17	2	000.180.933.170	Hex Bolt Screw M6x25

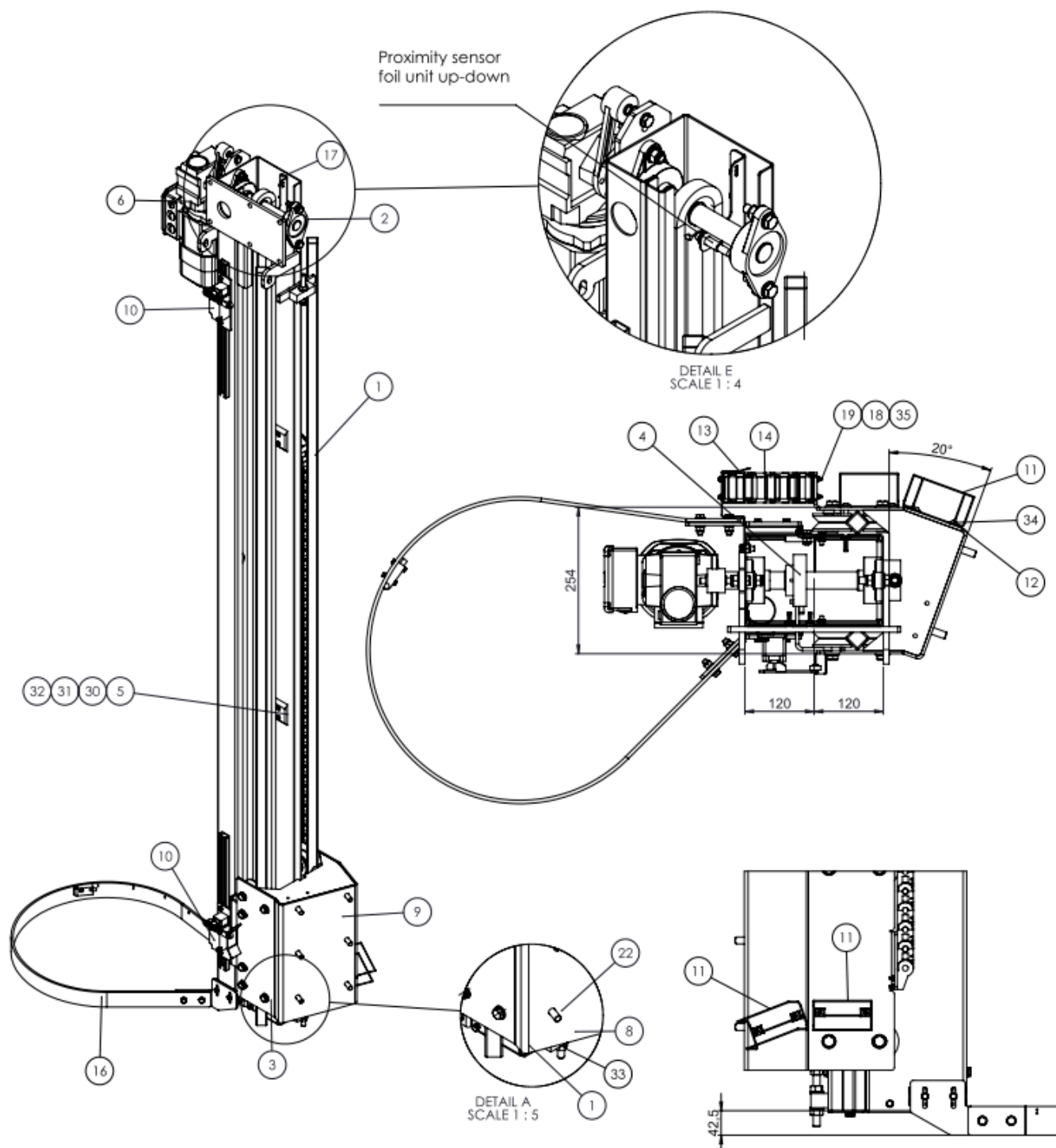
5.4 Slip rings collector

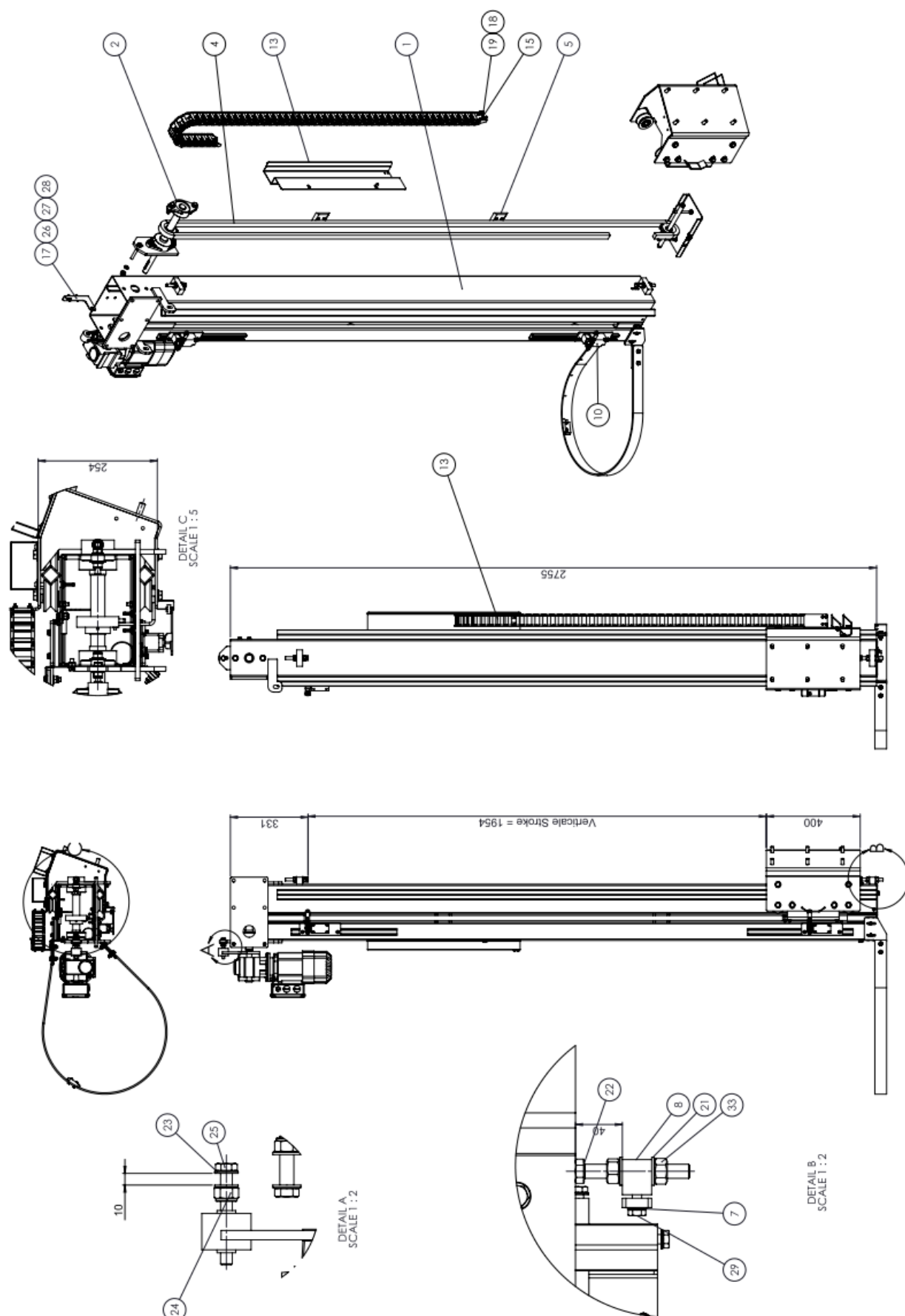


Manual Borst P17

NO.	QTY.	Part number	Description
1	1	10000266	Slipring Support
2	1	10000271	Sensor Cam
3	1	10000900	Slipring Mount
4	1	000.590.600.100	Slipring
5	1	08143813	Gliding Tube
6	12	10000027	Washer M8
7	1	10000102	Washer M6
8	4	10000203	Hex Nut M8
9	4	10000282	Hex Bolt Screw M8x35
10	1	10000181	Hex Bolt Screw M6x35
11	4	10000024	Hex Bolt Screw M8x25
12	1	10000240	Hex Bolt Nut M10

5.5 Mast

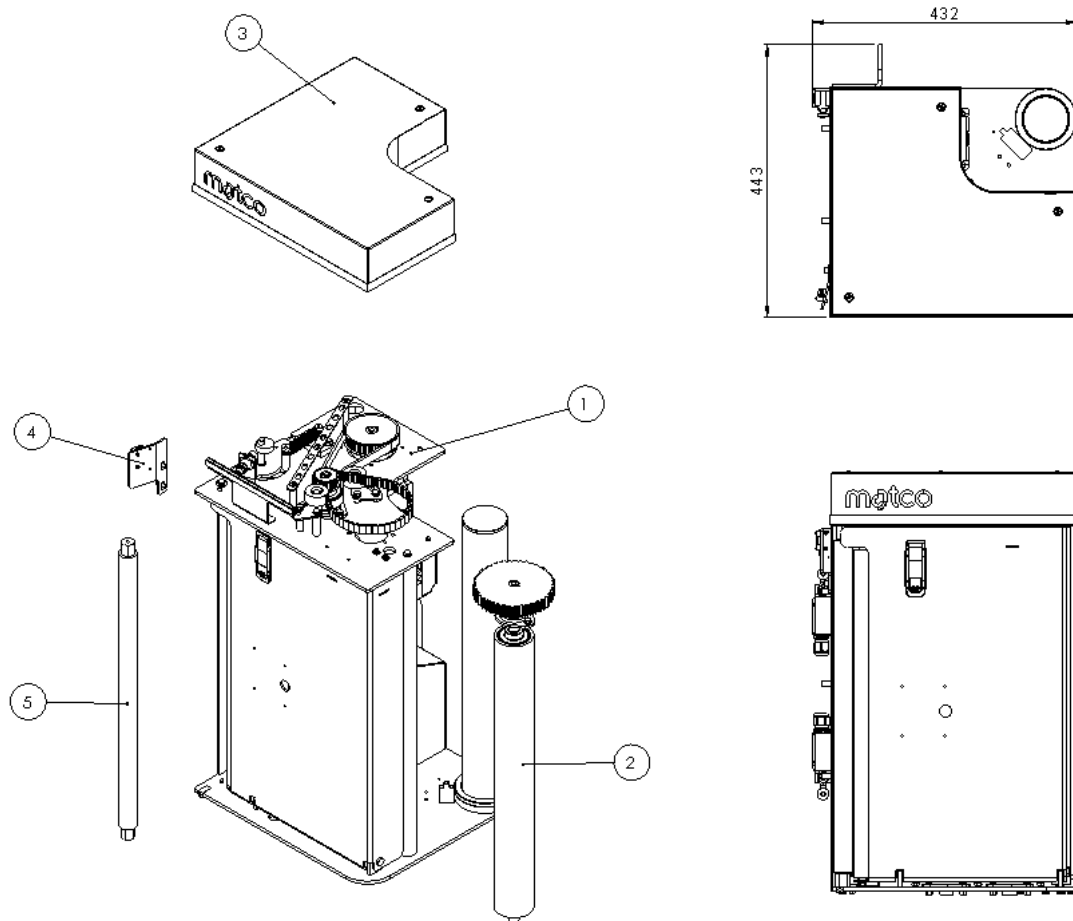




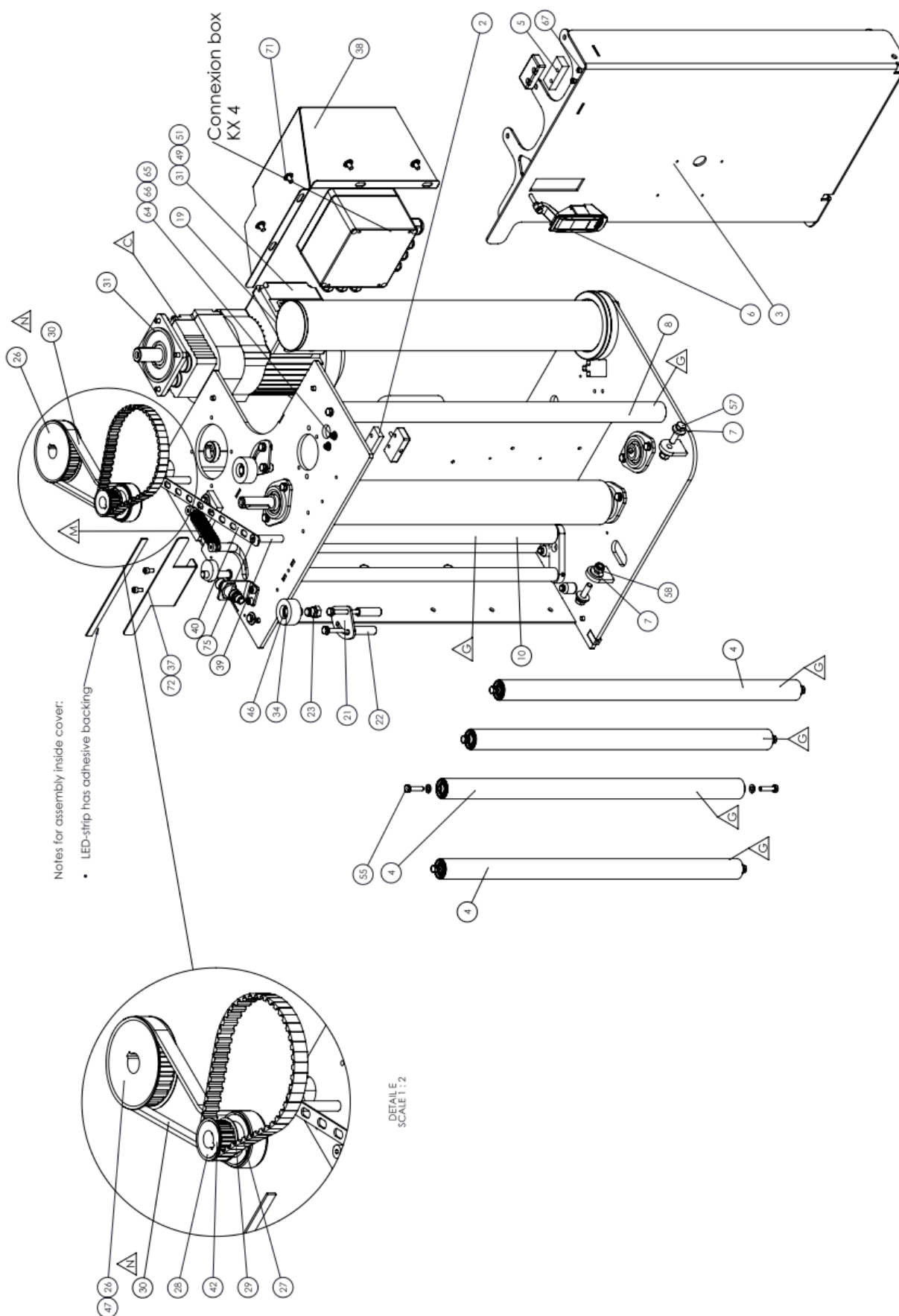
Manual Borst P17

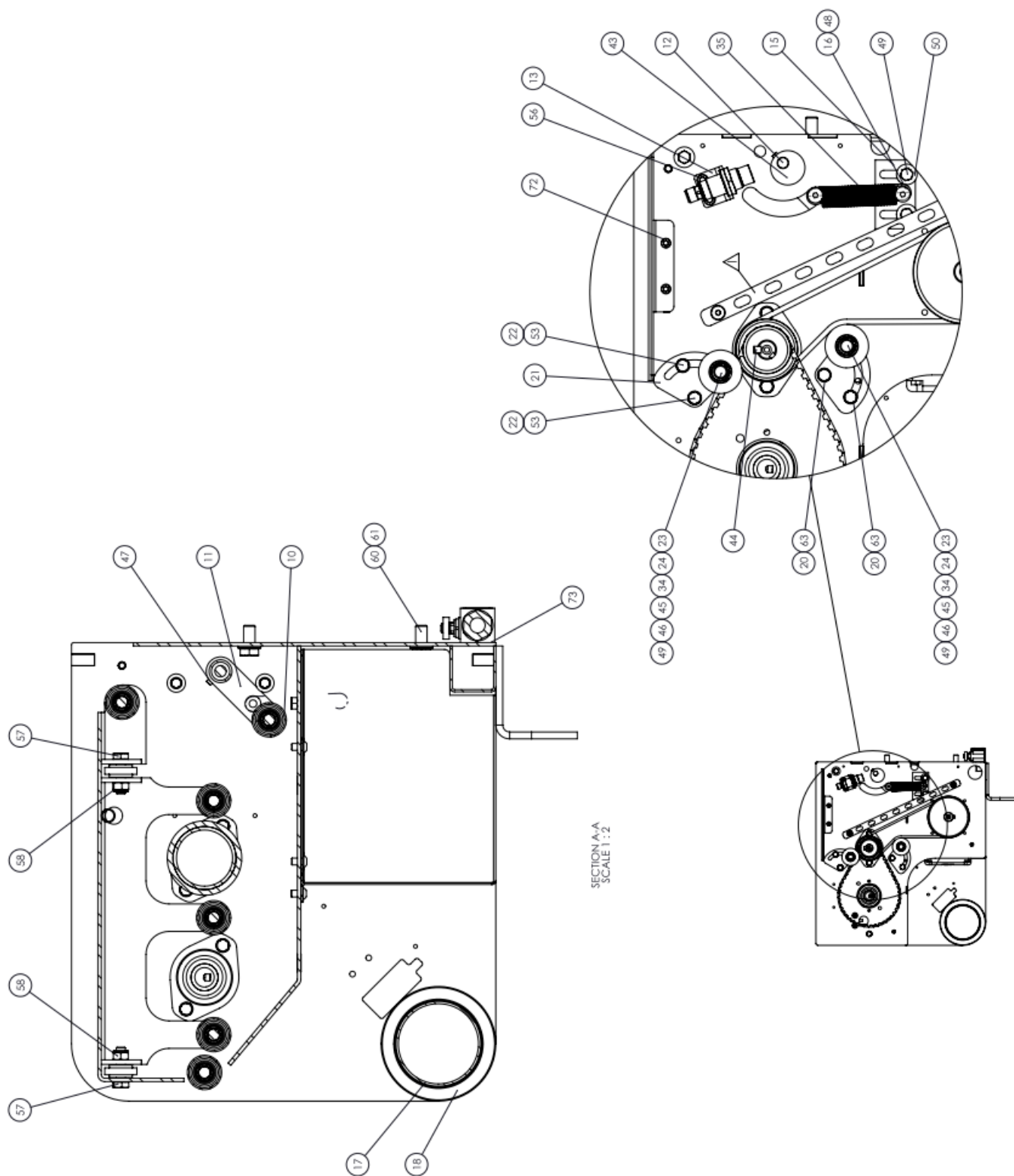
NO.	QTY.	Part number	Description
1	1	08141978	Frame Assy PH=2200
2	1	10000085	Drive transmission
3	1	10000092	Bottom Tensioner Unit
4	1	08143717	Chain 3/4" (12B-1)
5	2	10000106	Anti chattering plate
6	1	10000105	Motor (vert.) - 0,37kW - n=37
7	2	10000119	Back Plate
8	2	10000120	End Stop
9	1	08143257	Vertical wagon
10	2	10000136	Limit Switch
11	2	08143377	Wire Trunking
12	4	000.416.700.500	Couplerclip
13	1	08143719	Guidance Cable Carrier
14	55	000.414.100.210	Cable Train R=55
15	1	000.414.100.212	Connection Element set
16	1	10000107	Bumper (P17)
17	1	10000149	Corner Piece for Pulse Counter
18	17	10000116	Washer M4
19	4	10000148	Hex Bolt Screw M4x16
20	4	000.180.933.040	Hexagon Tap Bolt M4x10
21	4	10000029	Washer M12
22	2	10000150	Hex Bolt Screw M12x90
23	2	10000028	Washer M10
24	1	10000069	Self Locking Nut M10
25	1	10000152	Hexagon Bolt M10x80
26	10	10000027	Washer M8
27	4	10000031	Hex Bolt Screw M8x20
28	2	10000034	Self Locking Nut M8
29	4	10000113	Hex Bolt Screw M8x30
30	4	10000154	Countersunk Screw M6x25
31	4	10000102	Washer M6
32	4	10000118	Locknut M6
33	4	10000151	Nut M12
34	4	000.187.380.420	Button Head Screw M8x25
35	8	000.180.934.040	Hex Nut M4

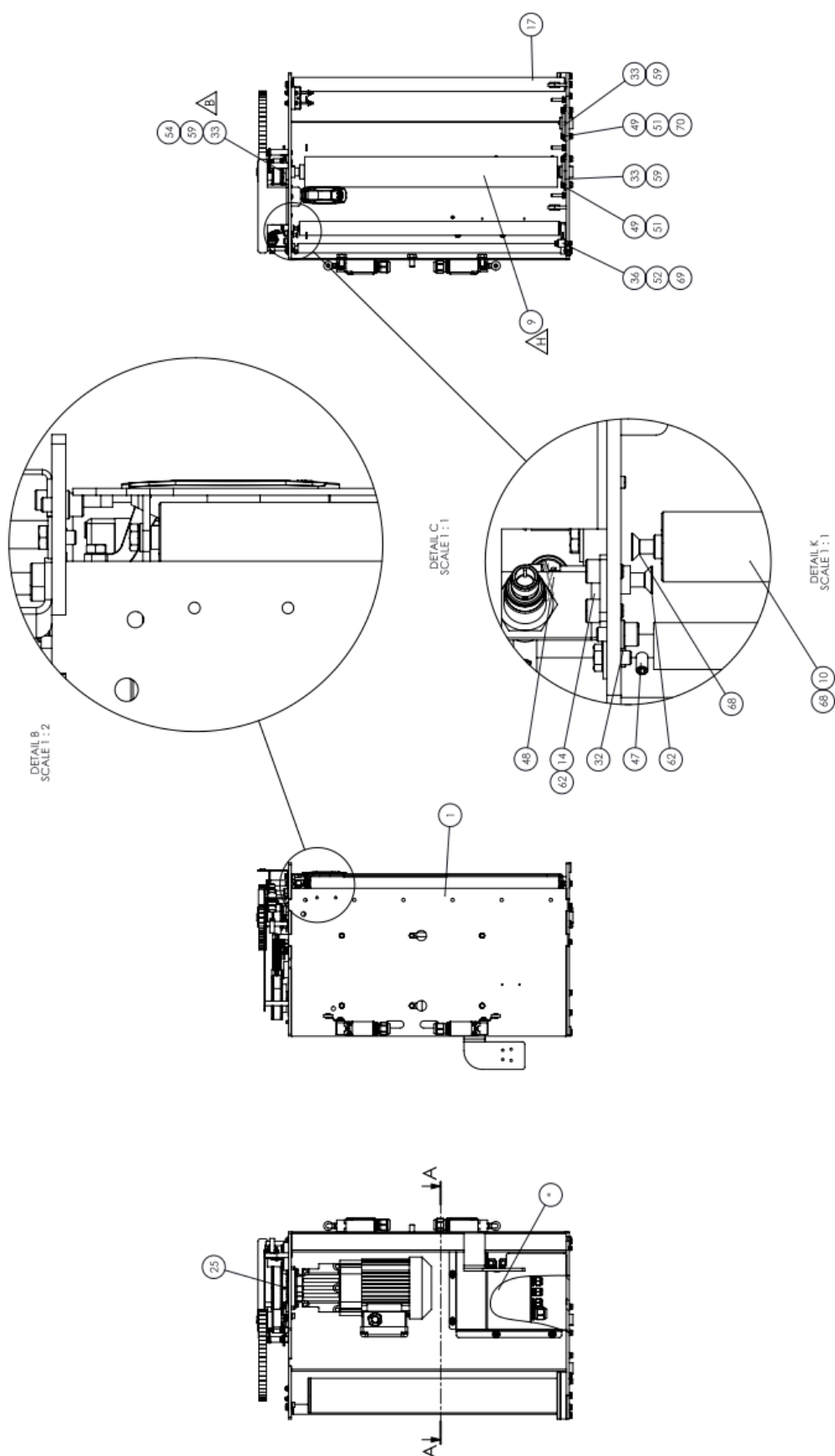
5.6 Film carriage



NO.	QTY.	Part Number	Description
1	1	901.127.232.050	Pre-stretch foil unit
2	1	901.127.232.130	Pre-strech roller
3	1	901.127.232.110	Borst cover low
4	1	901.127.232.150	Pallet detection sensor
5	1	901.127.232.140	Friction roller



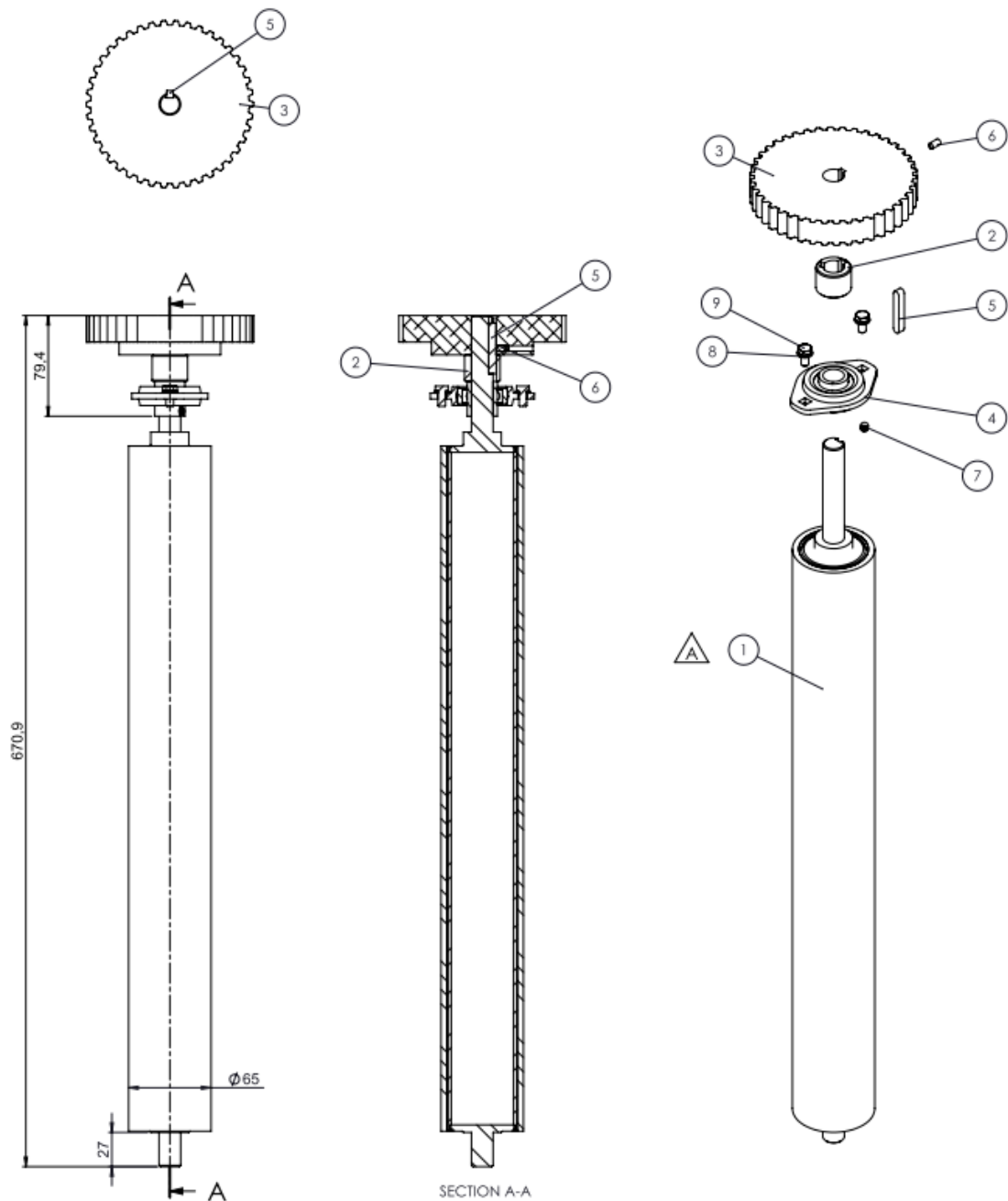




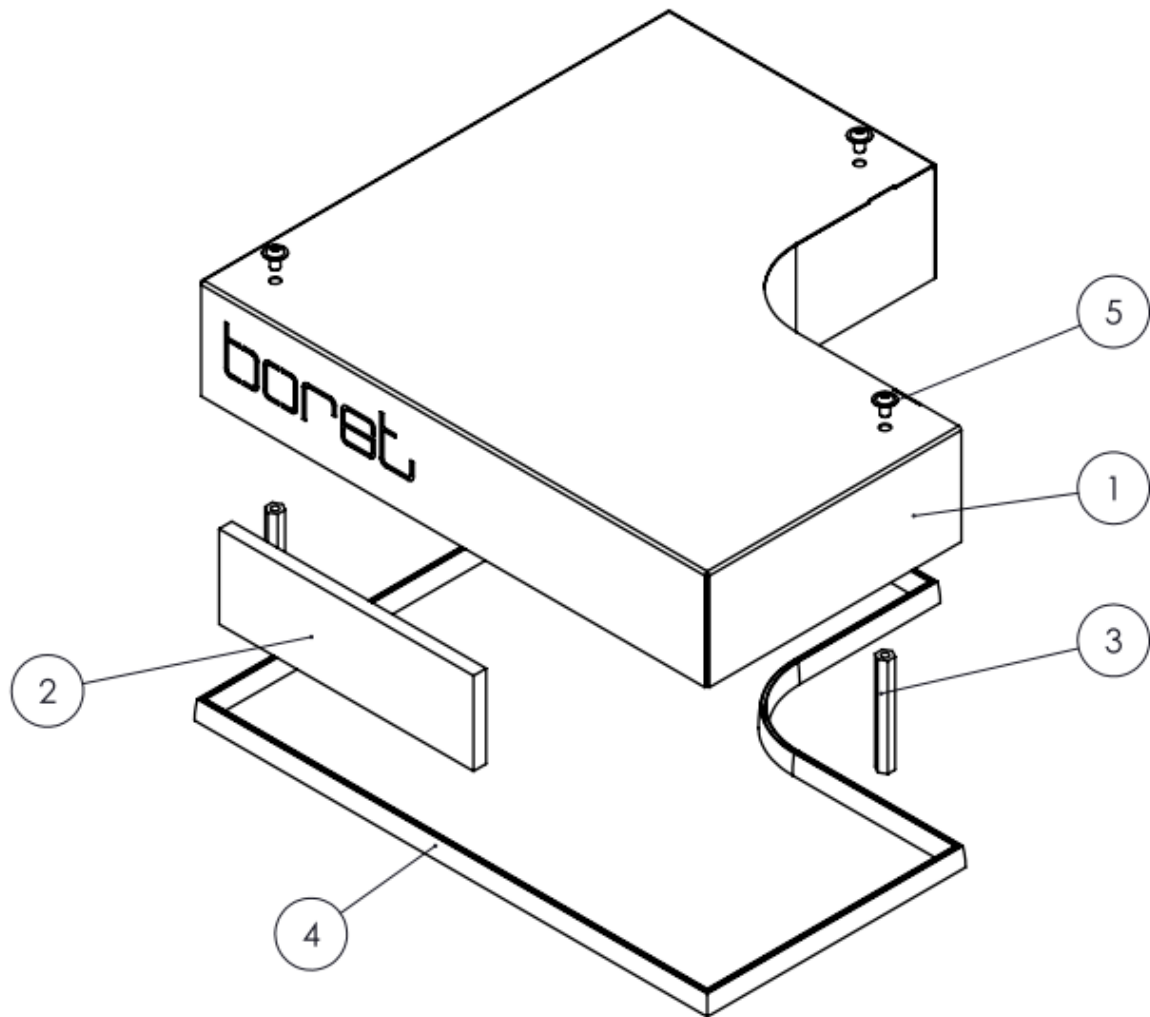
Manual Borst P17

NO.	QTY.	Part Number	Description
1	1	08140617	Foil unit frame
2	1	08141740	Frame sensor plate
3	1	08140383	Door
4	4	000.272.050.060	Roll Aluminium
5	1	08141763	Door sensor plate
6	1	000.172.205.140	Door Lever Latches
7	4	08140629	Nylon washer (M8)
8	1	000.272.050.080	Roll Aluminium
9	1	08137762	Pre-stretch roller
10	1	000.272.050.070	Roll Aluminium
11	1	08137753	Swing arm frame
12	1	08137794	Swing arm shaft
13	1	08137845	Swing arm sensor bracket
14	1	08137808	Fill-up tube Ĩ12 L=30
15	1	08129948	Adjustment Strip Spring
16	1	08129947	Fill-up Tube Ĩ10 L=10
17	1	08138060	Foil holder
18	1	08138061	Friction ring
19	1	08138411	Lamella plug
20	2	08137645	Tensioner bush 6mm
21	2	08137647	Tensioner plate
22	2	08137646	Tensioner bush 39mm
23	2	08138055	Tensioner shaft
24	2	08138056	Tensioner roller
25	1	08138065	Spacer Motor
26	1	08144019	Pulley T10 Z=27 B=16
27	1	08137637	Pulley T10 Z=16 B=16
28	1	08137638	Pulley T10 Z=12 B=16
29	1	000.223.025.304	Toothed belt T10 B=16 L=500
30	1	000.223.025.390	Toothed belt T10 B=16 L=600
31	1	000.263.600.880	Motor 0.25kW 18Nm 134rpm (Standard oil)
32	2	000.204.010.180	Collar Bearing Ĩ10
33	3	000.201.017.772	Flange bearing
34	2	000.201.012.060	Bearing Ĩ12xĨ24x6
35	1	000.196.216.200	Tension Spring 1 mm
36	2	000.248.102.010	Rubber Ĩ16xĨ6x20
37	1	08140475	Bracket
38	1	08140065	Protection Cover
39	2	08142075	Spacer wire bridge
40	1	08142067	Wire bridge
41	1	000.422.300.300	Earth Sticker
42	3	000.180.916.102	Set screw M5x6

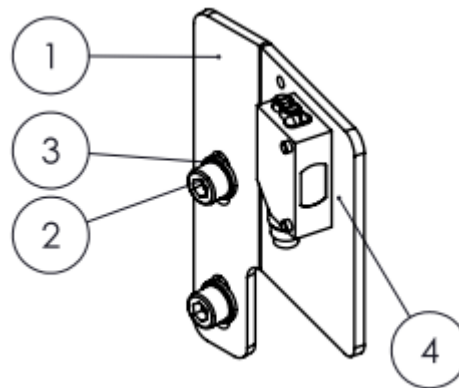
43	1	000.728.802.001	Excenter
44	1	000.186.885.140	Keyway 6x6x40
45	2	000.180.472.240	Circlip İ24 x 1,2
46	2	000.180.471.120	Circlip İ12x1
47	3	000.180.916.115	Set Screw M5x10
48	2	000.187.379.210	Fitting Bolt (M6) 8x16
49	16	000.180.933.160	Hex Bolt Screw M6x16
50	4	000.189.021.060	Large Washer M6
51	37	000.180.125.060	Washer M6
52	2	000.180.933.123	Hex Bolt Screw M5x30
53	2	000.180.933.175	Hex Bolt Screw M6x50
54	4	000.180.933.155	Hex Bolt Screw M6x12
55	10	000.180.933.170	Hex Bolt Screw M6x25
56	2	000.180.912.135	Socket Head Screw M6x10
57	2	000.180.933.245	Hex Bolt Screw M8x30
58	2	000.180.985.150	Self Locking Nut M8
59	3	000.180.916.146	Socket Set Screw M6x6 Black
60	6	000.180.933.285	Hex Bolt Screw M10x20
61	6	000.180.125.100	Washer M10
62	1	000.187.991.135	Countersunkhead Screw M6x20
63	2	000.180.933.165	Hex Bolt Screw M6x20
64	2	000.180.912.045	Socket Head Screw M4x30
65	4	000.189.021.040	Large Washer M4
66	4	000.180.985.050	Self Locking Nut M4
67	2	000.180.912.050	Socket Head Screw M4x35
68	2	000.187.991.140	Countersunk Screw M6x25
69	2	000.180.934.050	Hexagon Nut M5
70	6	000.180.934.060	Hex Nut M6
71	4	000.187.380.330	Butt.head screw flange M6x10
72	2	000.180.912.080	Socket Head Screw M5x10
73	4	000.180.912.040	Socket Head Screw M4x25
74	3	000.180.912.140	Hex Socket Screw M6x12
75	2	000.187.991.146	Countersunk Head Screw M6x60



NO.	QTY.	Part number	Description
1	1	08137762	Pre-stretch roller
2	1	08140762	Spacer stretch roller
3	1	08137639	Pulley T10 Z=42 B=16
4	1	000.201.017.772	Flange bearing
5	1	000.186.885.140	Keyway 6x6x40
6	1	000.180.916.115	Set Screw M5x10
7	1	000.180.916.146	Socket Set Screw M6x6 Black
8	2	000.180.125.060	Washer M6
9	2	000.180.933.155	Hex Bolt Screw M6x12



NO.	QTY.	File	Description
1	1	08140603	Foil unit transmission cover
2	1	08140642	Perspex Plate - orange
3	3	08140361	Cover mount
4	1	08140610	Rubber gasket
5	3	000.187.380.330	Butt.head screw flange M6x10



NO.	QTY.	Part number	Description
1	1	08140059	Mountingplate
2	2	000.180.912.140	Hex Socket Screw M6x12
3	2	000.180.125.060	Washer M6
4	2	000.180.912.010	Hex Socket Screw M3x16



NO.	QTY.	Part number	Description
1	1	08138410	Friction Roll 30mm
2	2	08138407	Roll Bearing Holder
3	1	000.201.055.420	Needle Roller Bearing
4	1	000.238.050.130	Roller Clutch Bearing