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1. Introduction.

This manual is intended for the recipient of the SAMON Elevator.
It contains information regarding the use and maintenance of the SAMON Elevator.

This manual has been created with the utmost care, illustrations and technical data are current until the print of this manual.

Ellens landbouwtechniek BV advises the user before using the SAMON Elevator to carefully read this manual and follow up safety instructions, directions and comments.

Reference to the left- or right side will be determined by the direction in which the SAMON Elevator will be driven, seen from behind.

Ellens Landbouwtechniek BV has the right to change the contents of this manual without notice.

The SAMON Elevator has been designed according to the conditions of the machine directives 89/392/EEG.

2. Warranty and Liability.

2.1 Warranty.

SAMON Agricultural Machines are guaranteed for the period of one season.

The SAMON Elevator has been designed for processing propagating material and fertilizer.*
Using the SAMON Elevator otherwise than it has been designed for will be deemed as improper use.

* Using the SAMON Elevator for other purposes, please check with your SAMON distributor for the possibilities.

The guarantee will be given to construction errors by normal use of the SAMON Elevator.

The guarantee does not cover wear parts, for example:

- Drive- and support rolls,
- Conveyor belt,
- Support wheels,
- Other wear parts.

The guarantee covers hydraulic and electric components only when these components prematurely fail and after inspection by the manufacturer.

Guarantee will be void if:

- Constructive adaptations and additions to the SAMON Elevator without permission of Ellens landbouwtechniek BV.
- Installing and use of components to and on the SAMON Elevator which will influence the rigidity of the construction.
- Failure of components due to improper use of the SAMON Elevator.
- Changing and ignoring specific settings and adjustments, therefore resulting in failure.

For information, help and guidance our distributors and employees are at your service.

2.2 Liability.

Ellens Landbouwtechniek BV are not liable for damage to SAMON Agricultural machines; tractors; machines from third parties; injury to people, animals and damage to products due to:

- Improper use
- Not following the instructions and directions described in the manual.

ATTENTION!!!

 The SAMON Elevator must be operated, maintained and repaired by persons whom are familiar with the machine and it's safety procedures.

3. Safety and Environment.

3.1 General safety.

WARNING!!!

 Make sure that everyone who works and maintains the SAMON Elevator, has read the manual and fully understands the personal safety procedures and the safety procedures for others while working with the SAMON Elevator.

Always maintain the following precautions while working with the SAMON Elevator.

- The SAMON Elevator must be operated, maintained and repaired by persons who are familiar with the Elevator and know the safety procedures.
- During checks and maintenance of the SAMON Elevator always disconnect the hydraulic hoses and power supply.
- Always use the SAMON Elevator on a flat and solid surface.
- After shut down , wait till the conveyor has fully stopped, before approaching the SAMON Elevator.
- Watch out with loose clothing and hair near the SAMON Elevator.
- Do not approach a working SAMON Elevator
- In a incident always turn off the SAMON Elevator and check for damage before putting the Elevator in operation.
- The SAMON Elevator has been equipped with parts which have safety chains, wires and locking pins. Make sure the safety parts are always connected.
- Always replace broken and damaged safety equipment.
- Do not move the SAMON Elevator when the swivel is not locked.
- Protective covers and rubber flaps must always be undamaged. If torn or damaged always replace with new ones.
- Always use original SAMON spare parts, these are specifically designed for the SAMON Elevator.

3.2 Environment.

From ecological point of view, when cleaning and maintaining the SAMON elevator use an solid and liquid proof floor.

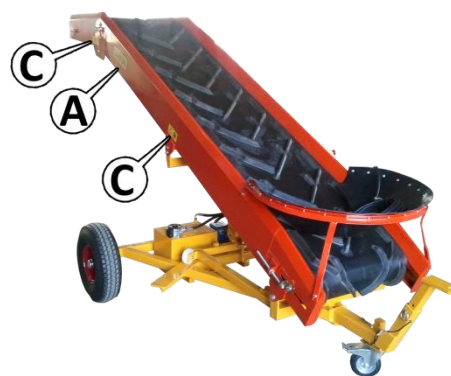
ATTENTION!!!

 The disposal of used lubricants should be on a environmentally friendly manner. We recommend to deliver the used lubricants in a closed container to a recycle center or collection station. Never drain used lubricants into a dustbin, ditch, sewer, cleanage drain or onto the ground.

3.3 Warning stickers and pictograms.

Every Samon Elevator has been equipped with the following stickers and warning labels:

	Description:	Size: (bxh)	Order nr.
A	Sticker "Samon"	24,8 x 7,8	TL6304
B	Sticker "Attention manual"	13,3 x 6,4	TL6310
C	Sticker "Attention hand"	13 x 6,4	TL6307
D	Sticker "Stop hydraulic"	8,3 x 7	TL6313



If one of the labels is missing or damaged, it can be ordered at the SAMON Distributor.

3.4 Emergency stops and protection.

Every SAMON Elevator has been equipped with one or more emergency stops.



3.4.1 Electrical emergency stop.

For the hydraulic-electric (ON..HE / ON..HEK) version of the SAMON Elevator.

The electric emergency stop is for the immediate disconnection of power to the SAMON Elevator. The emergency stop is located on the electrical power box on the side of the frame.

In a emergency the red button must be pushed firmly. The power supply will be disconnected immediately.

WARNING!!!

Always disconnect the power plug in a emergency!

3.4.2 Hydraulic emergency stop.

For the hydraulic (ON..H / ON..HK) and hydraulic-electric (ON..HE / ON..HEK) versions of the SAMON Elevator.

The Hydraulic emergency stop is for the immediate redirection of the Hydraulic fluid. The emergency stop is located on the side of the frame and consist in a red lever which can be turned. By turning the lever the hydraulic fluid will be redirected, when redirected the conveyor belt will stop running.

ATTENTION!!!

Using the Hydraulic emergency stop will only redirect the Hydraulic fluid. The Hydraulic system still delivers Hydraulic oil! To shut off the supply of Hydraulic oil use the emergency switch on the Hydraulic pump.

3.4.3 Thermal protection.

SAMON Elevators which are equipped with an electrical motor has a thermal protection to protect the motor for overload.

If the SAMON Elevator stops due to the thermal protection, then it will be possible to start up the Elevator after several minutes.

ATTENTION!!!

If the thermal protection is engaged: turn off the SAMON Elevator and unplug the power cord.

If the thermal protection is repeatedly engaged, please check the following before starting up the SAMON Elevator.

- Check if there isn't too much soil build up on the conveyor belt and rolls.
- Check for power loss.
Possible causes:
 - Too thin extension cord (Min. 2½ mm²)
 - Too long extension cord (Max 50 mtr)
 - Failure in socket.
 - Not enough voltage on the main power grid.
- Check if a phase is down. (recognizable by a humming sound in the electrical motor)
- Check if the set value of the thermal security matches the current consumption of the electrical motor.

4. Inspections before and during use.

ATTENTION!!!



When inspecting and maintaining, make sure the power supply has been turned off and all the Hydraulic hoses are disconnected and have no more pressure.

When turning off the SAMON Elevator, wait till the conveyor belt completely stops!

4.1 Necessary inspections before use.

- Check tire pressure. (4,5 Atm.)
- Check if the safety clips and cords are mounted.
- Check the chassis for damage and breakage.
- Check the height adjustment for damage.
- Check the support wheel for damage and check the brake function.
- Check the draw bar for damage.
- Check the conveyor for wear and tear.
- Check the support rolls for wear.
- Check the tension of the conveyor and do this on a regular basis.
- Check the oil level of the Hydraulic system.
- Check the complete Hydraulic system for damage and leakage.
- Check the electrical system for damage.
- Check the emergency stops for damage.
- Check the rotation of the electrical motor.

4.2 Inspections during use.

- Check if the sides of the conveyor belt is not running into the frame.
- Check the tension of the conveyor belt regularly.
- Keep the inside of the conveyor clean of any remains.

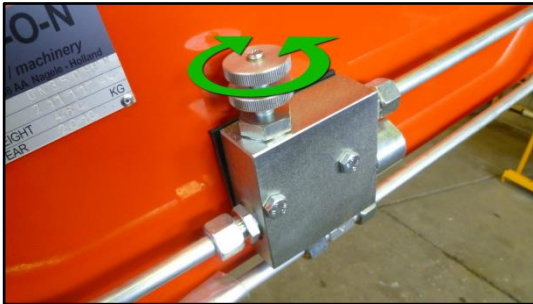
REMARK!!!



Use only a pressureless hydraulic return.

5. Operation.

5.1 Speed control conveyor.



The conveyor belt speed is steplessly variable with the speed control valve. Loosen the retainer nut and increase or decrease speed by turning the valve. Always tighten the retainer nut.

5.2 Height adjustment.

The conveyor can be adjusted manual and hydraulically.

5.2.1 Manual height adjustment.



CW (Clockwise) = up

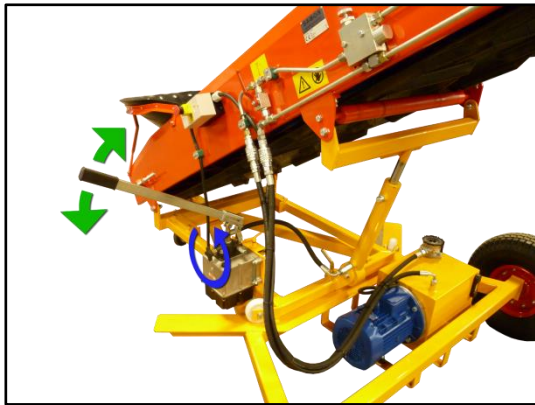
CCW (Counterclockwise) = down

With a manually adjustable height, the height of the conveyor can be adjusted by turning the spindle to the left (CCW) or right (CW)

WARNING!!!

! Always replace a damaged height adjustment! The adjusting spindle has been equipped with an special safety feature that will make it unable to separate the spindle. Therefore only replace the height adjustment with an original SAMON height adjustment!

5.2.2 Hydraulic height adjustment.



Up, move lever up en down.



Down, Turn return valve.

With the hydraulic height adjustment a hydraulic hand pump is used for adjusting the height.

- Elevator up.

For adjusting the elevator up, mount the lever into the hand pump, make sure the return valve has been turned into the closed position and move the lever up and down.

- Elevator down.

For adjusting the SAMON Elevator down just turn the return valve slowly open till the required height has been reached. Then turn the valve to the closed position.



WARNING!!!

While adjusting the height never let anyone underneath the conveyor!

5.3 Switching the drive of the SAMON elevator.

The Hydraulic-electric version of the SAMON Elevator gives the user the possibility to switch to a only hydraulic (by tractor) or an electric driven elevator.

This is very useful if there is no electrical power available where the SAMON Elevator is used.

WARNING!!!

- For external Hydraulic drive of the conveyor.
Set pressure on 110 bar, set flow on 20 L/min.



For switching from Hydraulic-electric to just Hydraulic use the following instructions.

- Make sure all machines are off and disconnect the hydraulic hoses of the hydraulic unit located on the frame by using the quick couplings, and put these on a clean place on the machine.
- Mount other loose hoses (optional available) to the SAMON elevator and connect these on a other power pack or tractor.

WARNING!!!

- The electrical emergency stop does NOT work when the SAMON Elevator is only driven hydraulically.
Use therefore the emergency switch of the power pack / tractor!

6. Maintenance.

WARNING!!!

During maintenance always disconnect power supply and hydraulic hoses, make sure the hydraulic system has no more pressure.

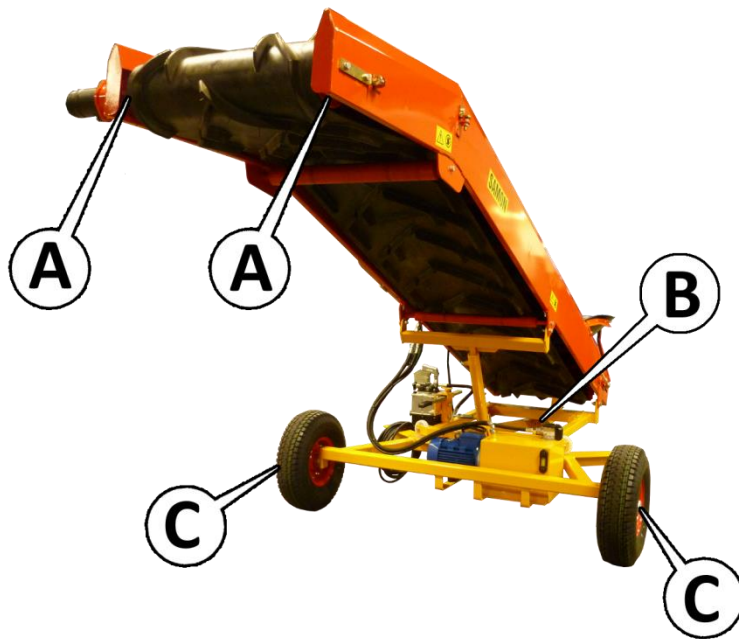
When shutting down the SAMON Elevator, wait till the conveyor has completely stopped.

6.1 Lubrication schedule.

Lubricate the SAMON elevator according the following lubrication schedule.

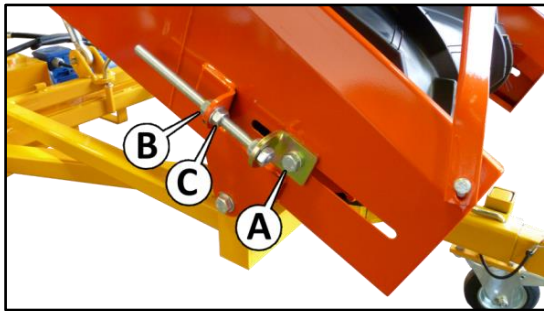
Lubrication schedule SAMON Elevator.

Point:	Interval:	Description:
A	8 hours	Bearings drive roll, bearings cage type roll
B	16 hours	Pivot joint
C	50 hours	Wheels,



6.2 Conveyor belt tensioning.

Tensioning and unloading the conveyor belt.



- Make sure the inside of the conveyor and it's rolls are clean, remove any remains stuck.
- On both sides of the Elevator there are identical adjustments for tensioning the conveyor belt.
- The instruction below must be done simultaneously on the left and right side of the elevator.
- Unlock retainer bolt "A" a few rotations.
- Unlock nut "B".
- Tension the conveyor belt by adjusting nut "C" simultaneously on the left and right of the Elevator.
- Lock nut "B" and bolt "A".



REMARK!!!

Always replace a worn or torn conveyor.

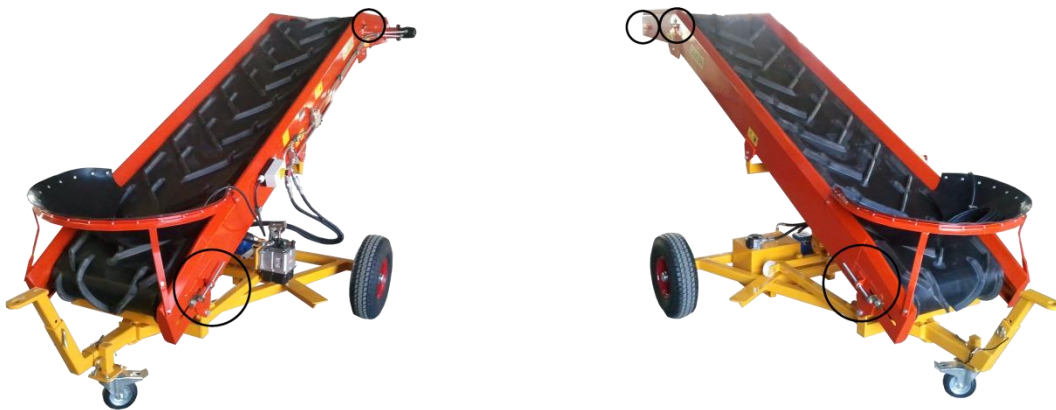
6.3 Aligning the conveyor belt.

After a while it is possible that the conveyor belt is not running completely aligned and needs adjusting to get it in the right alignment.

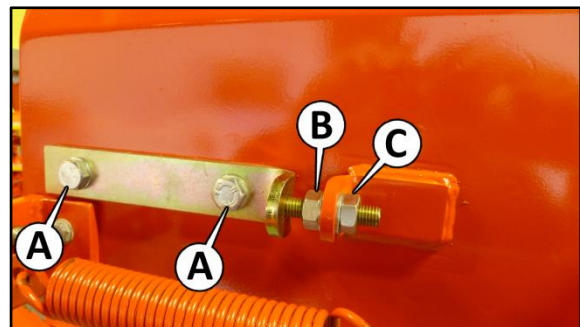
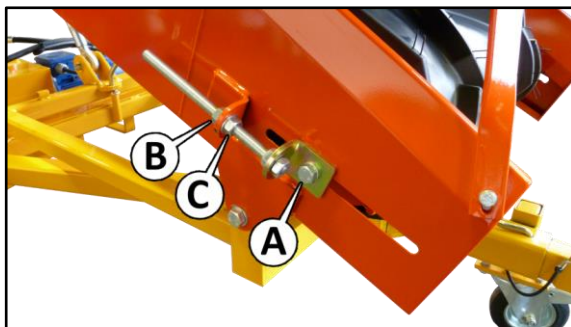
REMARK!!!

Check before adjusting the alignment if there are no remains like soil or dirt on the inside of the SAMON Elevator. These remains can affect the alignment of the conveyor belt.

Through 5 adjustment points it is possible to align the conveyor belt.



Adjust with the following instruction:



- Make sure the inside of the conveyor and it's rolls are clean, remove any remains stuck.
- Unlock retainer bolt "A". (Depending the position of the adjustment it is possible there are more than one Retainer bolt)
- Turn on the conveyor belt and let it run in a slow pace.
- Adjust the alignment of the conveyor belt by turning nut "B" and "C".
- Check if the conveyor is running in the middle of the frame.
- Turn off the conveyor
- Lock all nuts and bolts of the adjustment.

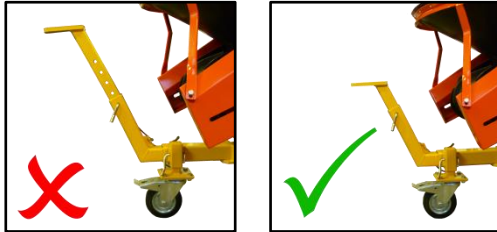
7. Transport and storage.

7.1 Transport on a carrier.

- Make sure that the SAMON Elevator has been firmly strapped with proper lashing straps.
- Block the wheels with wheel chocks.

7.2 Transport on a tractor.

- Put the O-hitch in the lower position



- Put the height adjustment into the lower position.
- Connect the SAMON Elevator to the tractor.
- Insert the hitch pin and retain with a safety clip.
- Remove the support Wheel.
- Maintain the traffic regulation if you transport the SAMON elevator on the public road.
- Mark the overhang of the SAMON Elevator while transporting on the public road.
- Keep in mind that there is an reduced visibility during the transport of the SAMON Elevator.
- When turning keep in mind that the has a tail swing

WARNING!!!



Maximum speed with a SAMON Elevator is 25 km/h.

Adjust the speed to the condition of the ground!

The SAMON Elevator always needs to be transported in the lower position.

7.3 Storage.

- Clean the SAMON Elevator thoroughly.

ATTENTION!!!

If using a high pressure cleaner, don't spray directly into bearings and electronics.

- Check tires for damage and pressure. (4,5 Atm.)
- Check the support wheel for damage and check it's brake function.
- Check the conveyor for damage and tears.
- Unload the conveyor belt.
- Check the carrier rolls for wear.
- Check all bearings and if needed replace these.
- Check the height adjustment for damage.
- Check the chassis and hitch for damage.
- Lubricate the complete SAMON Elevator.
- Check the oil level of the Hydraulic system and refill if needed.
- Check the rubbers and protective covers for damage.
- Check the safety cords and safety clips for damage.
- Check the complete Hydraulic system for leakage and damage.
- Check the electrical system for damage.
- Repair and replace any broken or damaged parts.
- Store the SAMON elevator when it's fully dry.

8. Technical data.

SAMON Elevator "Hydraulic version"					
	ON400H	ON350HK	ON450HK	ON550HK	ON650HK
Type:	4 meter	3,5 meter	4,5 meter	5,5 meter	6,5 meter
Version:	Straight	Kinked	Kinked	Kinked	Kinked
Belt type:	PVC	Rubber	Rubber	Rubber	Rubber
Conveyor profile:	V-shape 30 mm	Chevron 32mm	Chevron 32mm	Chevron 32mm	Chevron 32mm
Belt speed:	Stepless	Stepless	Stepless	Stepless	Stepless
Belt width:	65 cm	65 cm	65 cm	65 cm	65 cm
Height adjustment:	Mechanical*	Mechanical*	Mechanical*	Hydraulic*	Hydraulic*
Hydraulic motor:	100 cc	125 cc	125 cc	125 cc	125 cc
Max. Height:	2,50 m	2,10 m	2,50 m	2,80 m	3,10 m
Fill height:	0,95 m	0,95 m	0,95 m	0,95 m	0,95 m
Swivel range:	1,80 m	2,10 m	2,10 m	2,30 m	3,00 m
Weight:	340 – 360 kg**	395 – 415 kg**	465 – 485 kg**	520 kg	635 kg

* Standard on the SAMON Elevator

** Depending on options and extra's.

SAMON Elevator "Hydraulic-Electric version"					
	ON400HE	ON350HEK	ON450HEK	ON550HEK	ON650HEK
Type:	4 meter	3,5 meter	4,5 meter	5,5 meter	6,5 meter
Version:	Straight	Kinked	Kinked	Kinked	Kinked
Belt type:	PVC	Rubber	Rubber	Rubber	Rubber
Belt profile:	V-shape 30 mm	Chevron 32mm	Chevron 32mm	Chevron 32mm	Chevron 32mm
Belt speed:	Stepless	Stepless	Stepless	Stepless	Stepless
Belt width:	65 cm	65 cm	65 cm	65 cm	65 cm
Height adjustment:	Mechanical*	Mechanical*	Mechanical*	Hydraulic*	Hydraulic*
Hydraulic motor:	100 cc	125 cc	125 cc	125 cc	125 cc
Electric motor:	230/400V - 2,2 kW	230/400V - 2,2 kW	230/400V - 2,2 kW	230/400V - 2,2 kW	230/400V - 2,2 kW
Hydraulic oil:	ISO VG 46 - 20 Ltr	ISO VG 46 - 20 Ltr	ISO VG 46 - 20 Ltr	ISO VG 46 - 20 Ltr	ISO VG 46 - 20 Ltr
Max. Height:	2,50 m	2,10 m	2,50 m	2,80 m	3,10 m
Fill height:	0,95 m	0,95 m	0,95 m	0,95 m	0,95 m
Swivel range:	1,80 m	2,10 m	2,10 m	2,30 m	3,00 m
Weight:	405 - 425 kg**	460 – 480 kg**	530 – 550 kg**	580 kg	700 kg

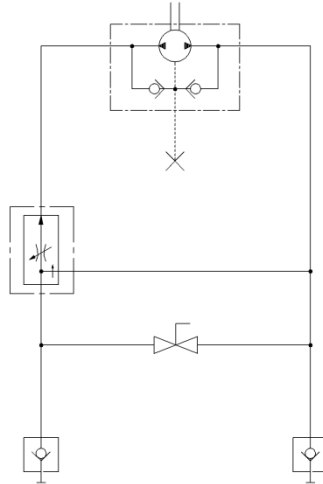
* Standard on the SAMON Elevator

** Depending on options and extra's.

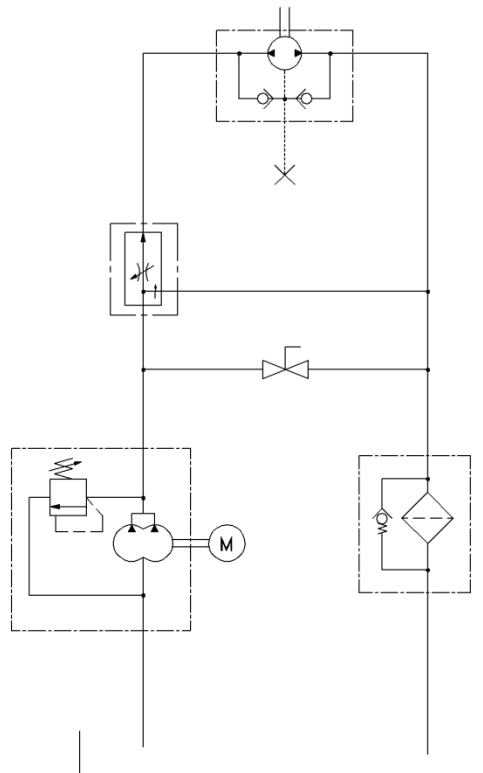
9. Technical diagrams.

9.1 Hydraulic diagrams.

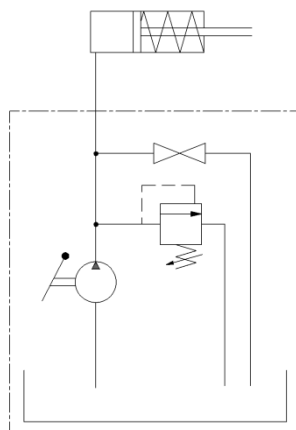
9.1.1 Hydraulic diagram types H and HK.



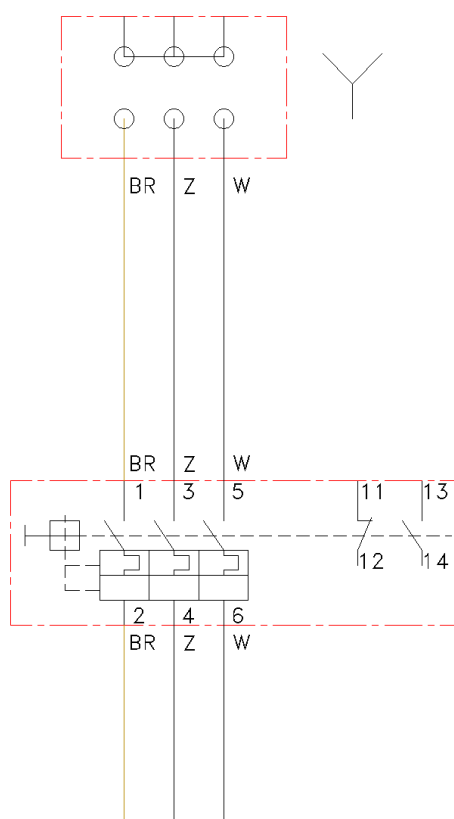
9.1.2 Hydraulic diagram types HE and HEK.



9.1.3 Hydraulic diagram height adjustment.



9.2 Electric diagram.



10. Ordering spare parts.

When ordering spare parts use the instructions below, then you will be assured for a quick and accurate delivery.

1. Order your spare parts at an official SAMON dealer.
2. Describe type, year and serial number of the machine, as described on the ID-tag. The ID-tag is located on the frame near the PTO.
3. Always specify the part number and full description.



11. Troubleshooting.

Malfunction:	Cause:	Solution:
Conveyor belt stops, but the hydraulic motor is turning.	Conveyor belt is not tensioned.	Tension conveyor belt
	Dirt on rolls	Clean rolls
	Dirt on inside Conveyor belt.	Clean inside of conveyor belt.
	Coupling Hydraulic motor failed.	Check and replace.
Conveyor belt stops and hydraulic motor stops but Hydraulic pump is working.	Hydraulic emergency lever in wrong position.	Put Lever in right position.
	Speed control valve knob has been fully screwed in.	Unscrew the speed control valve knob.
	Speed control valve failed.	Measure pressure and flow behind the valve.
	Pump broken.	Measure pressure and flow behind the pump.
Elevator drops by itself.	Leakage hydraulic system height adjustment.	Locate leakage and repair.
Elevator does not go up when pumping with the lever.	Return valve is still open.	Close return valve.
	No oil in reservoir.	Check for leakage. Fill oil.
Thermal security switches on.	To thin extension cord. (Min. 2½ mm ²)	Replace extension cord .
	To long extension cord. (Max. 50 mtr)	Shorten or replace.
	Failure in socket.	Replace socket.
	Not enough voltage on main power supply.	Contact power supplier.