User manual
MAXIFEEDER

We automate heavy and time consuming labour

Important for animal welfare, the farmer, and society

20.03.2026

ABOUT

Serigstad MaxiFeeder is a product produced by Serigstad AS.

MaxiFeeder is specialized to pre-processes high density round bales, square bales or blocks of silage or straw, or other materials which is packed or loose. MaxiFeeder's pre-processing materials makes the feeding process more efficient, reliable, and accurate, and prolong maintenance intervals and cost. The minimum length is 4.5m, and maximum length is 14.5m; each module is 2 meters, with the maximum length having 5 modules. With 5 modules the total load capacity is $43m^3$.
MaxiFeeder has two knife drums with 60 knives each. The whole drum is covered in knives, which gives it a smooth and balanced rotation. Together with the photocells this gives a well-adjusted feeding. MaxiFeeder control can be regulated by a distribution wagon, band feeder or similar. It can also work as an independent cutter. While running, the knife drum is supervised by a frequency transformer which regulates and potentially stops the machine if needed.

MACHINE TYPE:

SERIAL NUMBER:

Contact:

Serigstad AS
Nordlysvegen 5
4340 Bryne
NORWAY

(0047) 46854665

info@serigstad.no

CONTENT

Dear customer!

We appreciate the trust shown to our company purchasing Serigstad MaxiFeeder. The product is tested and built on a highly reliable and known technology. The product fullfil strict safety and quality requirements.

Upon delivery our distributor will give you information about control, maintenance and adjustments of the machine. The brief introduction is not a compensation for the more detailed and necessary information given in this instruction manual.

This instruction manual includes detailed safety instructions, use and maintenance guidance, knowledge of functions and use of MaxiFeeder. The system has one year warranty against fabrications- and material defects. Serigstad reserve the right to change the design without obligation for previously delivered products.

We hope the product meets your expectations and needs!

Best regards

Helge Njærheim
Research & Development Manager
Serigstad AS

DECLARATION OF CONFORMITY

EC – samsvarserklæring
EU's maskindirektiv 2006/42/EC

Produsent;
Serigstad Agri as
Vardheiveien 60
NO – 4349 Bryne

Bekrefter herved at MaxiFeeder og MaxiMag samsvarer med maskindirektivet 2006/42/EC.

Samsvarserklæringen gjelder installasjon og bruk som utføres i samsvar med Serigstad Agri's instruksjoner og retningslinjer. Dette forutsetter også at det ikke er gjort endringer i maskinens konstruksjon eller virkemåte.

Bryne 20.01.2021

Helge Njærheim
Produkt – og utviklingsleder

Trond Gjermund Haugen
Dagligleder

SAFETY INFORMATION

IMPORTANT!
Please read the safety instructions thoroughly before setting up, using, and maintaining the machine!

The user manual supplied with the machine should be stored safely, as it contains the serial number of the machine.

THINK SAFETY

The system can be remotely controlled and may start automatically several times a day without supervision. Place the enclosed warning sign in a clearly visible location at the entrance or in a natural area near the machine. The installation must be secured with physical barriers.

Familiarize yourself with our safety recommendations and take the necessary precautions when entering hazardous zones.

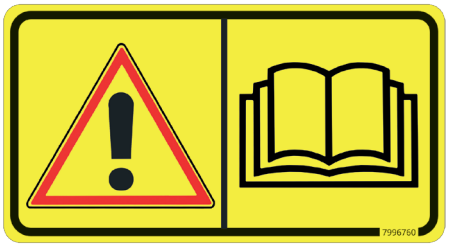
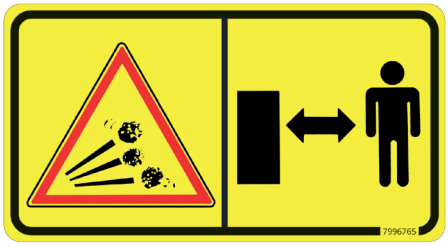
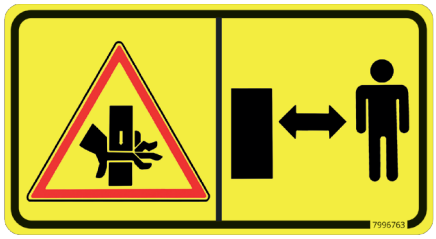
DANGER

Indicates an imminent dangerous situation which, if not avoided, may result in serious injury or death.

WARNING

Indicates a potential dangerous situation which, if not avoided, may result in serious injury.
The label shows exposed danger areas when the covers are opened or removed.

SAFETY INFORMATION

Description	Decal
Warning sign 996760 - red and yellow zone Be careful! Make sure you read and understand the instruction manual before startup, maintenance, and adjustments are made.	
Warning sign 7996765 - red and yellow zone Be careful! Keep distance to running equipment. Do not stand in hazard area during startup or operation. Objects may be thrown out of machine during operation.	
Warning sign 996766 - red zone Be careful! All covers must be closed when machine is running. Fingers and limbs can be damaged if they are in contact with rotating parts.	
Warning sign 996763 - red zone Be careful! Crushing hazard that may cause serious injury or death! Keep distance when machine is running.	
Warning sign 996746 - red and yellow zone Be careful! High voltage. Disconnect power supply before opening control cabinet.	
Danger sign 996745 - red zone WARNING! Disconnect power supply before entering high risk area for maintenance or adjustments. Standing in danger zone during operation may cause serious injury or death.	

WARNING!

Use labeled points when lifting the machine.
Use labeled points for lifting the machine with forklift.
Keep clear of hanging load!

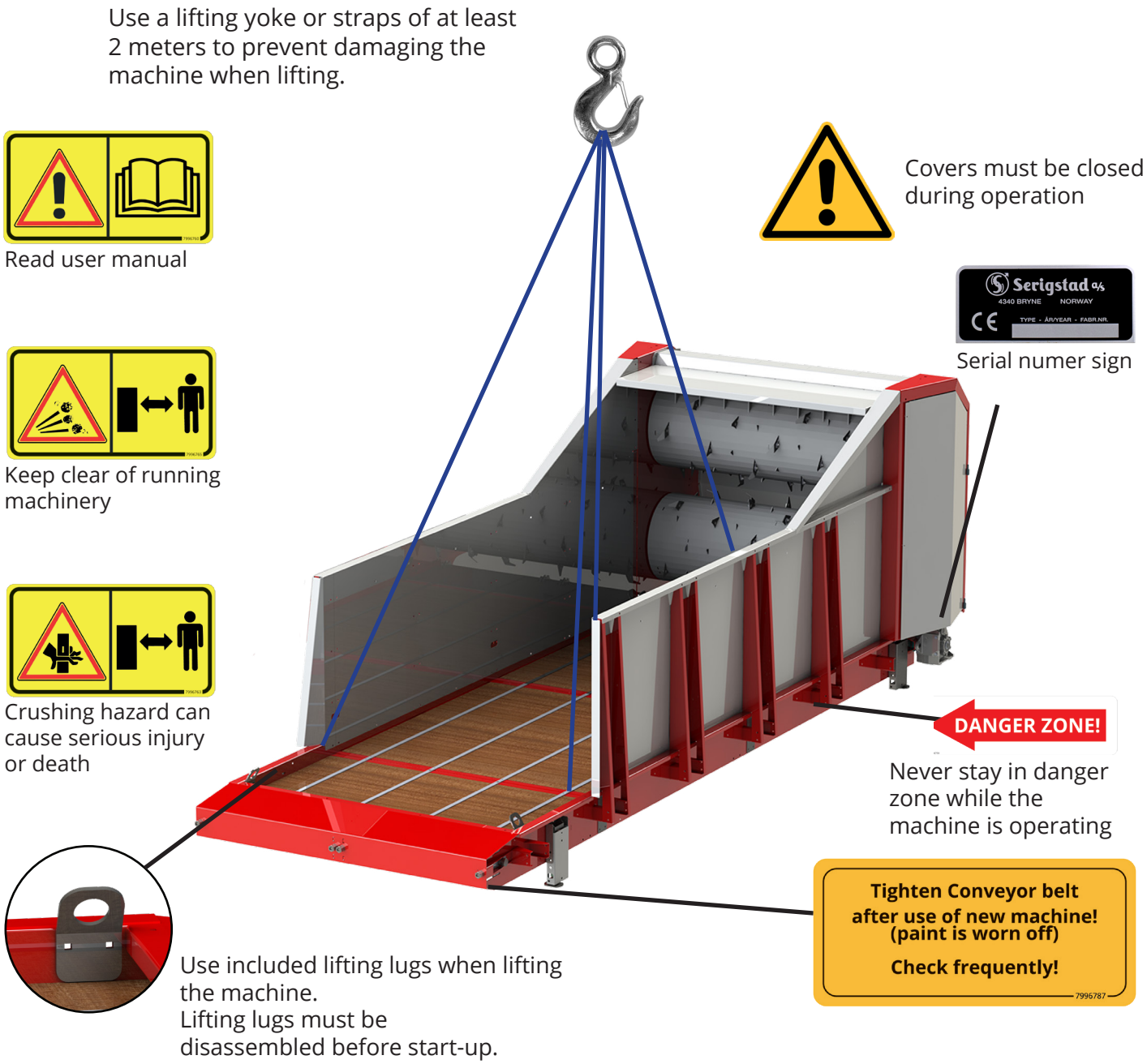


Figure 1 MaxiFeeder with labelling.

INSTALLATION

The MaxiFeeder is delivered assembled; in the case of partially assembled delivery, see the separate **MaxiFeeder Assembly Guide.**

INSTALLATION WARNINGS

All electrical connecting must be performed by authorized personell.

When receiving the machine, ensure that it is undamaged; report any damages before using the machine.

Control the elements are placed edge to edge without any overlap.

Follow safety instructions shown on **page 8**. Take note of any warnings and instructions from pictograms and signs.

Use appropriate PPE when handling knives on the knife drums.

INSTALLATION CAUTIONS

When assembling stand, ensure that all the necessary parts are present before assembling. Use the provided nuts and bolts, and use correct tools.

CRITICAL USAGE WARNINGS

Read the usage warnings and cautions before using the machine.

Follow the instructions and warnings on the pictograms and signs.

Be aware of the hazard areas, and take the appropriate measures to minimize the risk to the operator and everyone else.

Do not enter or operate in the Red zone while the machine is running. Ensure the red zone is clear or that there is no risk to anyone present before starting the machine.

Safety fencing around the machine is recommende; the fencing should follow the standard: EN ISO 13857:2008.

Keep the electrical cabinet locked at all time.

Keep covers over axels and chains closed at all time.

Do not use with non-organic matter, or organic matter above a certain hardness, as this can cause matter to be ejected and risk harming the operator and/or bystanders, animals, and the environment.

The MaxiFeeder is only for cutting organic material meant for feeding of livestock and animals, or further treatment before feeding to livestock and animals.

USAGE CAUTIONS

Be cautious when entering or operating in the Yellow zone while the machine is running.

Operate machinery in adequately lighted conditions.

Operate the machine in adequately ventilated conditions.

The operating volume of the machine is 65 dB.

SAFETY INFORMATION

Hazard areas must be secured!

Before startup make sure nobody stays in hazard areas.

Before entering hazard area for maintenance, reparations, or adjustments turn off and lock main power switch.

Red zone (0-850mm from machine)

Represents hazard area which might cause serious injury or death. It is important to keep safe distance to the area during operation.

Yellow zone (400-1000mm from machine)

Represents potentional hazard are during operation.

Green zone (>1000mm from machine)

Represents low risk of injuries during operation.

Figure 2 MaxiFeeder with hazard areas.

SAFETY FUNCTIONS

- Emergency stop switch is placed in front of the control cabinet
- Lockable main power switch is placed on the left side of the control cabinet.

- Light signals:

Green	Power connected
Yellow	Blinks during start-up and operation.
Red	Emergency stop is activated or fault has occured.

- Alarm signal is heard before startup.

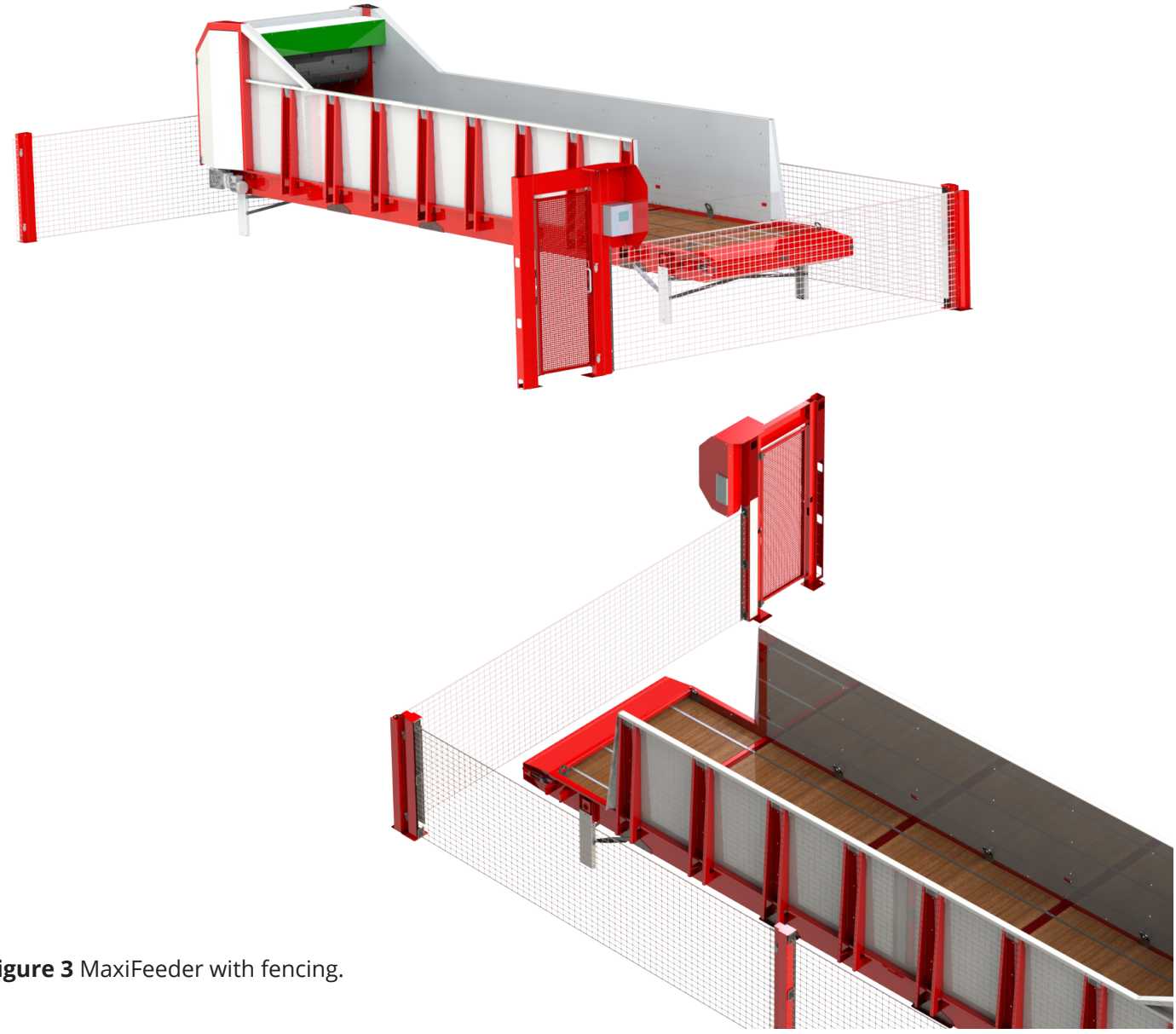


Figure 3 MaxiFeeder with fencing.

Height of safety fence (requirement according to standard: EN ISO 13857:2008):

• If the machine is raised with extended leg set, the height of the safety fence must be at least 300mm higher than the lower frame on the feed table. See figure below.

• As an alternative to higher safety fences all distances of at least 850 mm can be raised to a minimum of 1400mm.

• Minimum recommended distance from safety fence to conveyor is 600 mm, safety fence towards the conveyor is always to be a minimum of 2000mm high.

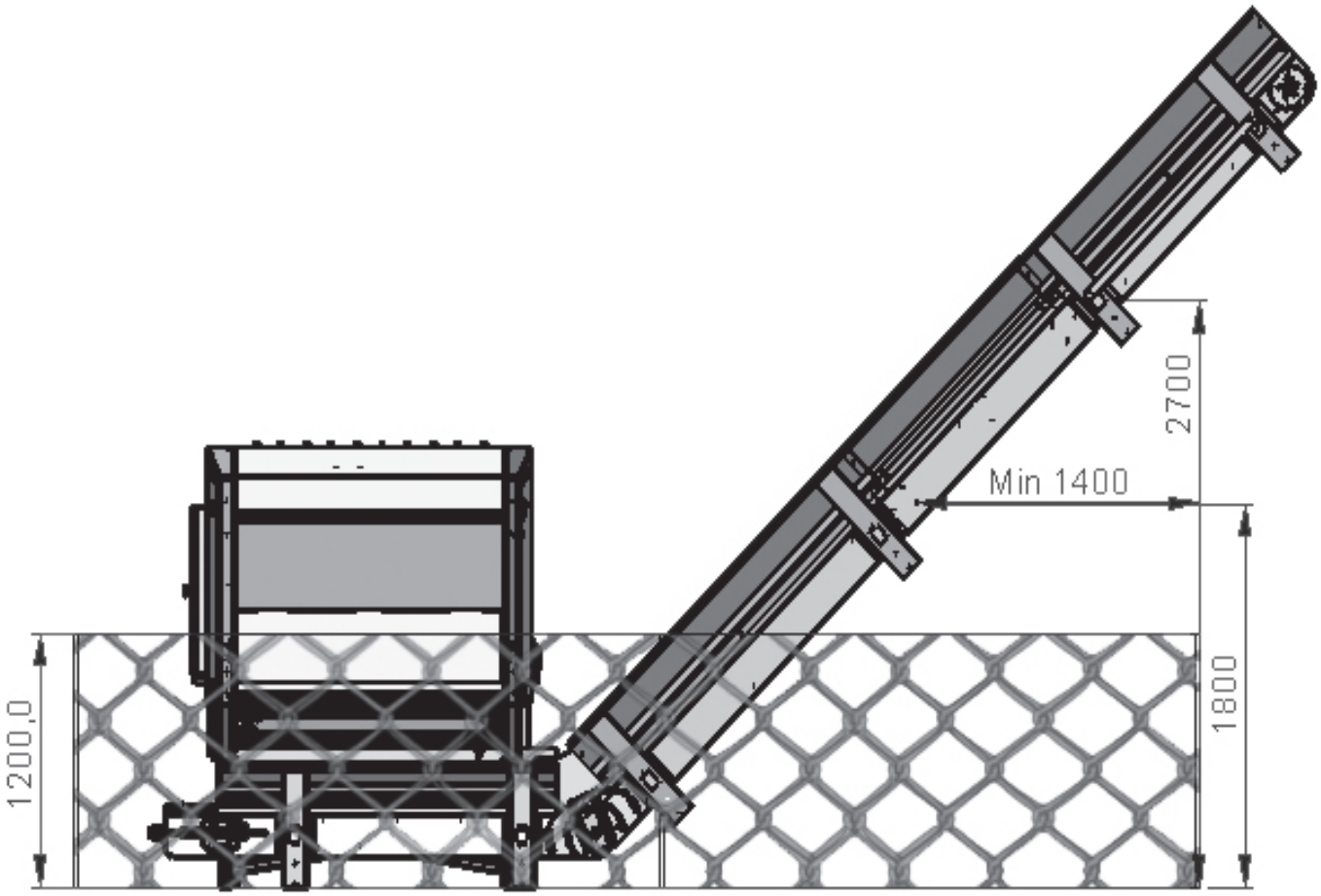


Figure 4 For illustration: ExactFeeder with angeled conveyor and fences.

CRITICAL MAINTENANCE WARNINGS

Read the instructions on maintenance and repairs before attempting any work on the machine.

Turn off the power supply when working on the machine; use the lockable main power switch on the electrical cabinet.

Use appropriate and necessary PPE when working on the machine.

Use the correct spare parts; contact your local supplier or Serigstad directly to aquire the necessary part.

Check pages 53-59 for information regarding the most common spare parts.

Ensure any adjusted or replaced part is fastened properly.

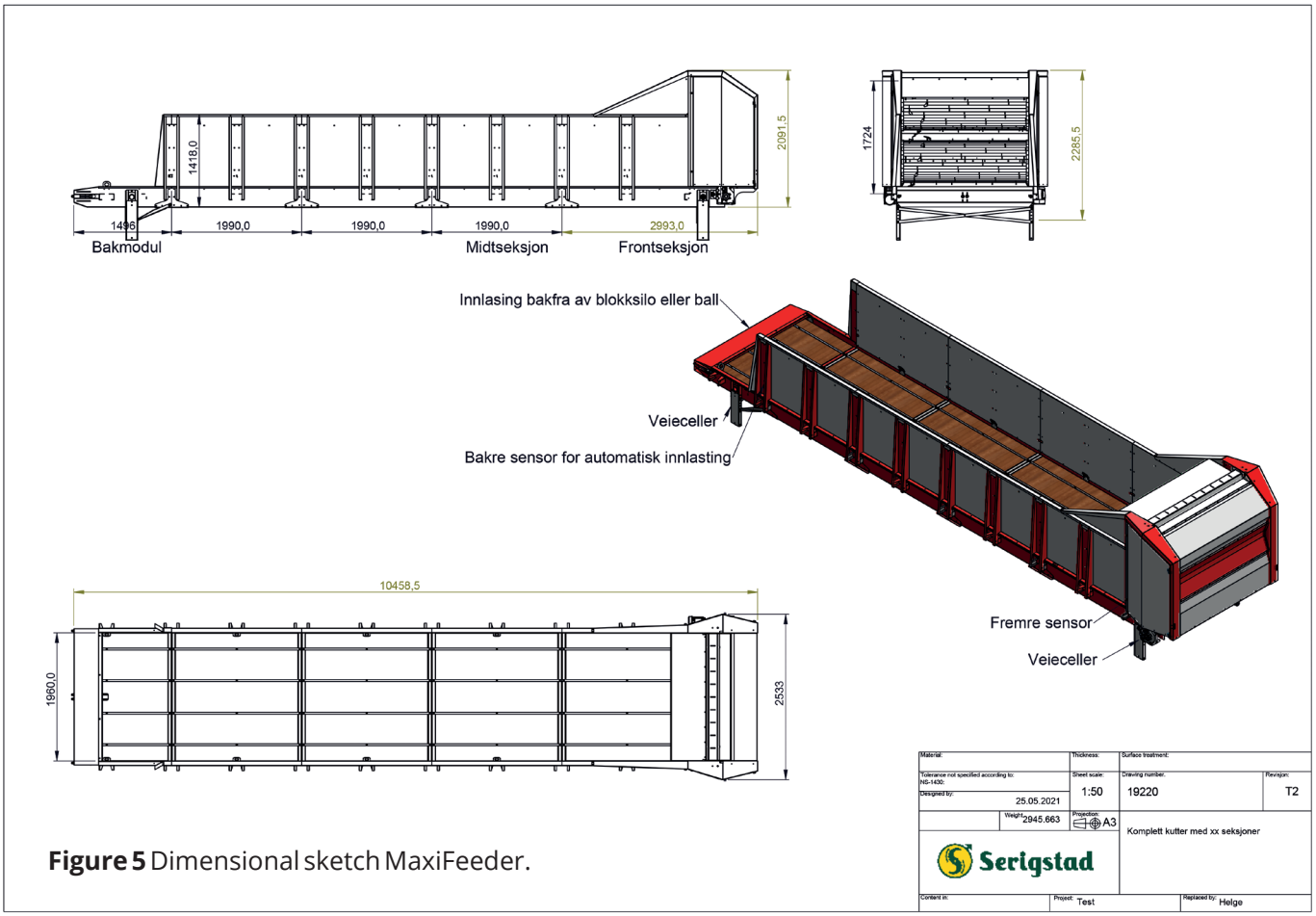


Figure 5 Dimensional sketch MaxiFeeder.

RECYCLING

When the equipment has reached the end of its service life, proper waste handling is important to ensure efficient use of resources and to protect the environment.

Electrical components such as cables, switches, sensors, control cabinets, and motors are classified as WEEE (Waste Electrical and Electronic Equipment). WEEE must be collected and delivered for recycling after its useful life.

Dealers are required to accept WEEE from products in their range. The waste must be stored properly and sent to an approved collection or treatment facility. Storage and transportation of WEEE must be carried out in a way that prevents damage or contamination.

Components containing hazardous substances must be handled and sorted safely to avoid environmental harm.

Steel waste should be delivered to recycling collection to ensure it is recovered.

For more information on recycling and waste handling, please contact your dealer.

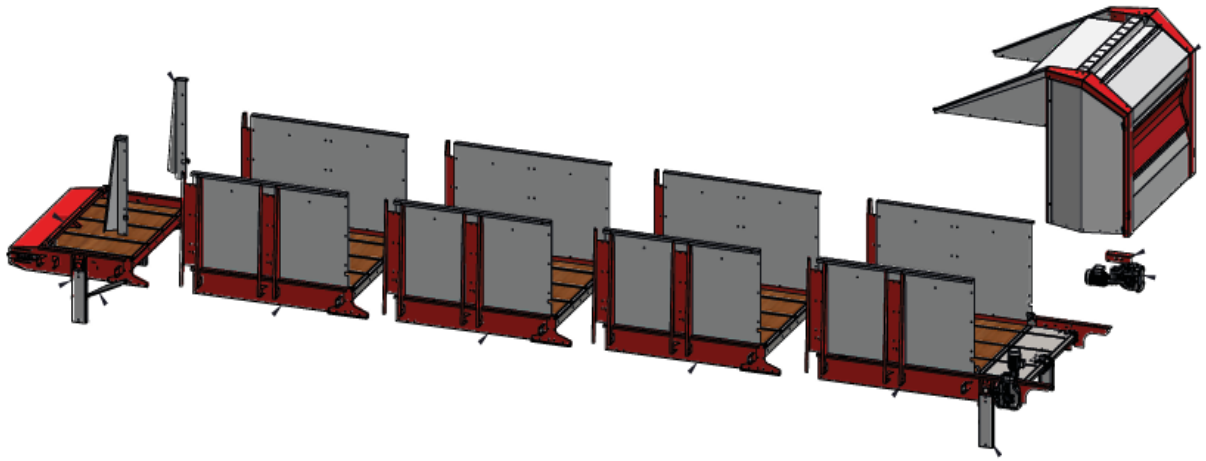


Figure 6 MaxiFeeder end module, 3 mid-sections and cutter module.

MaxiFeeder is a flexible machine that can be designed according to your wishes and needs. The system can be delivered with up to 5 mid-sections of 2 meters each, for a total length of 14.5 meters. The shortest unit, consists of only back- and front-section will have a total length of 4.5 meters.

Mid-sections are bolted together with splicing plates, side supports, side walls and adjusted chain.

NOTICE! Control the elements are placed edge to edge without any overlap.

INSTALLATION REQUIREMENTS

Read the instructions before starting any work.

Assemble all the necessary tools before starting the installation.

Check that everything is accounted for, and the type and amount of delivered parts are correct.

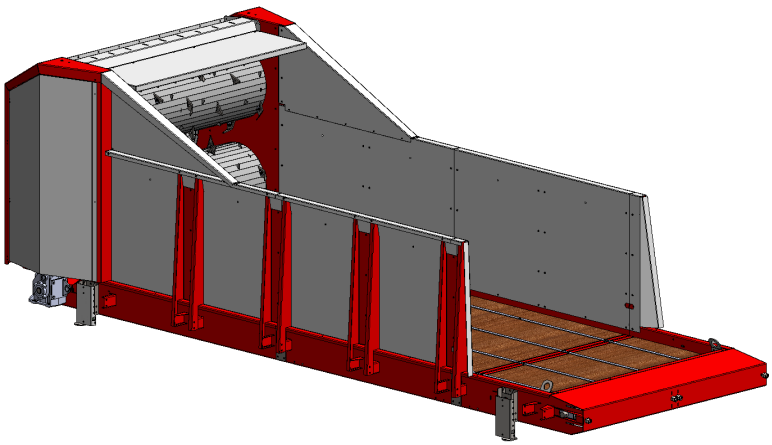


Figure 7 MaxiFeeder with cutter and two mid-sections.

RECOMMENDED PLACEMENT

For optimal use and a longer machine lifetime, as well as minimised risk to health and safety, it is recommended to follow the points below when placing the machine.

The machine should be placed in an environment with:
- Adequate lighting
- Adequate ventilation

Adequate lighting is important when operating, maintaining, and repairing the machine. Adequately lighted workspace will reduce some of the risks that might be present when operating, maintaining, and/or repairing the machine.

The work space need adequate ventilation, as the machine and the work it does can produce a good amount of dust. The dust can be harmful to the operator, and it might be necessary to provide the correct PPE for this scenario.
The dust produced can also be harmfull to the machinery and the the electrical components; it is important to prevent buildup of dust inside the electrical cabinet, as this is a risk of fire.

The height and placement of the machine should not cause strain to the operator when they are operating, maintaining, or repairing the machine.
Ensure the most common maintenance points are easily accessible.

If the machine is placed above a certain height the operator must use PPE when moving on or inside the machine.

Due to the nature of the work, it is possible for the machine or the area surrounding the machine to be wet and/or slippery. As such, it is important to be careful when moving around, inside and on the machine; wear the correct PPE when necessary.

If the machine is placed in an enclosed space it might be necessary to supply hearing protection for the operator.

STANDARD LEG SET
Standard leg-sets on MaxiFeeder if not otherwise specified. This leg set can be combined with a conveyor. Lifts the machine 600 mm from the ground.

Slide the leg into the bracket on the side of MaxiFeeder. Fasten with bolts, nuts and support rods as shown on figure 9.

Load cells are assembled as described on page 20-21.

Figure 8 Installed standard leg set.

STAND
The stand is mounted to the machine's base frame. The stand has brackets for attaching support struts, which should be positioned facing inward toward the machine.

The leg of the stand is prepared for on-site adjustment and can be cut to the desired length. To secure the floor mount, drill a hole in the leg, using the existing hole in the floor mount as a guide. Insert a bolt and locknut into the hole to lock the leg in place.

The stand is attached to the base frame using two through-brackets that are fixed to the stand. The stand is stabilized with bracing rods mounted between the leg assembly and the base frame.

The floor mount is secured to the surface.

Figure 9 Stand attached to the frame.

Cut the legs to the desired length to adjust the height of the stand. Then place the floor mount at the bottom of the stand. Drill a hole and secure the floor mount with a bolt and locknut. See Figure 9.

Figure 10 Floor mount.

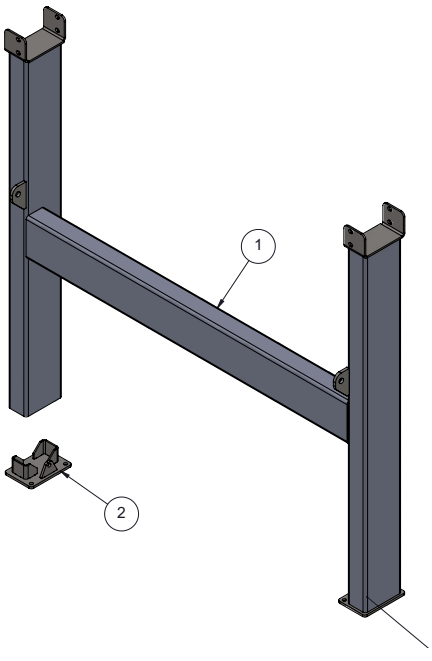


Figure 11 Short stand for machine (1) with floor mount (2).

At the front of the machine, the bracket for the bracing rod must be positioned, and holes must be drilled in the base frame for the bracket.

At the rear of the machine, place the bracket as shown in Figure 12.

Figure 12 Bracing rod connected to the base frame with the bracket.

To adjust the angle, loosen the bolts next to the stand mounting.

Rotate the mount to the desired position and tighten the bolts to lock it in place.

Ensure the bolts are securely fastened and that the machine is stable before using the machine.

Figur 13 Mounting the stand to the base frame.

LOAD CELLS

The MaxiFeeder with cutting unit is equipped with a load cell in each leg to measure the feed amount passing through the machine.
The load cell is mounted on a ball to eliminate lateral forces. These balls are installed after the legs have been mounted. After installation, the load cells are calibrated in the settings menu with an empty chamber.
See page 21 for detailed information on calibrating the load cells.

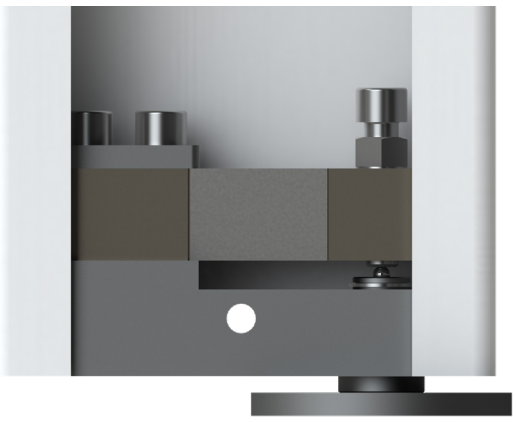


Figure 14 Load cell installed in a leg

1. Position the machine. The load cells are delivered unloaded, without the ball, to prevent damage during transport.
2. Ensure that the machine rests centered on the mounting bracket's cone so that no lateral forces are applied to the load cells. Then secure the bracket to the surface.
3. Place the ball in the recess on the bracket.
4. Tighten the bolt until the machine lifts a few millimeters and rests on the ball. Make sure the ball is properly seated between the bracket and the bolt.

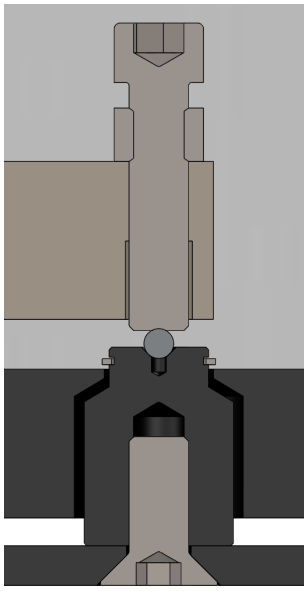


Figure 15
Cross-section of the load cell mounting.
The mounting bracket is designed with a cone to center the ball.

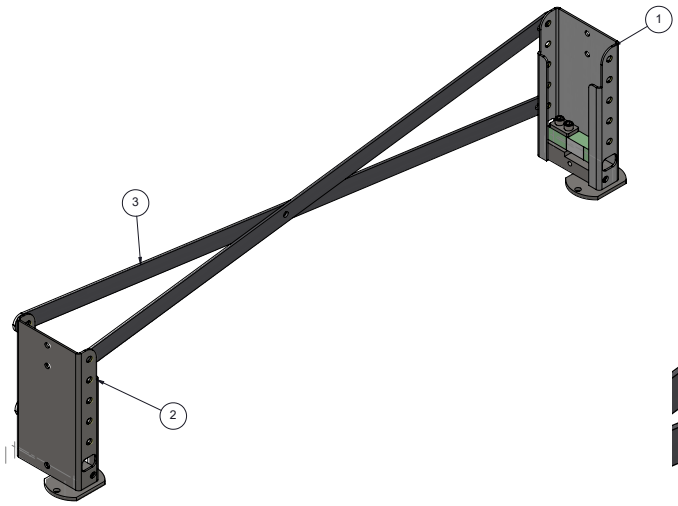


Figure 16
Leg set with load cells

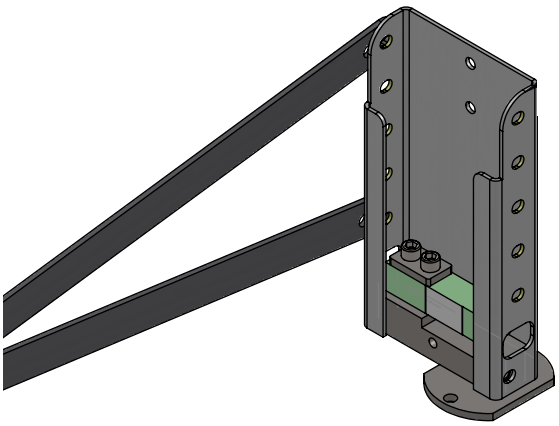


Figure 17
Detail leg

ELECTRICAL CABINET AND CONTROL BOX

The electrical cabinet is placed according to the customers specifications.

The control box is attached to the electrical cabinet with a 4-5 meter long ethernet cable, but it is not attached to the machine unless specifically requested.

The control box can be placed wherever the operator prefers, as long as the cable is long enough; make sure there is no strain on the cable, or that it is not a tripping hazard.

Make sure to fasten the control box properly, and in a good position for the operator to regularly operate; make sure it is not too low, where untrained individuals may access the controls.

Placement should be according to hazard zones, and in clear view of the machine.
If necessary provide PPE for noise and dust.

Figure 18
Control box with screen and emergency stop button

OTHER MACHINERY COMBINED WITH MAXIFEEDER

The MaxiFeeder can be combined with other machines for a complete feed line.

Instructions for connecting to TopFeeder can be found on **page 24.**
The MaxiFeedere can receive a startup signal from a superior controller/software; the signal is on input 19+20.

Any electrical work needs to be performed by authorized personell.

MOTOR KNIFEDRUM
9.2 kW
1450 RPM
Gear transmission: 1:9.69
Shaft/bearing: 40 mm

MOTOR CONVEYOR BELT
0.25 kW
920 RPM
Gear transmission: 1:821.70
Shaft/bearing: 40 mm

Figure 19 Motor and gearbox for the knife drum and conveyor belt

Technical data	Motor size	230 V	400 V
Knife drum	9 kW	29.5 A	17.5 A
Conveyor belt (2 pcs over 6.5 m)	0.25 kW	1.4 A	0.74 A
Recommended fuse size		> 35 A	> 25 A

MAXIFEEDER IS DELIVERED IN 230V OR 400V
MaxiFeeder use a control cabinet with advanced software.
Two motors for conveyor belt is used when there are three or more midsections.

CONTROL CABINET
The control cabinet is complete and assembled from the factory.

Connecting:
- Power supply for control cabinet
- Startup signal from superior control/software

Signal for external startup of MaxiMag on input 19+20.

CONNECTING MAXIFEEDER AND TOPFEEDER
To control MaxiFeeder via TopFeeder use following setup:

Signal on input 11	Startup machine and running knife drum
Signal on input 12	Pause mode canselled, conveyor belt can start

MaxiFeeder receive startup signal when TopFeeder starts on input 11.
Machine starts with acoustic signal before startup. Knife drum runs.

When the machine receive signal on input 12 the conveyor belt starts, followed by feeding. When signal on input 12 ceases, the machine will go into pause mode where only cutting section runs, but forage will not be drawn to the drums.

This function is useful in combination with for instance TopFeeder where it is desirable to pause the feeding while moving the plow between the different groups, without stopping the machine completely.
The signal can in sometimes be permanently fixed to always feed when signal 11 is activated.

NOTE!
All electrical connecting must be performed by authorized personell.

The control cabinet is fully assembled and test-run at the factory.

Nr.	Description
1	Rectifier
2	PLC
3	Motorprotector
4	Fuse
5	Main power switch
6	Power supply

Nr.	Description
7	Terminal block
8	Safety relay for emercengy stop
9	Frequency converter
10	Input- /output-signal
11	Emergency stop circuit
12	Ewon (WIFI module)

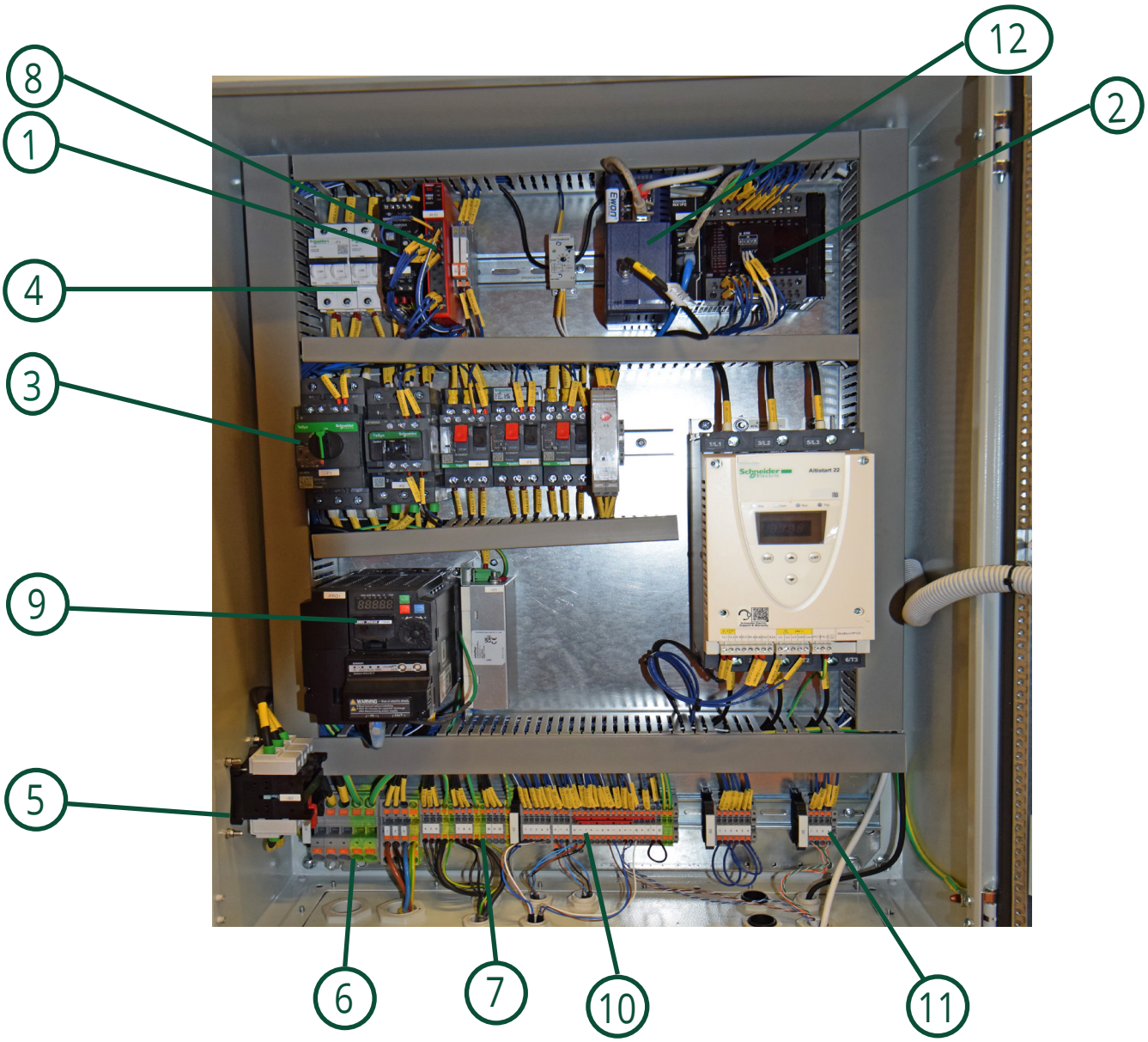


Figure 20 Control cabinet for MaxiFeeder.

CONNECTING

Page	Page description	supplementary page field	Date	Edited by	X
&EAB/1	Title page / cover sheet		27.09.2024	496415RUVI	
&EAB/2	Table of contents : &EAB/1 - &EFS/9		04.11.2024	496415RUVI	
&EAC/1	Generelle data		27.09.2024	496415RUVI	
&EFS/1	Hovedstrøm 1		27.09.2024	496415RUVI	
&EFS/2	Kutter		04.11.2024	496415RUVI	
&EFS/3	Feeder		04.11.2024	496415RUVI	
&EFS/4	Bunnbelte		04.11.2024	496415RUVI	
&EFS/5	Styrestrøm 1		04.11.2024	496415RUVI	
&EFS/6	Styrestrøm 1		04.11.2024	496415RUVI	
&EFS/7	Styrestrøm 1		04.11.2024	496415RUVI	
&EFS/8	Styrestrøm 1		27.09.2024	496415RUVI	
&EFS/9	Styrestrøm 1		04.11.2024	496415RUVI	

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WIRE COLORS

TYPE OF CIRCIUT	WIRE	STANDARD
Main power	AC/DC L1, L2, L3 or L+,L-	Black
230V AC Control voltage	L1	Red
	N	Red/White
24V DC Control voltage	24V	Dark Blue
	0V	Dark Blue/White
24V AC Control voltage	L1	Brown
	L2	Brown/White
External voltage	Conductor may have voltage even if the main switch is open	Orange
Protective earth	PE	Yellow/Green
PEN	PEN	Yellow/Green/Light Blue
N	N	Light Blue
Mesuring signal 4-20 mA, 0-10 V etc	+ / -	White
ASI	+ / -	Yellow

TECHNICAL DATA

DESCRIPTION	DATA
Main power	3x230VAC, 50 Hz
Incoming supply cable	3/PE
Pre connected protection	40A
Control voltage	24VDC
Degree of protection	IP54
Ambient Temp.	40°C
PLC Type	Omron
Communication	Ethernet

REGULATIONS, STANDARDS AND DIRECTIVES

EN 60204-1	EL equipment of machines-General requirements
NEK 400	Electrical low voltage installations
NEK 144	Graphical symbols for electrotechnical documentation (IEC 617)
NEK 321	Electrical ducumentation - General requirements
FEL 1999	Electrical low voltage
2006/95/EC	Low voltage directive
2004/108/EC	EMC (electromagnetic compatibility) directive
FSE 2006	Regulations for work and operation of electrical installations
EN 61439-1	Low-voltage switchgear and controlgear assemblies

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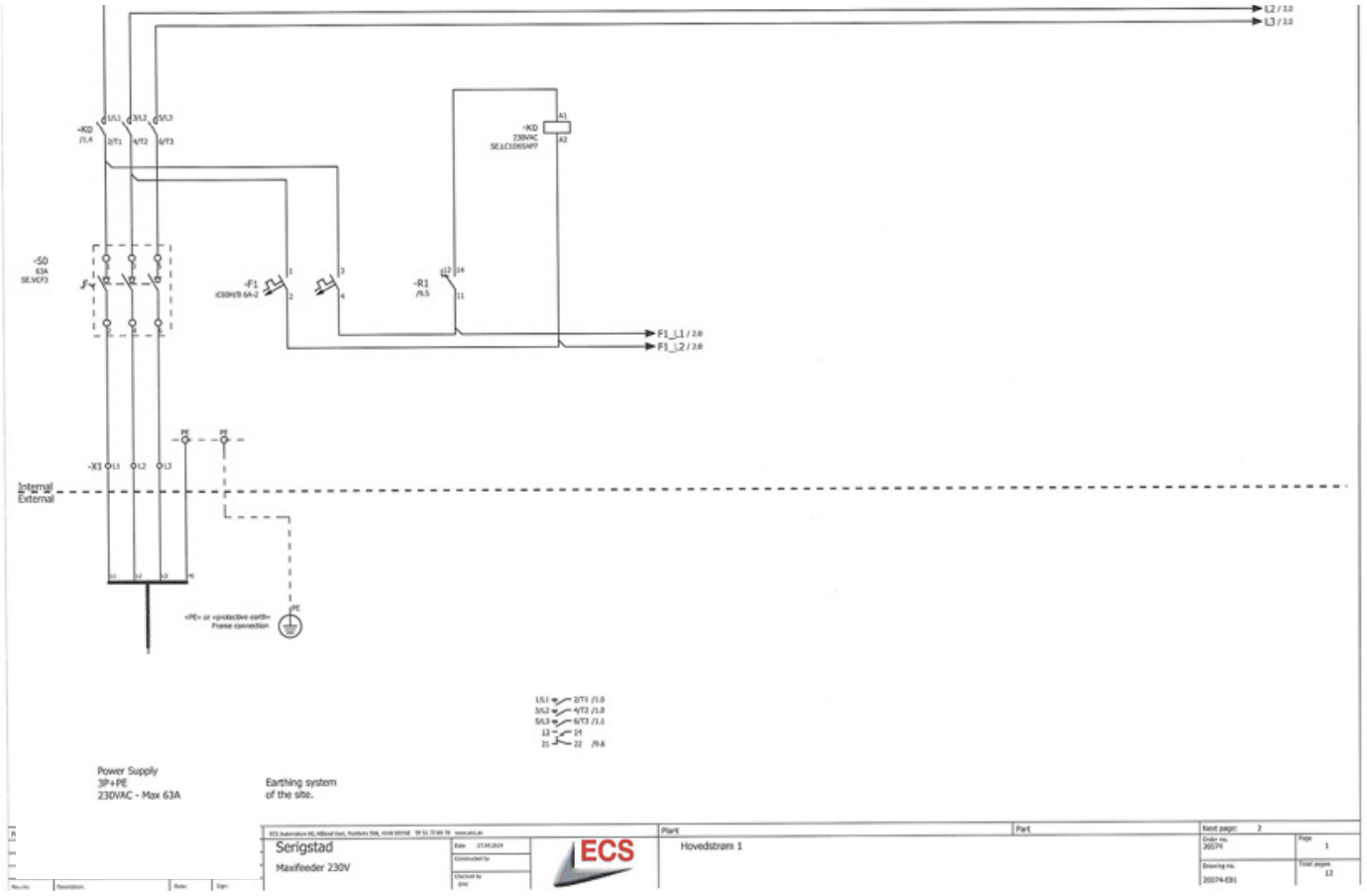
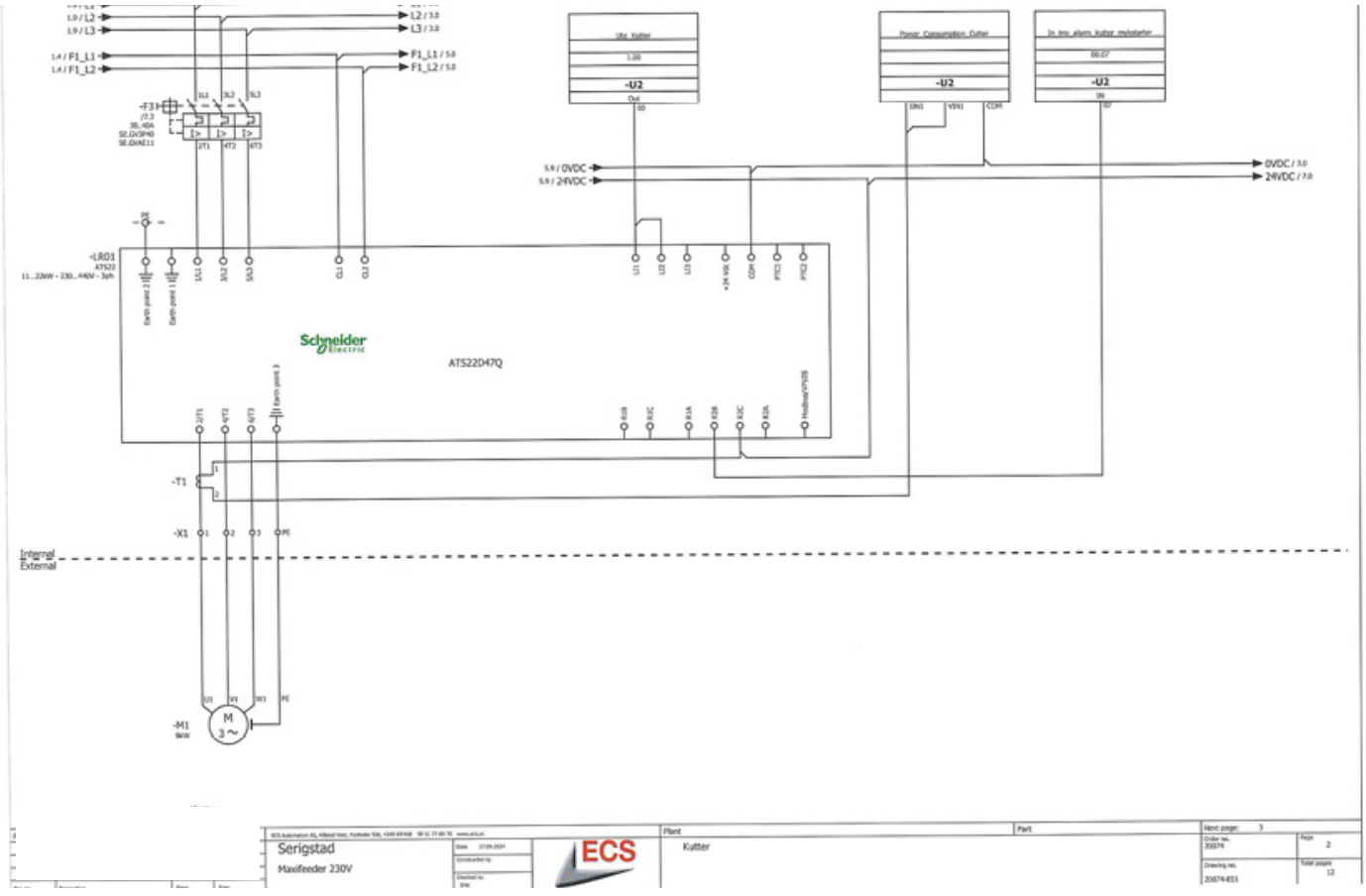

Power Supply
3P+PE
230VAC - Max 63A
Earthing system
of the site.
Internal
External
Serigstad
Maxifeeder 230V
Hovedstrøm 1
ECS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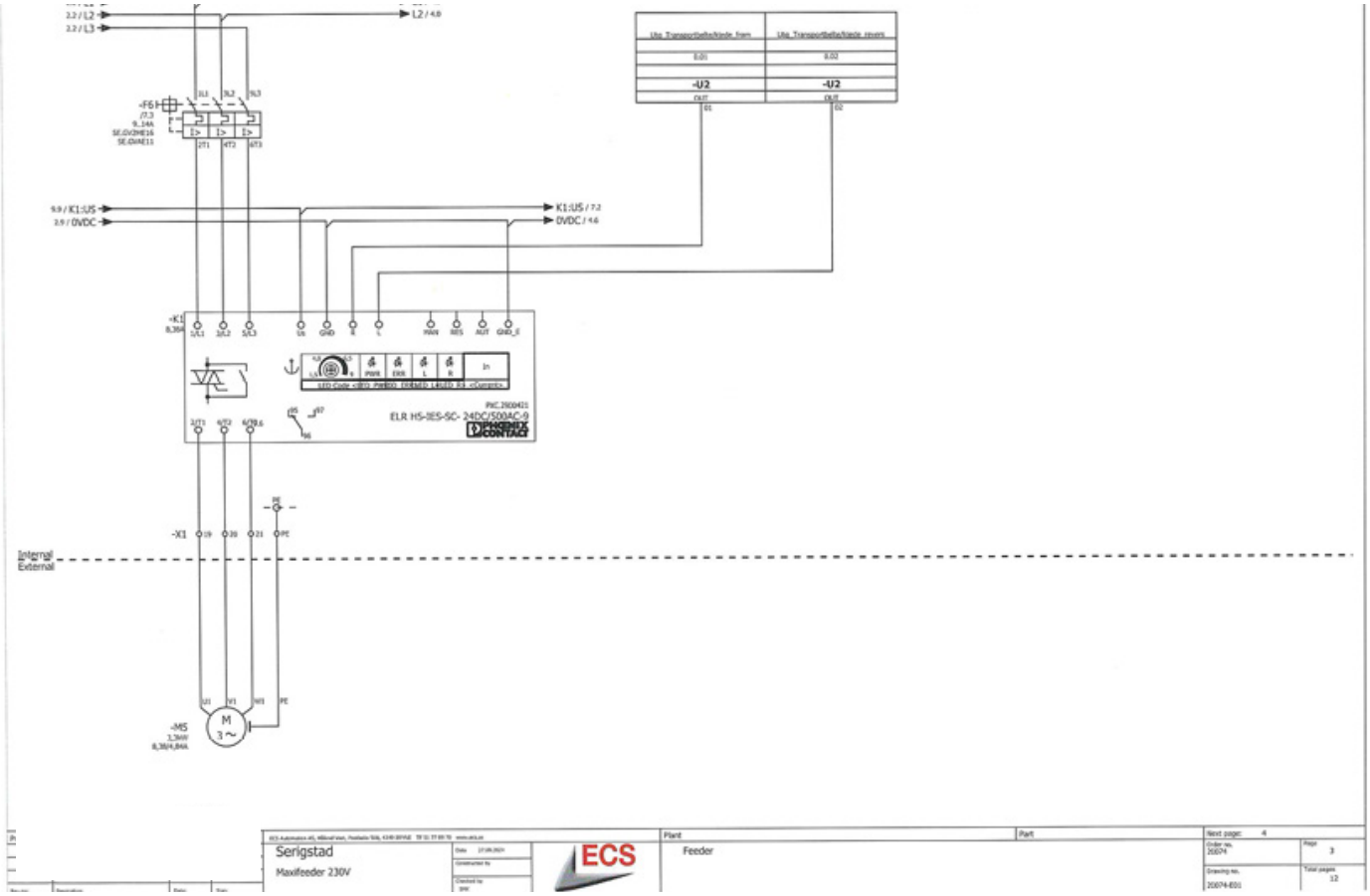
Kutter
ECS


L2 / 4.0
-F6
K1:US / 7.2
0VDC / 4.6
-K1
ELR H5-IES-SC- 24DC/500AC-9
-X1
Internal
External
-M5
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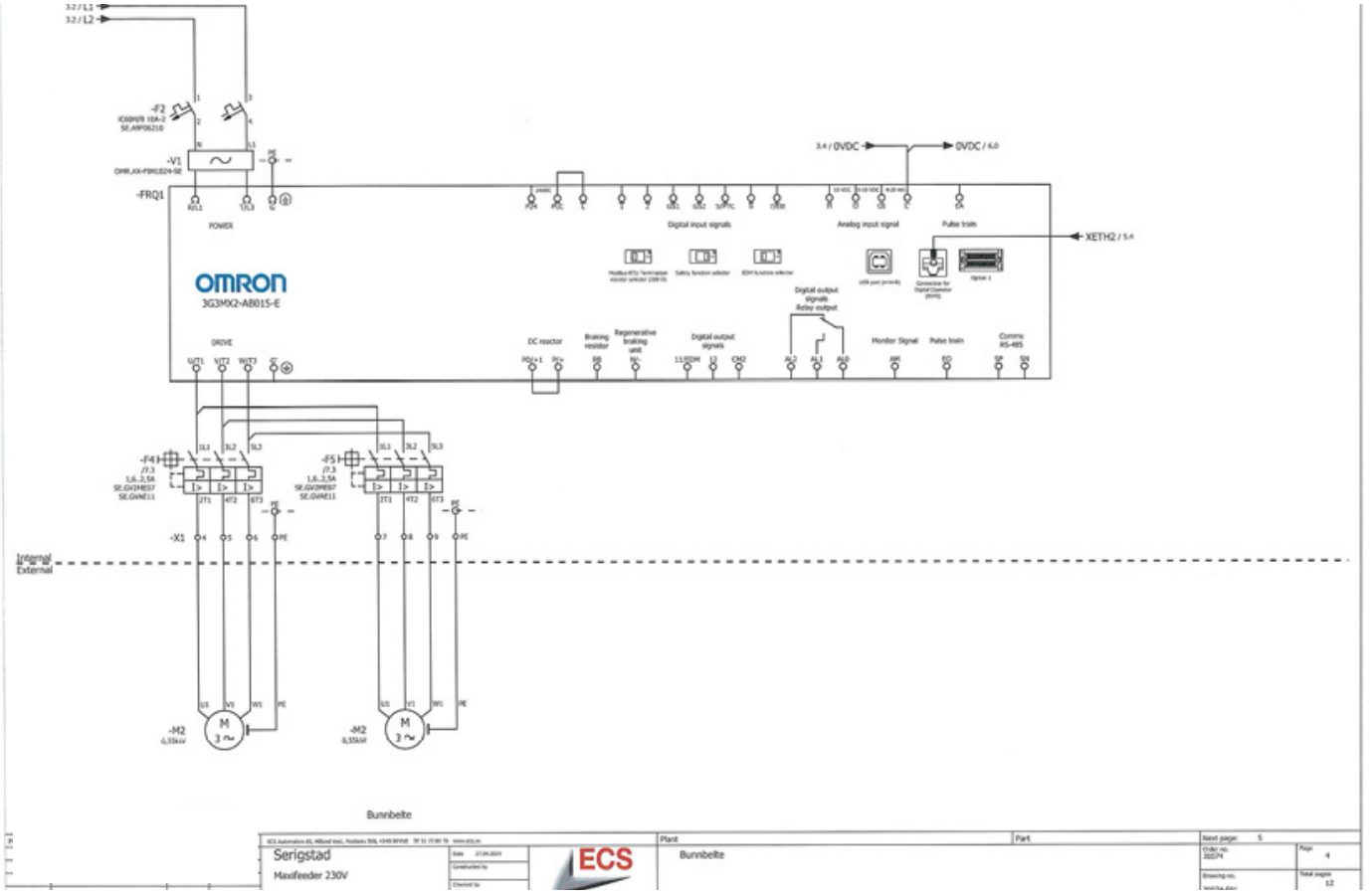
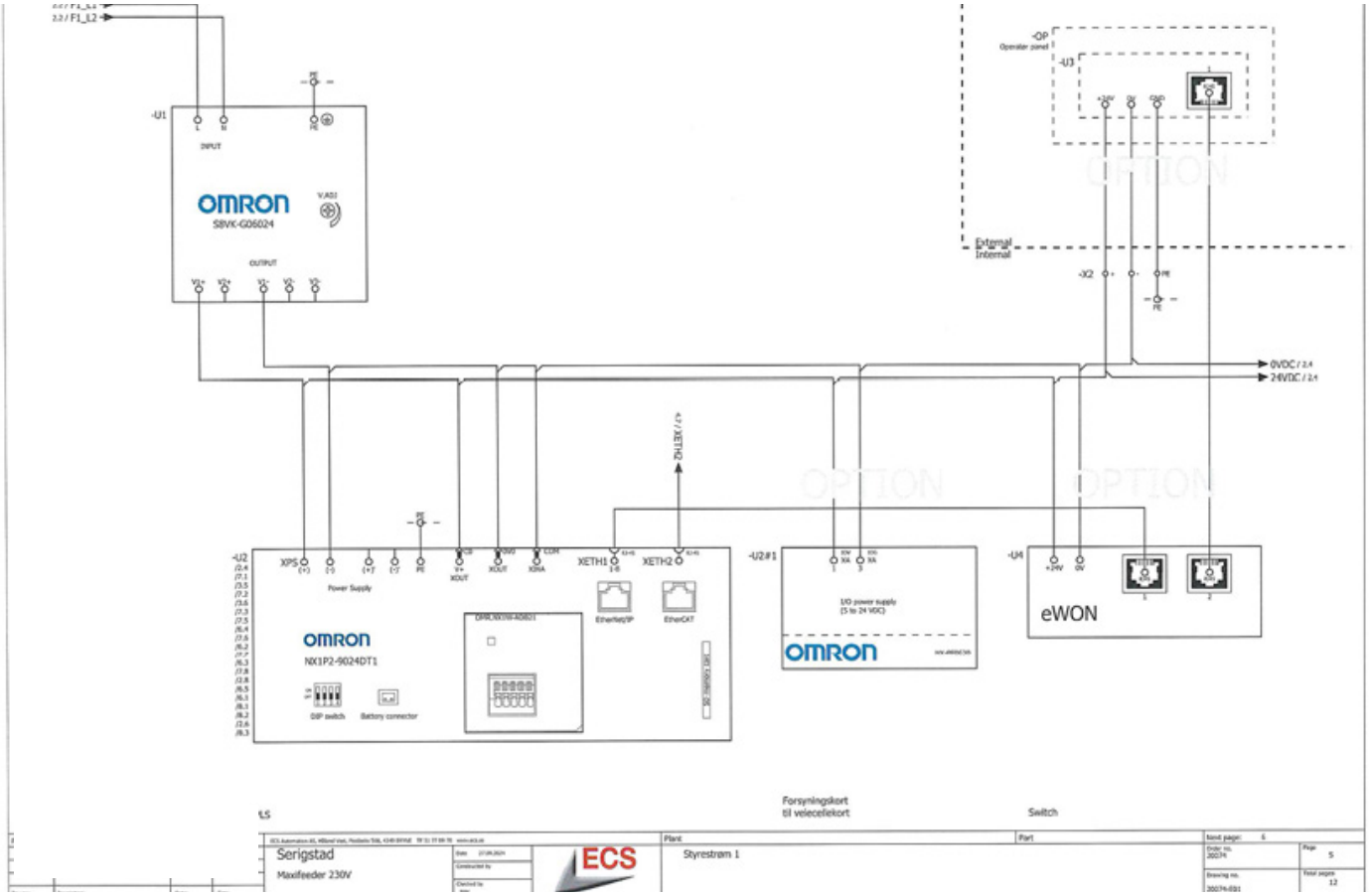
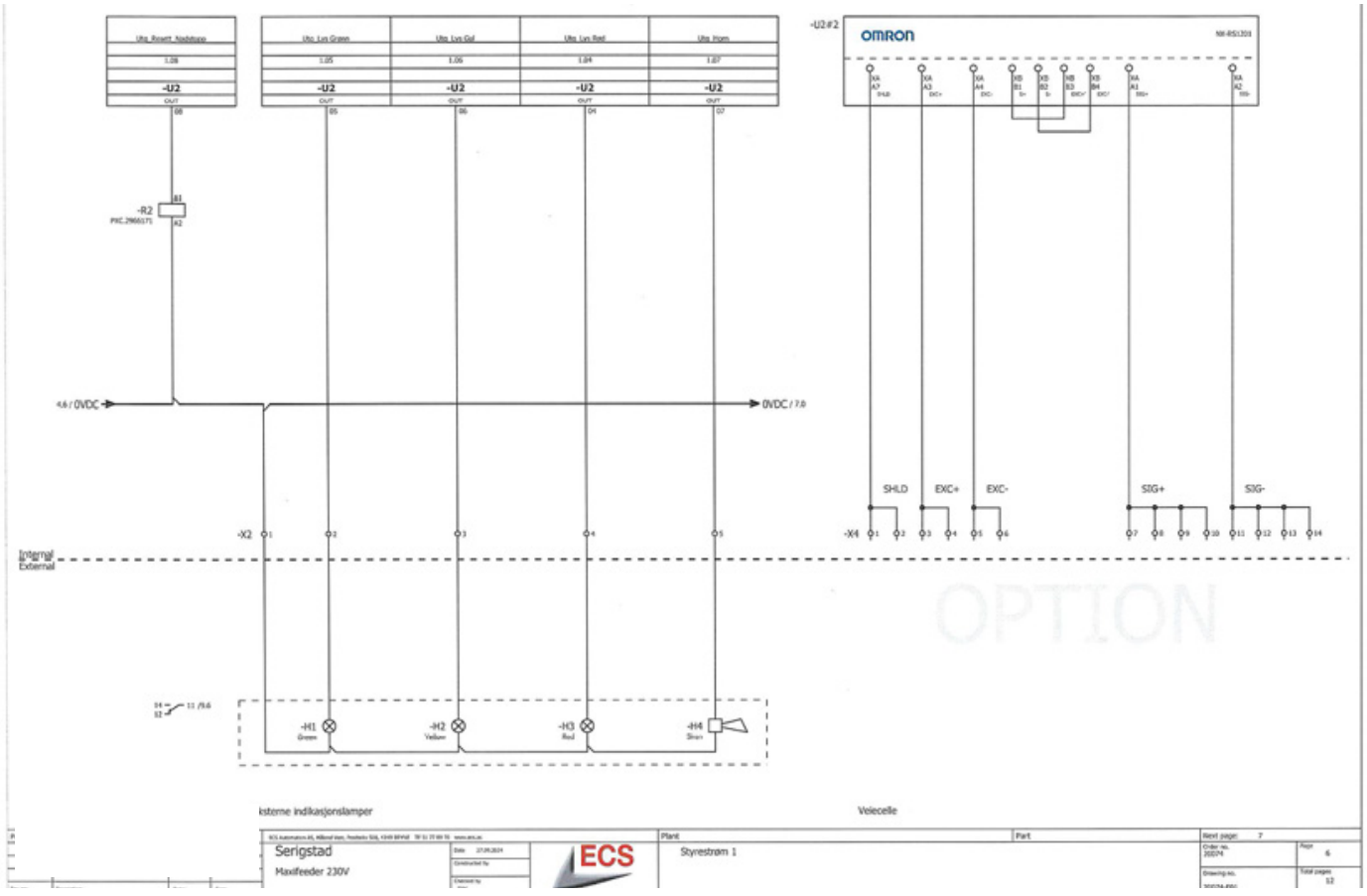
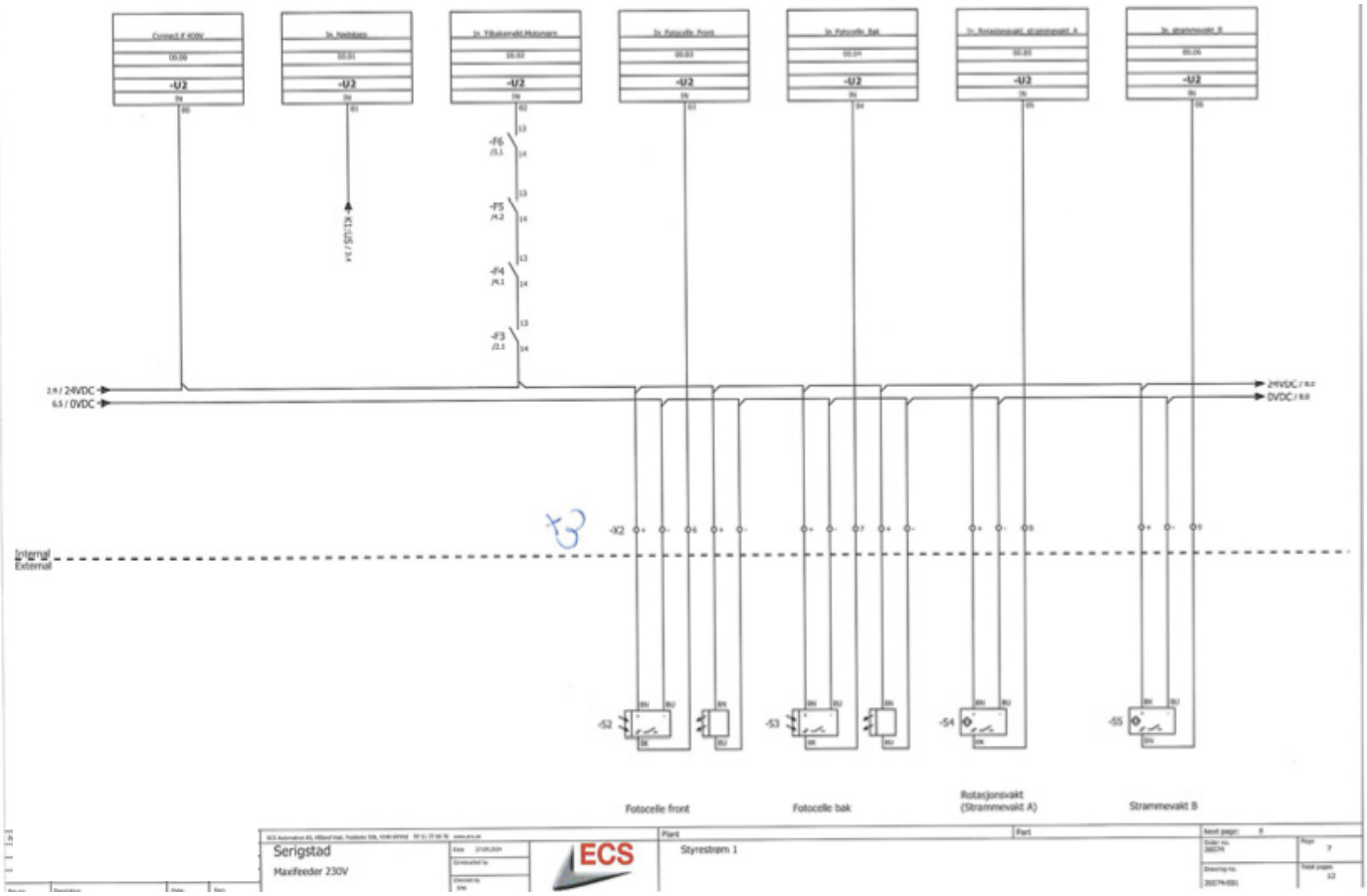
3 ~
Serigstad
Maxifeeder 230V
ECS
Feeder

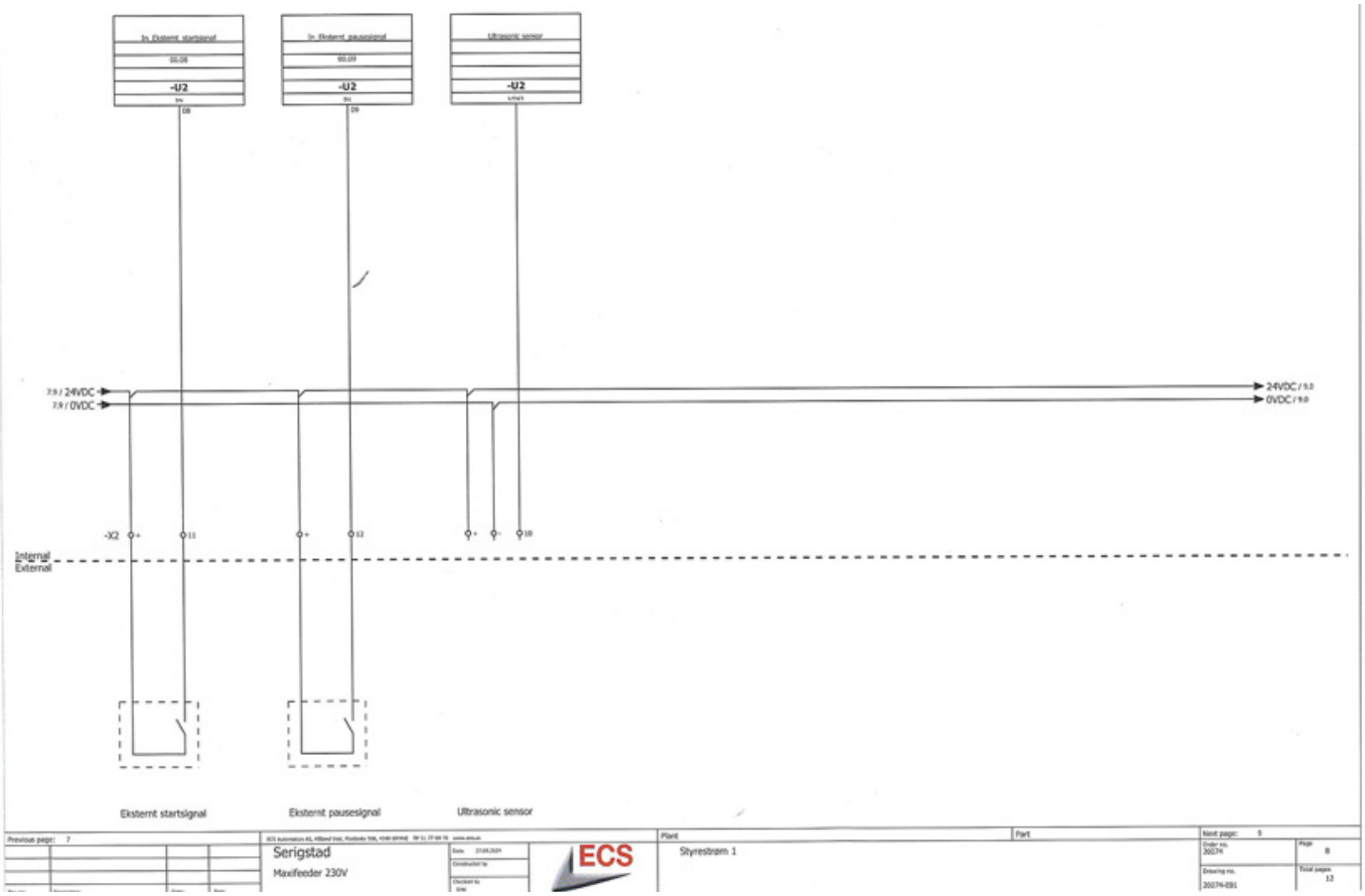

-F2
-V1
-FRQ1
POWER
0VDC / 6.0
XETH2 / 5.4
OMRON
3G3MX2-A8015-E
DRIVE
Digital input signals
Analog input signal
Pulse train
Digital output signals Relay output
Monitor Signal
Comms RS-485
-F4
-F5
-X1
Internal
External
-M2
M
3 ~
Bunnbelte
Serigstad
Maxifeeder 230V
ECS

CONNECTING

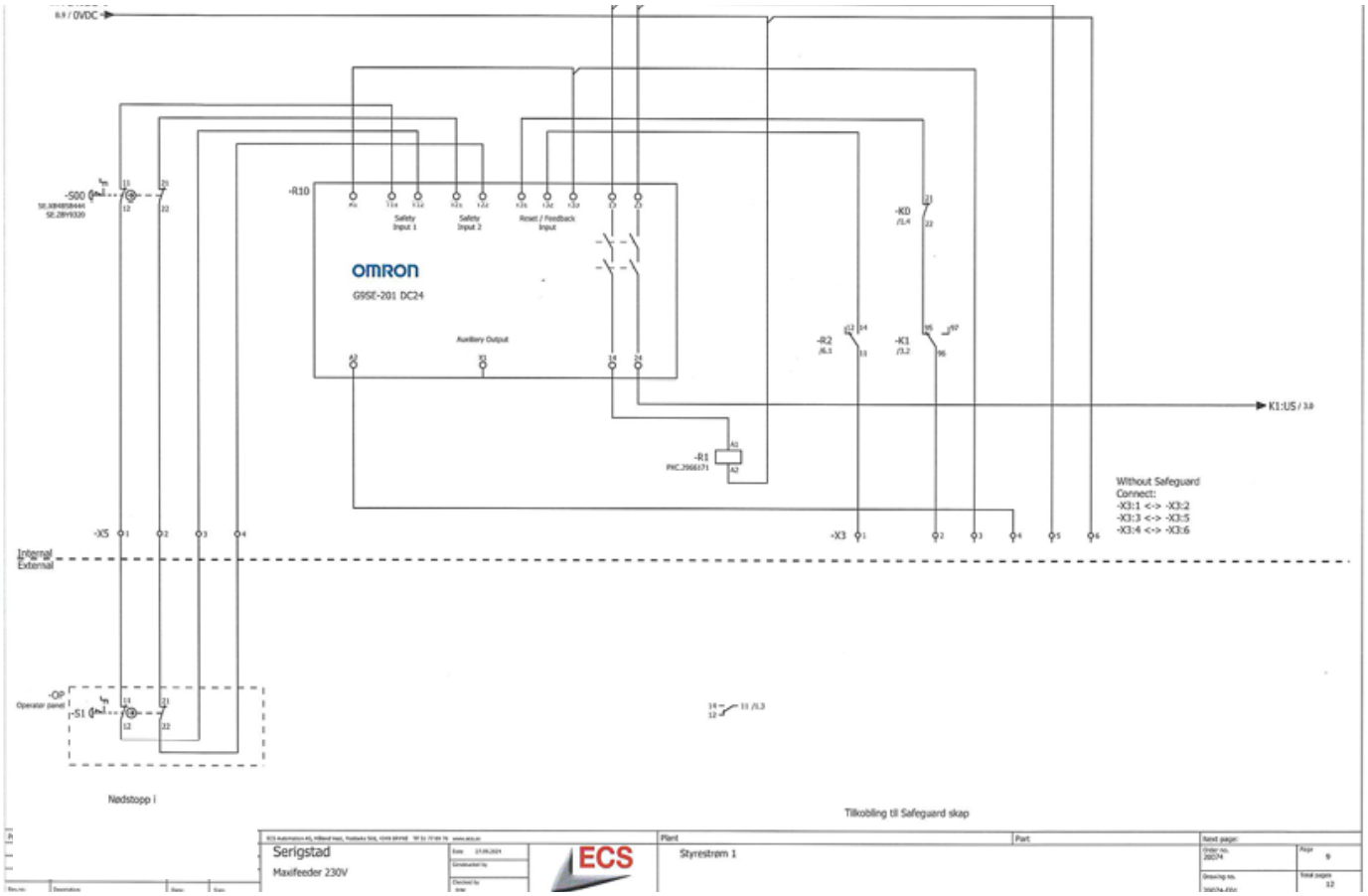

-U1
OMRON
S8VK-G06024
-OP
Operator panel
-U3
External
Internal
-X2
0VDC / 2.4
24VDC / 2.4
-U2
XPS
Power Supply
XETH1
XETH2
EtherNet/IP
EtherCAT
NX1P2-9024DT1
DIP switch
Battery connector
-U2#1
I/O power supply
(5 to 24 VDC)
-U4
eWON
Forsyningskort
til velecellekort
Switch
Serigstad
Maxifeeder 230V
ECS
Styrestrøm 1


-U2
-R2
4.6 / 0VDC
0VDC / 7.0
-X2
-U2#2
OMRON
SHLD
EXC+
EXC-
SIG+
SIG-
-X4
Internal
External
-H1
-H2
-H3
-H4
Interne indikasjonslamper
Velecelle
Serigstad
Maxifeeder 230V
ECS
Styrestrøm 1


-U2
-F6
-F5
-F4
-F3
-X2
Internal
External
-S2
-S3
-S4
-S5
Fotocelle front
Fotocelle bak
Rotasjonsvakt
(Strammevakt A)
Strammevakt B
Serigstad
Maxifeeder 230V
ECS
Styrestrøm 1


-U2
-X2
Internal
External
Eksternt startsignal
Eksternt pausesignal
Ultrasonic sensor
Serigstad
Maxifeeder 230V
ECS
Styrestrøm 1

CONNECTING



IMPORTANT!
All electrical work must be done by authorized personell!

INITIAL SETTINGS

The settings on the MaxiFeeder can be customised to suit every user, but are delivered from the manufacturer with the factory settings.

Before starting the machine for the first time, the settings should be checked to see if they match the factory settings shown below.

The settings can be safely changed before operating the machine for the first time.

SETTINGS INFORMATION

Minimum bottom belt speed speed: If it is too low, the feeding output rate will be very slow. If it is too high, the forage can block the knife drums and cause jamming and/or a increased power usage.

Current draw threshold: The maximum ampere allowed. If it is set too low the machine will not work as it should; the drums will stop when resistance from the forage gets too high. If it is set too high, it can knock out the power.

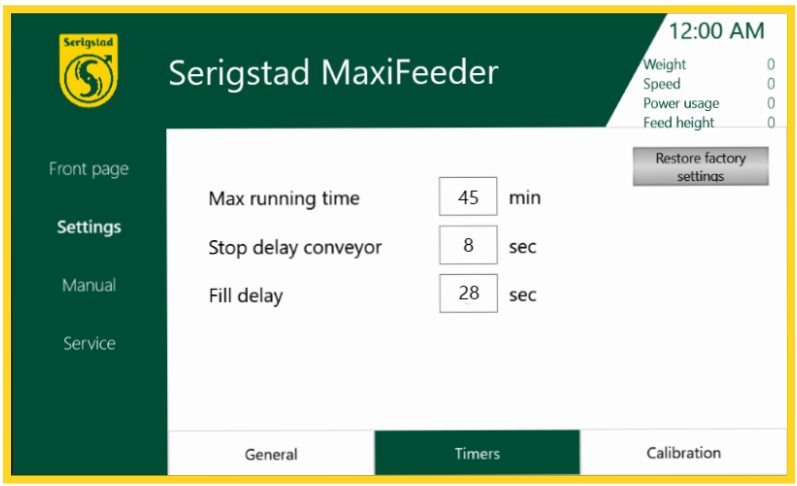


Figure 21 Screenshoot of settings - timers - numbers are examples, and not the factory settings

Factory settings:

Maximum operating time: 60 min

Conveyor overrun: 12 sec

Refill delay: 60 sec

SIDE LOADING

By removing the rear post and installing a short side panel, a side opening of approximately 2 meters can be created at the back of the machine. This allows the machine to be loaded from the side. Ensure that the photo sensors are positioned directly opposite each other so they can maintain signal alignment.

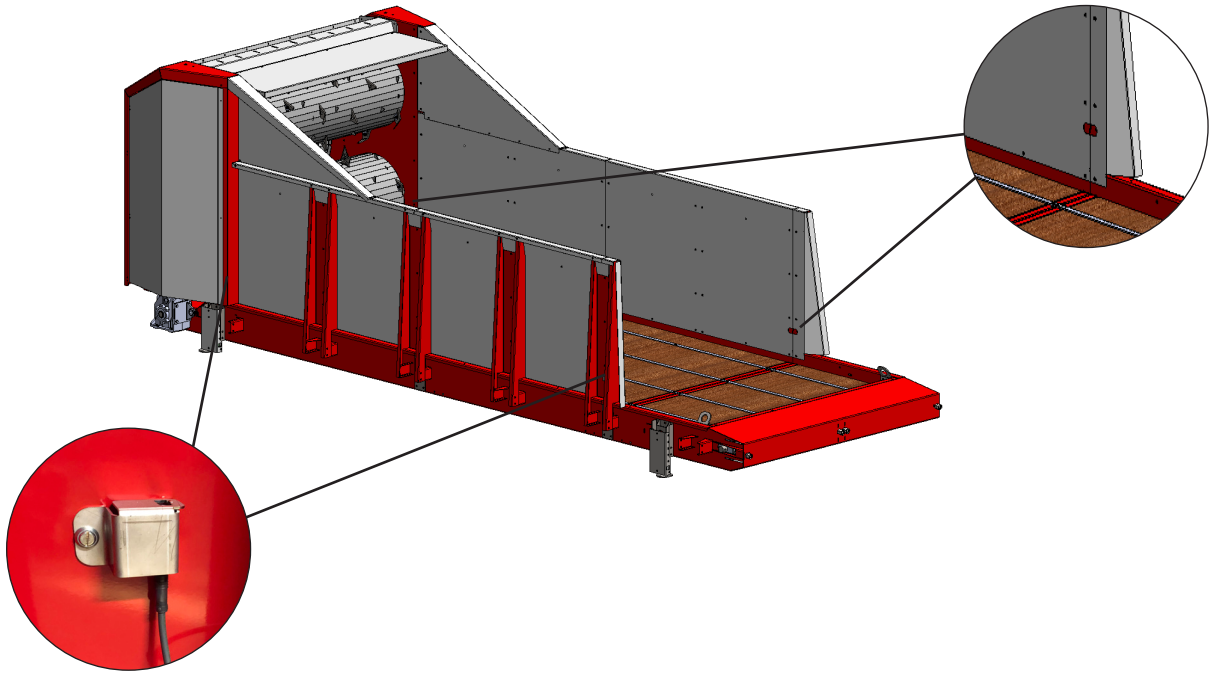


Figure 22 Photo sensor placement on MaxiFeeder

PHOTO SENSOR ADJUSTMENT

The photo sensors are positioned at the front and rear, on each side of the machine. The photo sensor mounts are equipped with a quarter-turn locking mechanism. Insert the mount into the slot, rotate the lock a quarter turn, and the photo sensor is installed.

The photo sensors detect when something is placed between them and can therefore control the machine during feeding and loading operations. When the machine is empty, the photo sensors should have a clear line of sight, and a green light indicates that the sensors are aligned.

When both LEDs on the photo sensor are lit, it indicates that the sensor has lost contact with its counterpart, and the control system will assume that the feed table is full.

TYPES AND PLACEMENT OF KNIVES

The MaxiFeeder is equipped with two knife drums, each containing 58 knives.
The plates in the drums are labeled “C.” and “C..”.

The MaxiFeeder uses two different types of knives distributed across the drums, as shown in the figure on the next page. The combination of right- and left-bent knives provides an optimal balance between feed cutting and discharge capacity. See the figure on the next page for the recommended knife configuration. Also note the direction of the bolt through the knives in Figure 24 (in Figure 23, the direction is random).

Correct knife type and placement are essential for optimal feeding performance and operational reliability. The choice depends on several factors, including the moisture content of the bale, operational safety, and the desired cutting length.

The best setup for your specific conditions can be achieved by using the standard configuration as a starting point and then adjusting according to operating conditions and the desired cutting performance.

Figure 23
Standard knife MaxiFeeder right- and left-bent.

Figure 24
Knife for dry matter MaxiFeeder right- and left-bent..

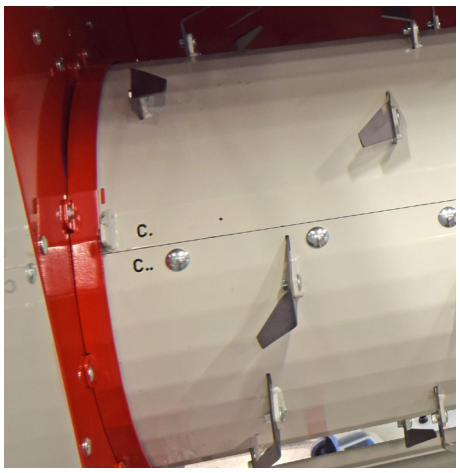


Figure 25
Detail of plate joint on the knife drum.

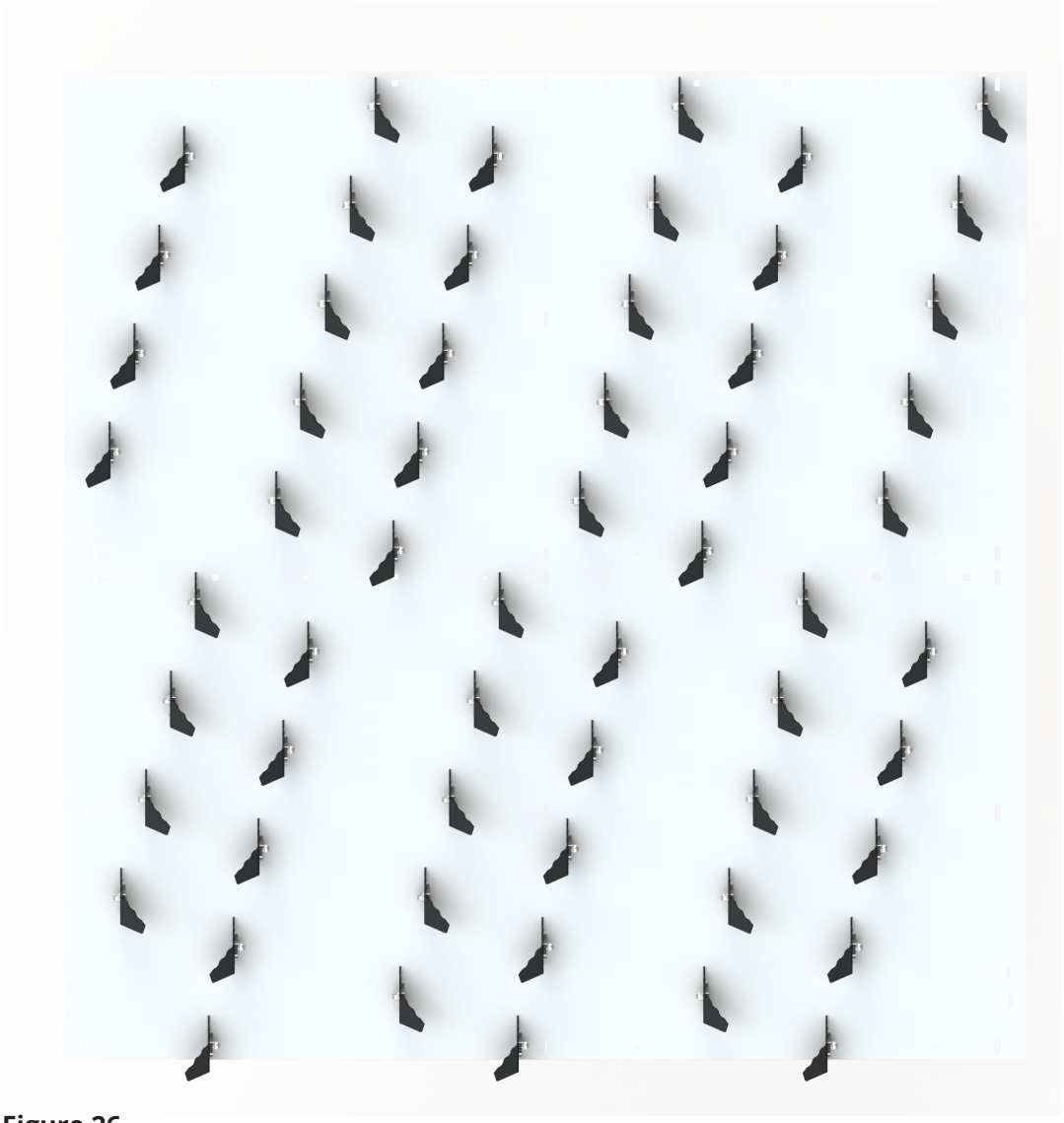


Figure 26
"Unfolded" knife drum with the standard knife configuration of 58 knives.
This distribution ensures smooth and balanced operation of the knife drum.

CHANGING KNIVES

The knives are inserted into the groove on the drum and secured with the supplied bolt and nut in the knife mount. Ensure that the rounded head of the bolt is positioned on the knife side to prevent feed from accumulating.

WARNING! Never hold the knife when loosening or tightening the bolts. Doing so can cause personal injury.

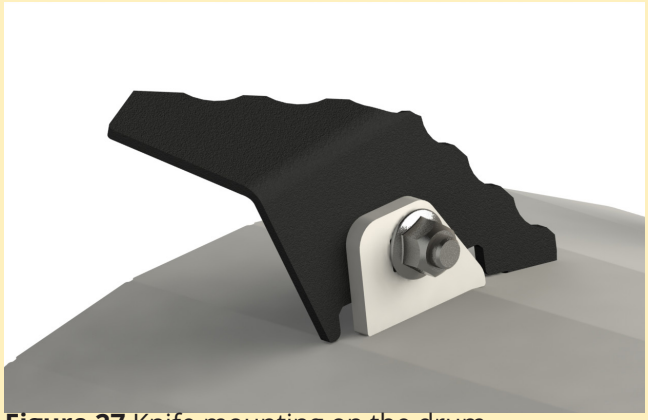


Figure 27 Knife mounting on the drum.

The MaxiFeeder is a reservoir systems with the option of a high-capacity cutting unit for producing feed for a distribution unit, such as the TopFeeder.

The solution is modular and can be configured with or without a cutting unit and with varying hopper capacities. PLC-controlled sequence management and monitoring allow for automatic operation via an external start/stop signal from a distribution unit like the TopFeeder or similar.

The MaxiFeeder offers strong cutting performance with a consistent feed output, making it well-suited for direct feeding to a belt feeder, conveyor, distribution wagon, or similar system.

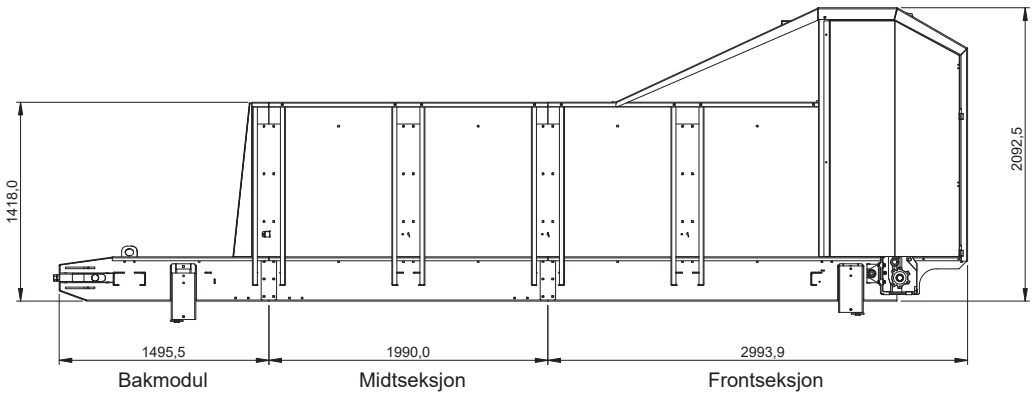


Figure 28 MaxiFeeder with measured sections

The MaxiFeeder consists of a minimum of one rear section and a front section, totaling 4.5 meters. From there, the machine can be extended with 2-meter middle sections, up to a total length of 14.5 meters.

The cutting unit is mounted on the front section.

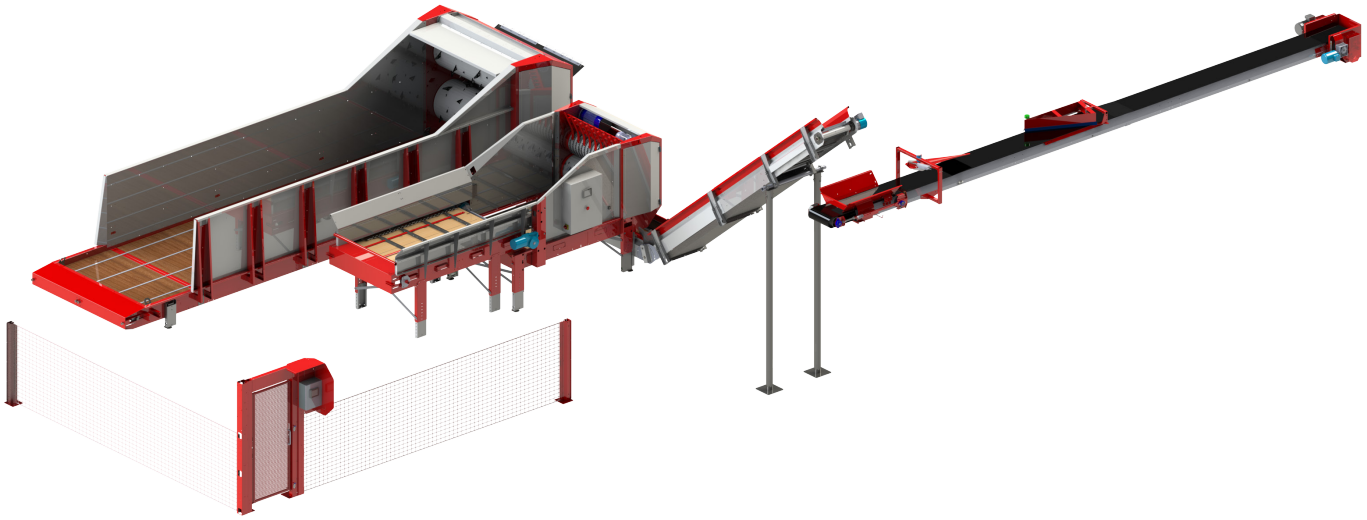


Figure 29
From the left: MaxiFeeder, ExactFeeder II, angled conveyor og TopFeeder.

AUTOMATIC FEED RATE CONTROL

The MaxiFeeder with cutting unit can monitor and regulate the feed flow from the machine to ensure consistent and accurate feeding. This can be achieved using either load cells or an ultrasonic sensor.

When using the ultrasonic sensor, the feed height on the conveyor belt under the cutter is monitored. If the amount deviates from the desired quantity, the speed of the bottom belt is adjusted to correct it. When using load cells, the feed flow is calculated in kg/s and regulated to the desired value.

CURRENT MONITOR (AMPERE GUARD)

The ampere guard measures the current consumption of the cutting unit and adjusts the conveyor belt movement if the load on the cutter becomes too high. The threshold and maximum values for the ampere guard can be adjusted under “Settings.”

If the current draw of the cutter reaches the threshold value, the speed of the conveyor belt will be reduced to lower the load on the cutting unit.

If the current draw exceeds the maximum value for a certain period, the movement will stop for 5 seconds and may reverse the conveyor belt. If the current does not drop below the maximum within 5 seconds, the cutter will stop and trigger an alarm.

USING THE MAXIFEEDER

Before using the MaxiFeeder it is important to read the user manual thoroughly; this will lower the risk of operator error, and prolong the lifetime of the machine.

The operator should familiarize themselves with the how to properly operate the machine, common errors that might appear, and in which scenarios it will be necessary to use PPE.

NOTE!

Any work done in the electrical cabinet require authorized personell!

The rotating knife drums may cause matter to be ejected from the machine, therefore it is important to not put unsuitable materials into the machine.
Unsuitable materials can be the following:
Inorganic matter
Organic matter above a certain hardness

CONTROL
The MaxiFeeder can be configured as a slave unit, receiving start/stop signals from a master control system. This could, for example, be a belt feeding system with its associated control or similar. The MaxiFeeder operates in sequences during startup and shutdown. During operation, the knife drum is monitored by a current guard, which regulates or stops the operation as needed.

STARTUP SEQUENCE
- Alarm and warning lights are activated for 10 seconds.
- The conveyor belt reverses for 2 seconds.
- The conveyor starts.
- The knife drums start (takes 5 seconds).
- The conveyor belt starts.

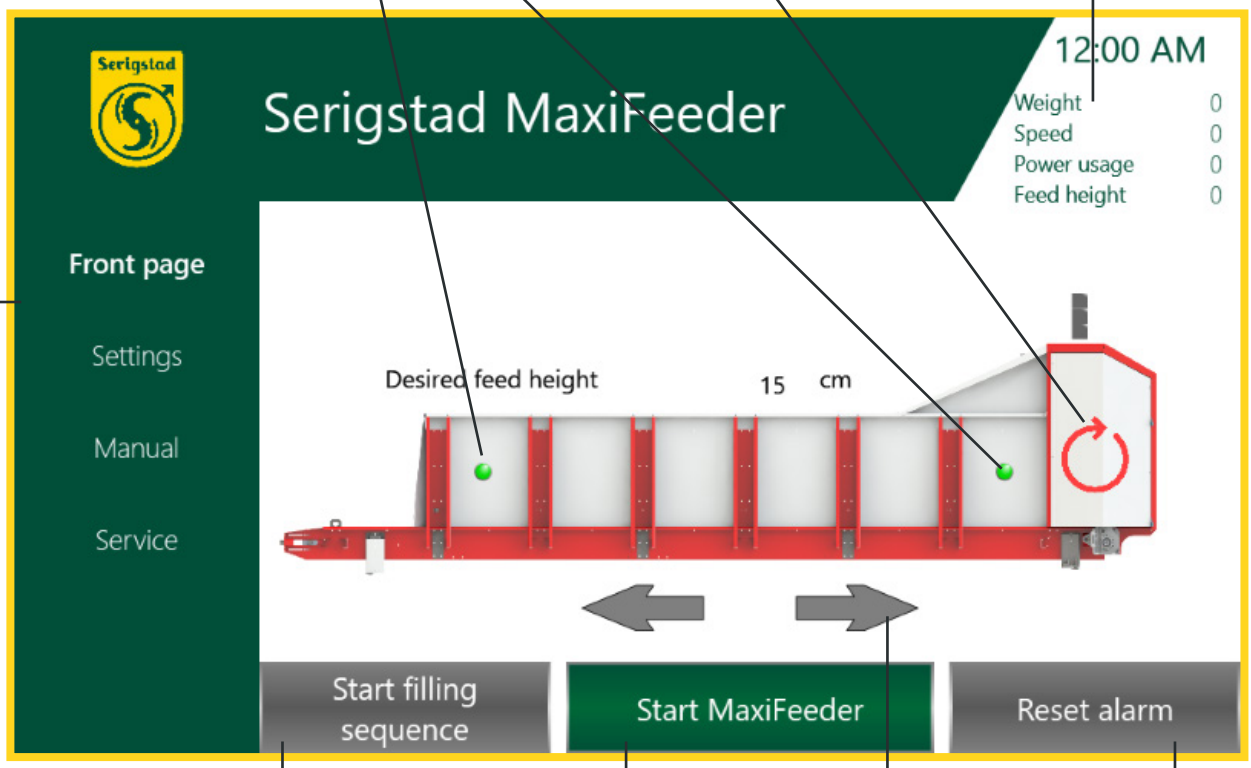
The startup sequence takes approximately 30 seconds from the signal being given until feed is delivered from the machine.

MAIN SCREEN

PHOTOCELLS
Green: Chamber is empty
Grey: Feed in chamber

CUTTING UNIT
Red symbol: Cutting unit is not running.
Green symbol: Cutting unit running.

STATUS
Overview of relevant values



ARROWS
Indicating conveyor belt direction while running.

MENUS
Menus for settings, manual, and service

START FILLING
Press to start filling sequence

START MACHINE
Activate to start the machine in automatic mode.

RESET ALARM
Press to reset alarm.

Figure 30 Main screen MaxiFeeder with functions.

STOP SEQUENCE

- Operation of the conveyor belt is stopped.
- The knife drums are stopped.
- Two seconds after the knife drums have stopped, the conveyor belt reverses for 2 seconds
- Side feeders/conveyor belt stop unless an overrun has been set.

  The stop sequence takes approximately 30 seconds. Normally, the feed flow ceases after 10 seconds.

FILL SEQUENCE

- The conveyor belt reverses until any remaining feed is detected by the rear photo sensor
- The remaining feed is then moved forward slightly.
- When new feed is loaded in front of the rear sensor, a timer starts to allow time for removing plastic and netting. This timer can be set to the desired duration in the settings.
- The conveyor belt then runs forward until the feed is cleared. The sequence repeats until the front photo sensor detects feed, or “Stop Filling” is pressed on the screen. The feed will then be advanced to the front sensor to be ready for feeding.

MAXIFEEDER

A signal on input 11 of terminal block X2 gives the machine a feeding command. The startup sequence and cutting unit are activated.

A signal on input 12 of terminal block X2 cancels the pause signal. The conveyor belt starts running.

SETTINGS - GENERAL
Select how the feeding should be regulated: ultrasonic sensor or load cells.

Enter the desired feed height for the ultrasonic sensor or the target weight for the load cells. This sets the parameters for regulating the machine during feeding.

Choose which conveyor type is used: chain conveyor or belt conveyor.

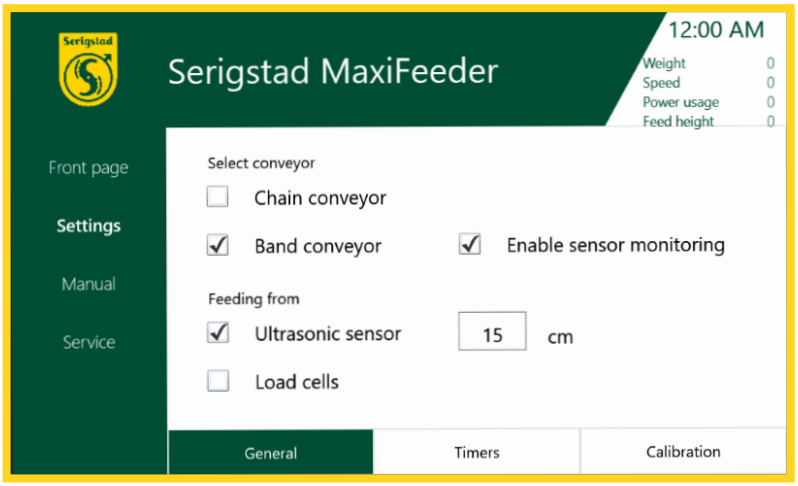


Figure 31 Screenshot settings - general

SETTINGS - TIMERS
This menu allows you to adjust timers.

Maximum operating time: To prevent the machine from running indefinitely in case of a malfunction, you can define a maximum operating time. If the machine reaches the maximum operating time during a single start signal, the feeding process will stop.
Conveyor overrun: This function allows the conveyor to empty remaining feed during the stop sequence. The value set here determines how long the conveyor will continue running after the stop sequence has been initiated. During startup, the time from when the MaxiFeeder stops until the conveyor is empty is measured. This forms the basis for setting the conveyor overrun time.

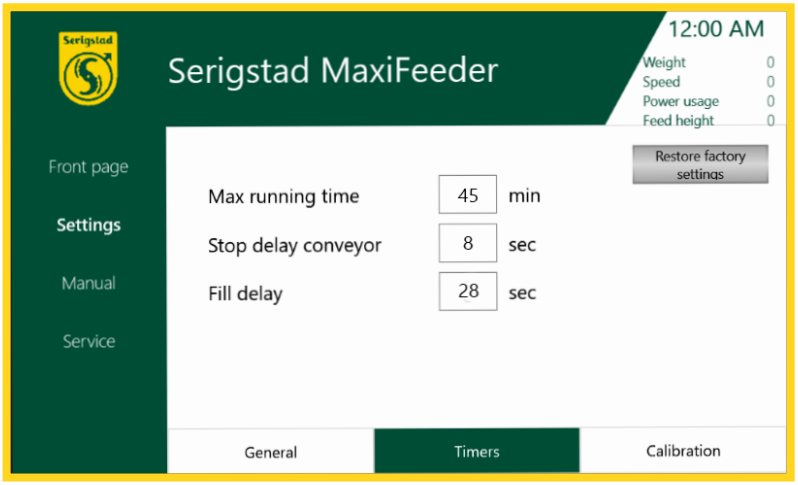


Figure 32 Screenshoot settings - timers

Refill delay: The number of seconds the conveyor belt should wait before starting during loading.

SETTINGS CALIBRATION

Menu for calibration of load cells and feed meter, as well as setting threshold values for current draw and bottom belt speed.

Current draw threshold: Set the desired value at which the feed rate will be limited during operation.

Minimum bottom belt speed: Cannot be set below 10 Hz to ensure sufficient backpressure against the knife drum.

Zeroing load cells or feed meter: Performed when the cutter or conveyor is empty of feed, to set the current level as the zero reference.

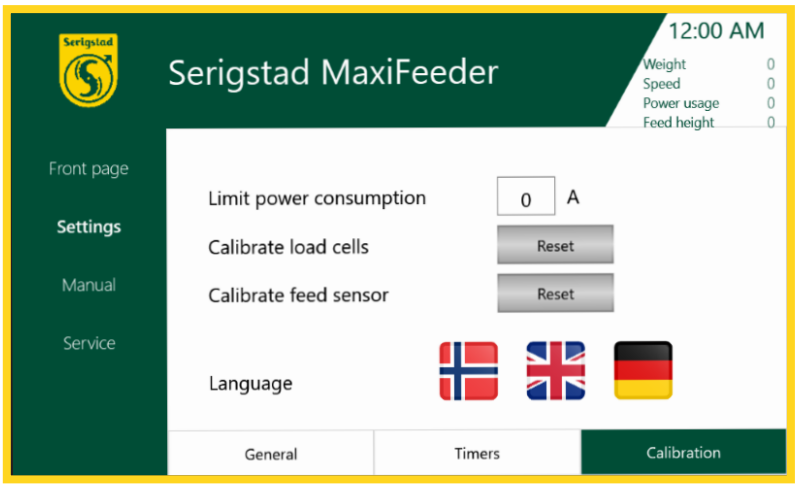


Figure 33 Screenshot settings - calibration

MANUAL

In this screen, the various functions can be operated manually.

The speed of the bottom belt during manual operation can be adjusted by pressing the value. 0 Speed

Activate the conveyor if it is to be controlled by the MaxiFeeder.

Enable

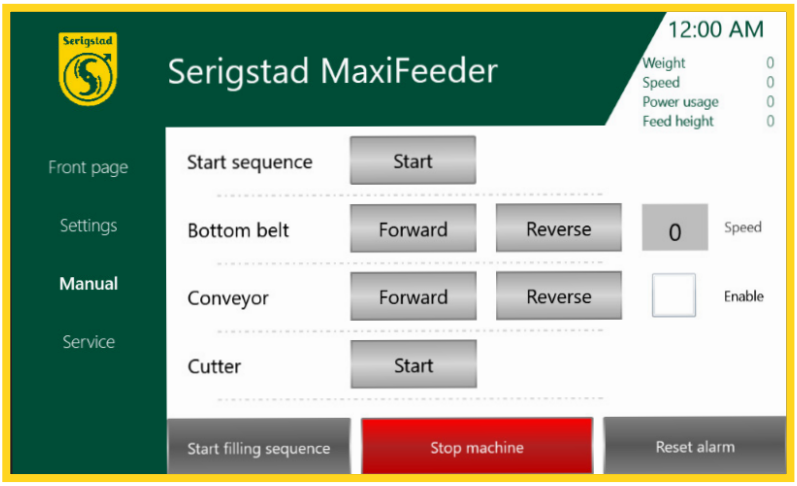


Figure 34 Screenshot manual.

SERVICE
This screen provides an overview of operating time and the status of service intervals.

After performing service, confirm by holding Service performed for 3 seconds.

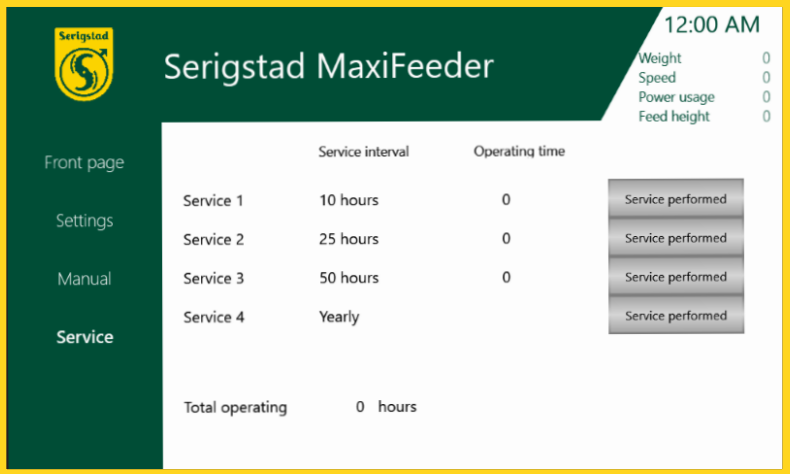


Figure 35 Screenshot service.

Factory settings:

Maximum operating time: 60 min

Conveyor overrun: 12 sec

Refill delay: 60 sec

APP CONTROL

The MaxiFeeder can be optionally delivered with app control. The machine connects to the local network (Wi-Fi), allowing you to monitor and control it from anywhere—whether in the barn, on the couch, or even on the train.

SETUP ON PHONE/TABLET

App control requires two applications, which must be downloaded to your tablet or smartphone.
Supported operating systems are iOS and Android.

eCatcher establishes a VPN tunnel to the machine, providing secure access over the Internet from anywhere.

HMI Remote Viewer functions as a screen and control panel, just like the display mounted on the machine. It can be used on iOS devices and Android tablets.

VNC Viewer is equivalent to HMI Remote Viewer for Android smartphones.

Download on the App Store

eCatcher

HMI Viewer

GET IT ON Google Play

eCatcher

VNC Viewer

Open eCatcher and log in using the username and password provided by Serigstad.

Select the relevant machine and press “Connect.”

Open HMI Viewer or VNC and tap the + icon. Select “NA-series” and give the connection a name (e.g., MaxiFeeder). Enter the IP address 172.21.20.10 and port 5900, then press “Save.”

The app control is now ready for use.

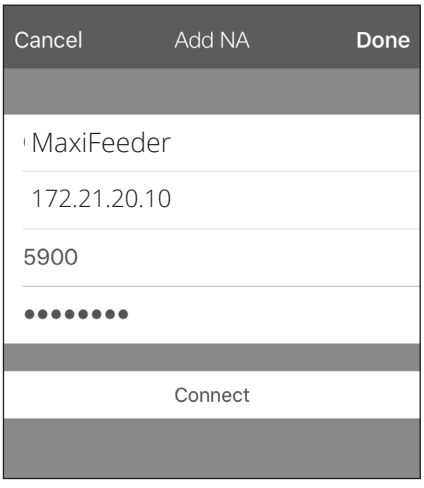
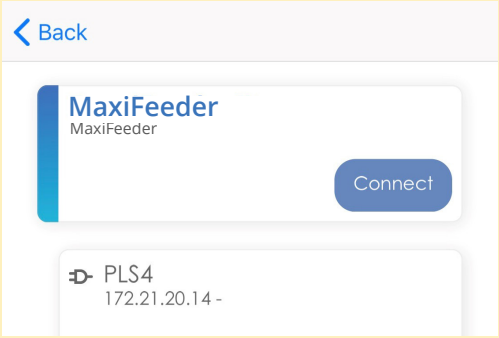


Figure 36 Login eCatcher.

USING APP CONTROL:
Once the initial setup is complete, the app control is used as follows:

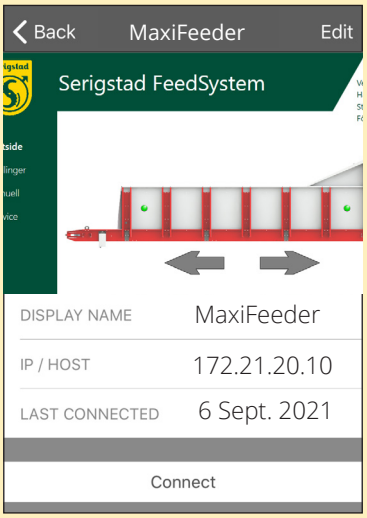
1 Open eCatcher (log in if required).

2 Select the relevant machine and press “Connect.”



3 Open HMI Viewer or VNC

4 Give the connection a name (e.g., MaxiFeeder). Enter the IP address 172.21.20.10 and port 5900, then press “Save.”



5 The screen should now be mirrored in the app and can be used to control the machine.

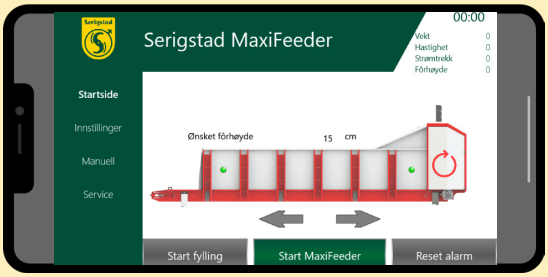


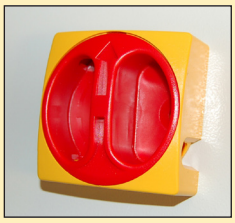
Figure 37 Setting up app control

MAINTENANCE

Proper maintenance extends the machine's lifespan and contributes to trouble-free operation. Regular inspections also provide economic benefits, including lower energy consumption, reduced repair costs, and increased productivity.

Ensure proper PPE is available and that the operator is familiar with how to maintain the machine.

THINK SAFETY!
Turn off and lock the main power switch before performing maintenance, repairs, or adjustments on the machine!



CRUSHING RISK
After performing maintenance on the equipment, the side covers for the drive system must be closed before startup.

ELECTRICAL HAZARD
Ensure that the control cabinet door is always kept closed during operation.

After 24 hours of operation, a follow-up inspection of certain components should be carried out, as paint may wear off and to ensure the machine is functioning optimally.

24-HOURS CONTROL

- Check the tension of the conveyor belt
- Inspect the condition of the knives. Loose knives must be secured to prevent damage to the drum.
- Lubricate the specified points using a grease gun.
- Check the oil level in the gearboxes.

LUBRICATION POINTS

The MaxiFeeder is equipped with lubrication points at the front of the machine, see Figure 38.
At the rear, there are lubrication points on each side of the shaft, see Figure 39.

Figure 38 Centralized lubrication.

TENSIONING THE CONVEYOR BELT

The conveyor belt must be checked regularly, as paint wears off and the belt stretches due to normal use.

The machine has a continuous shaft for the bottom belt at the front and a split shaft for tensioning at the rear. It is therefore important to tighten both sides equally. The conveyor belt is tensioned by tightening the nuts located at the rear of the machine.

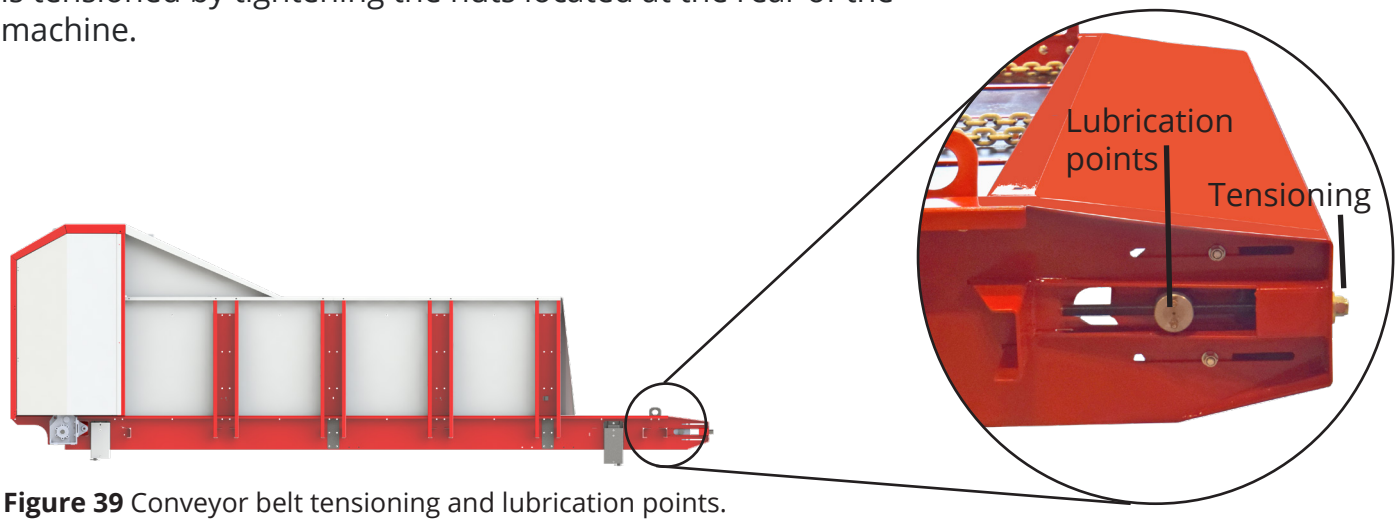


Figure 39 Conveyor belt tensioning and lubrication points.

MOTOR AND GEARBOX

Check that there is oil in the gearbox sight glass. Replace the oil and refill with the correct amount if the level drops below the sight glass.

Recommended oil: Omala 220
Motor – knife drum: 4.95 liters of oil
Motor – bottom belt: 4.25 liters of oil

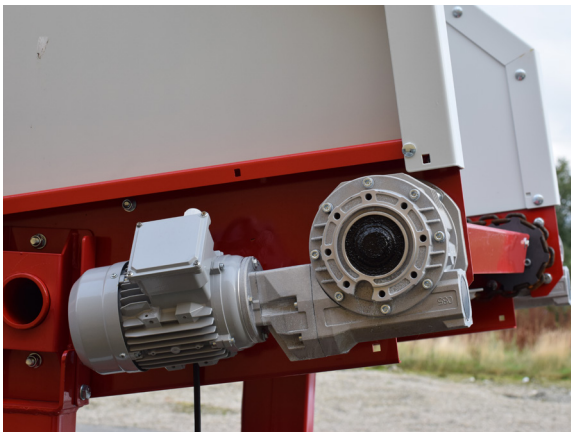


Figure 40 Motor and gearbox for conveyor belt.

NOTE!
Wear correct PPE when changing knives.
Wear safety goggles when grinding knives.
Be cautious – consider the risk of fire.

KNIVES
The knives are the “heart” of the machine. Ensure that all knives are intact at all times. Damaged knives must be replaced immediately.

Knives should be inspected after approximately 30 round bales, depending on the type of grass and the amount of stones in the bales. The edges can be lightly sharpened on the outside with an angle grinder. Excessive grinding can damage the knife’s hardening.

Worn knives cause unnecessary wear on the machine—replace knives in a timely manner!

The placement and distribution of the knives are also important to prevent excessive wear on the knife drum and to ensure efficient and effective cutting of the feed. Follow the instructions on page 34.

Figure 41 MaxiFeeder with knives for dry matter on the left side and standard knives on the right side.

STANDARD KNIFE
Standard knives are used in cases where the feed has some variation in dry matter content.

The standard knife features a wavy cutting edge to capture as much feed as possible with each rotation.

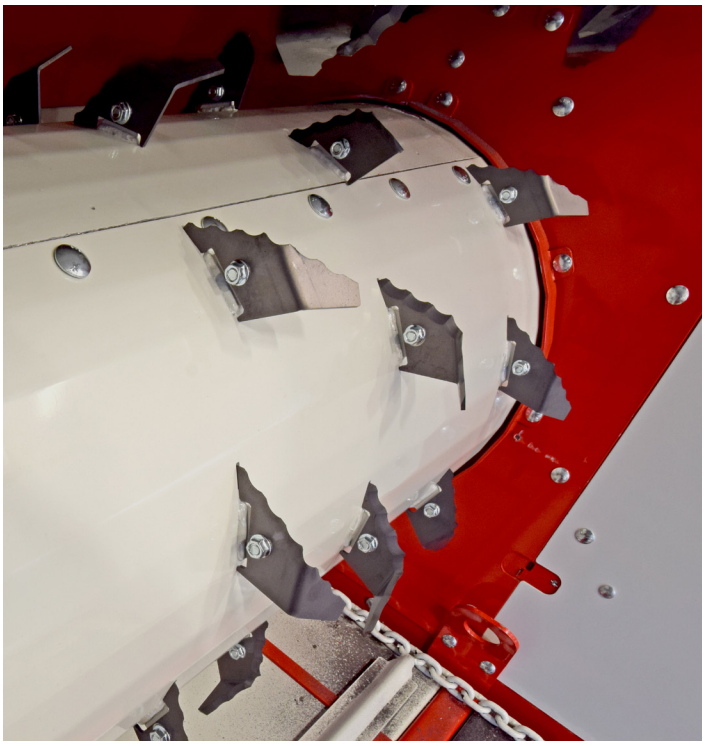


Figure 42 Standard knife.

KNIFE FOR DRY MATTER
Dry-matter knife is used when the feed has a dry matter content of 30% or higher.

The dry-matter knife has a smooth cutting edge, allowing the feed to pass the knife more easily. This reduces the risk of feed jamming in the cutting unit.

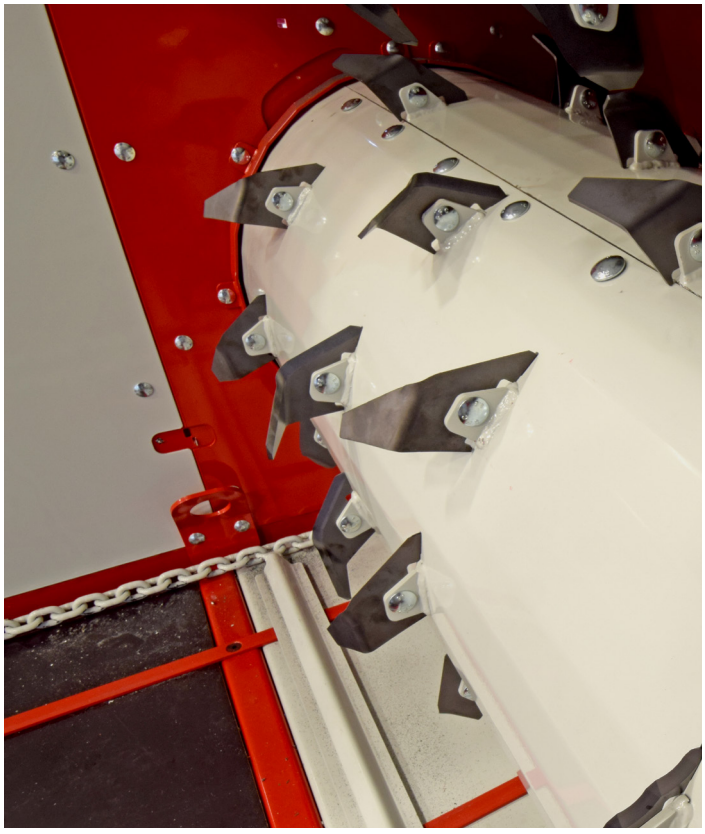


Figure 43 Knife for dry matter mounted on the knife drum.

TROUBLESHOOTING

Issue	Possible reason	Try the following
Motor protection for the operation of the bottom belt or knife drum trips under load.	1. High voltage drop	1. Check power while running. Contact an electrician if power-drop goes above 20%.
	2. Motor protection set too low	2. Change in settings; check if default value, or go above default.
	3. Conveyor belt minimum speed too high	3. Lower minimum speed in settings (see standard settings)
	4. Wet grass is too heavy for hte knife drums	4. Increase maximum allowed ampere
Won't start	1. Check if the emergency stop button has been pressed.	1. Release the emergency stop by turning the button.
	2. Motor protection has tripped; check the status messages on the display.	2. Check the motor protection and reset the alarm in the control cabinet.
	3. Frequency converter error	3. Change values in settings (check user manual)
Extended operating time for chopping a round bale.	1. Worn knives	1. Check the knives using a knife template and sharpen the cutting edge if necessary. Replace worn knives.
	2. Conveyor belt maximum speed too low	2. Adjust maximum speed higher
	3. Conveyor belt minimum speed too low	3. Adjust minimum speed higher
	4. Bale rolls away from drums	4. Turn bale, flat side down
Starting problem	1. Reverse speed (on starting) too low	1. Adjust the timer values. If the forward feed time is too short or the stop time is too long, problems with bale rotation may occur.
	2. Ampere setting too low	2. Increase the ampere setting.

TROUBLESHOOTING

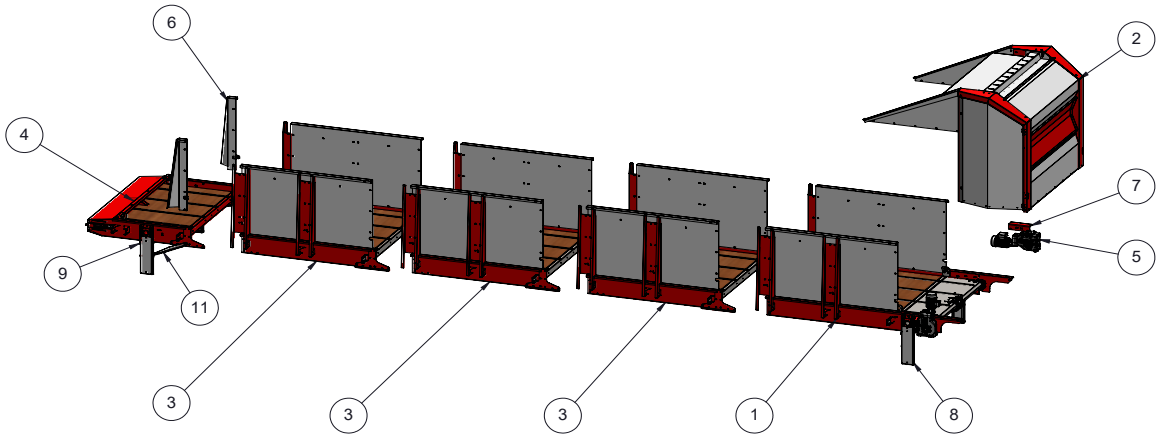
Issue	Possible reason	Try the following
Jamming occurs in the cutting unit, causing the motor protection to trip.	1. Worn knives 2. Conveyor belt maximum speed too high 3. Conveyor belt minimum speed too low 4. Knife drum ampere settings too low 5. Long, dry grass jams the top knife drum	1. Check the knives. Sharpen or replace them as needed. 2. Lower maximum speed in settings. 3. Increase minimum speed in settings. 4. Increase ampere in settings. 5. Remove 50% of the knives on top knife drum.
Feeding of a new bale does not start.	1. Dirt on photo sensors or incorrect positioning. 2. Check status in display	1. Check the photo sensors for dirt and ensure they are aligned in the same hole pattern. 2. Resolve error and remove error message.
Feeding won't start	1. Transporter error 2. Check status bar for error code 3. Check that the right mode is selected.	1. Check the sensors for conveyor belt tension. 2. Resolve error 3. Set to correct mode

TROUBLESHOOTING

Error message	How to resolve
Error: Emergency stop	Check what triggered, resolve issue. Release emergency stop button, reset alarm
Error	Try to reset alarm, check for any visible issues.
Motor protection triggered	See troubleshooting for possible reasons causing the triggering, reset alarm. If that does not resolve it, contact supplier
Error: Frequency drive	See troubleshooting for possible reasons causing the triggering, reset alarm. If that does not resolve it, contact supplier
Cutter load too high	See troubleshooting for possible reasons causing the triggering, reset alarm. If that does not resolve it, contact supplier
Perform X hour/yearly service	Reset alarm, perform yearly service/regular service in X hours
Feed belt empty	Fill chamber, reset alarm. If chamber full, check sensors.
Chain out of position	Check if conveyor belt is blocked/not in position, resolve issue. Reset alarm
Error: Rotation conveyor	Check for blockage on conveyor, resolve. If no visible issue, check sensors. Reset alarm
Error: Cutter	Check for blockage in cutter, resolve. Check for tripped fuses, resolve. Reset alarm
Conveyor error	Check for blockage on conveyor, resolve. If no visible issue, check sensors. Reset alarm
Alarm	Reset alarm

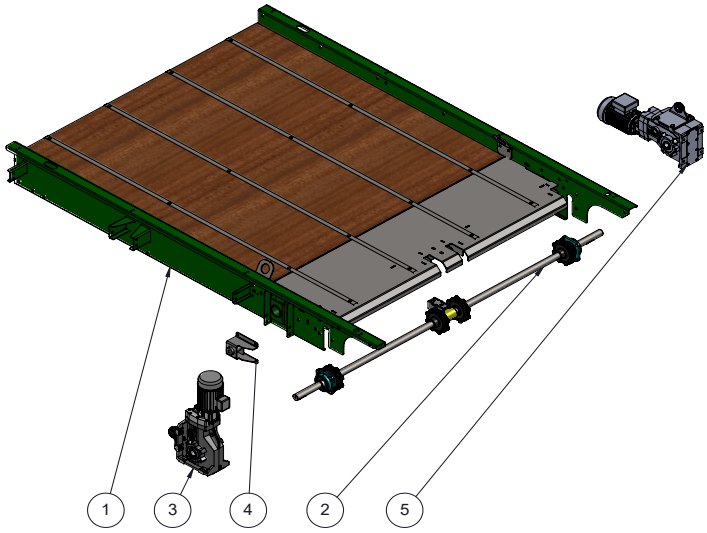
SPARE PARTS

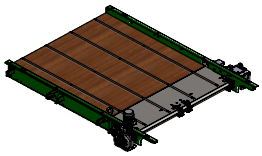
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	19170	Komplett frontramme magasin	1
2	19100	Frontseksjon MaxiFeeder	1
3	19160	Komplett midtseksjon	3
4	19110	Komplett bakseksjon magasin	1
5	19211	M_X84C_C_349,30_-F_BR_N_A_-R_D_B3.3d Motor H side	1
6	19215	Bakre endeplater med sensorholder	1
7	19063	Motorbrakett	1
8	71052	Justerbar kombifot nr 2	4
9	19278	Stag for føtter MaxiFeed	4
10	19277	Speilvendt skråstag	1
11	19276	Skråstag for bein	1



Material:	Thickness:	Surface treatment:	
Tolerance not specified according to: NS-1430:	Sheet scale: 1:100	Drawing number: 19220	Revision: T2
Designed by: 25.05.2021			
Helge	Weight: 2945.663	Projection: A3	Komplett kutter med xx seksjoner
Serigstad			
Content in:	Project:	Replaced by:	

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	19180	Montert frontramme	1
2	19200	Drivlinje med aksel og kabelarhjul	1
3	19097	_M_X84C_C_821,70	1
4	71125	Sveist motorfeste	1
5	19212	M_X84C_C_349,30_-F_BR_N_A_-R_D_B3.3d Motor H side	1

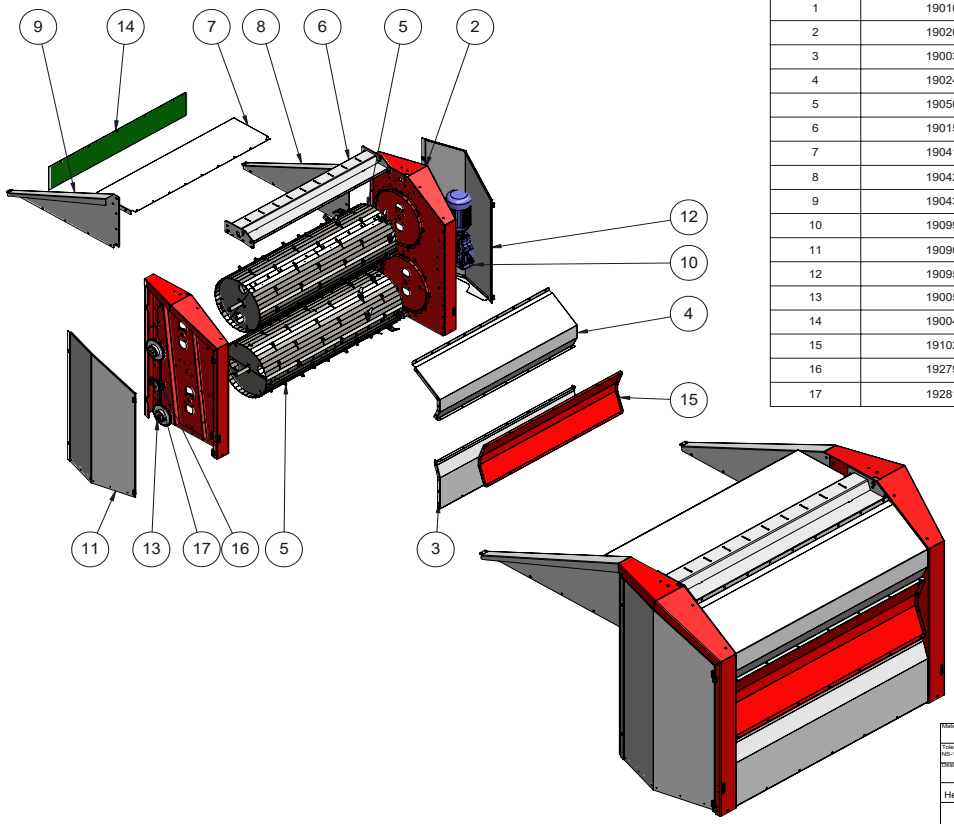




En motor benyttes på størrelser opp til 2 seksjoner.
Over 2 seksjoner, benyttes 2 motorer.

Material:	Thickness:	Surface treatment:	
Tolerance not specified according to: NS-1430:	Sheet scale: 1:20	Drawing number: 19170	Revision: T3
Designed by: 19.01.2026			
Helge	Weight:	Projection: A3	Komplett frontramme magasin
Serigstad			
Content in:	Project:	Replaced by:	

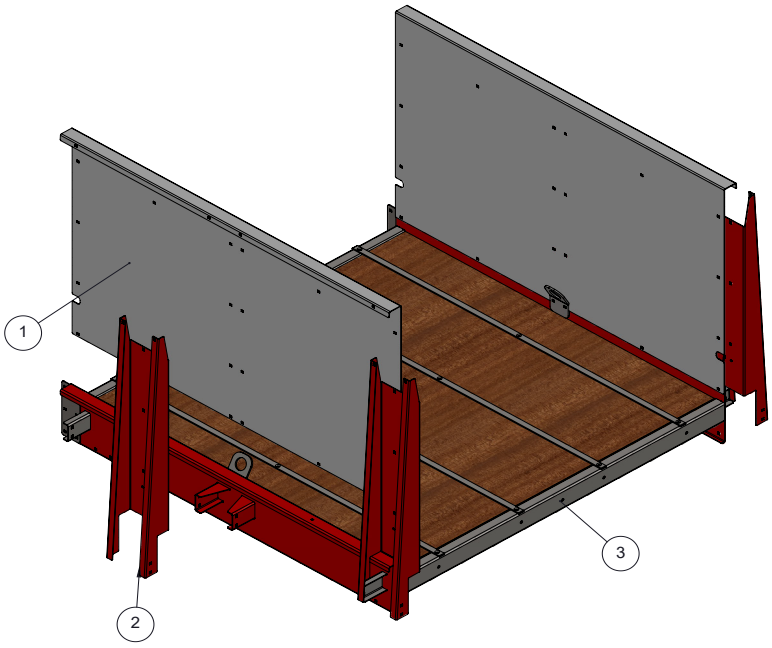
SPARE PARTS



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	19010	Montert høyre front sideplate	1
2	19020	Montert venstre front sideplate	1
3	19003	Nedre frontplate	1
4	19024	Topp frontdeksel	1
5	19050	Komplett montert nedre knivtrommel	2
6	19015	Sveist topp grind	1
7	19041	Topp innføringsplate	1
8	19042	V. skråplate for kutteseksjon	1
9	19043	H. skråplate for kutteseksjon	1
10	19099	SW-Description@Part4.SLDPRT	1
11	19090	Montert H sidedeksel	1
12	19095	Montert V sidedeksel	1
13	19005	Tannhjul 30 tanns m taperlock	2
14	19004	PVC skjørt	1
15	19102	Front plate	1
16	19279	Strammebrakett for kjede	1
17	19281	Strammehjul MaxiFeeder	1

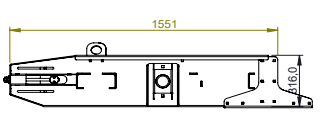
Material:		Thickness:	Surface treatment:
Tolerance not specified according to: NS-1430:		Sheet scale: 1:50	Drawing number: 19100
Designed by: Helge	21.05.2021	Weight: 975.55	Projection: A3
Serigstad			Revision: T2
Content in:	Project:	Replaced by:	Frontseksjon MaxiFeeder

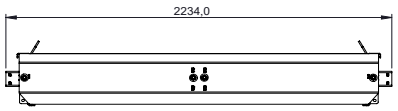
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	19156	Sideplate	2
2	19157	Støtte for sideplater	4
3	19150	Montert midtseksjon	1



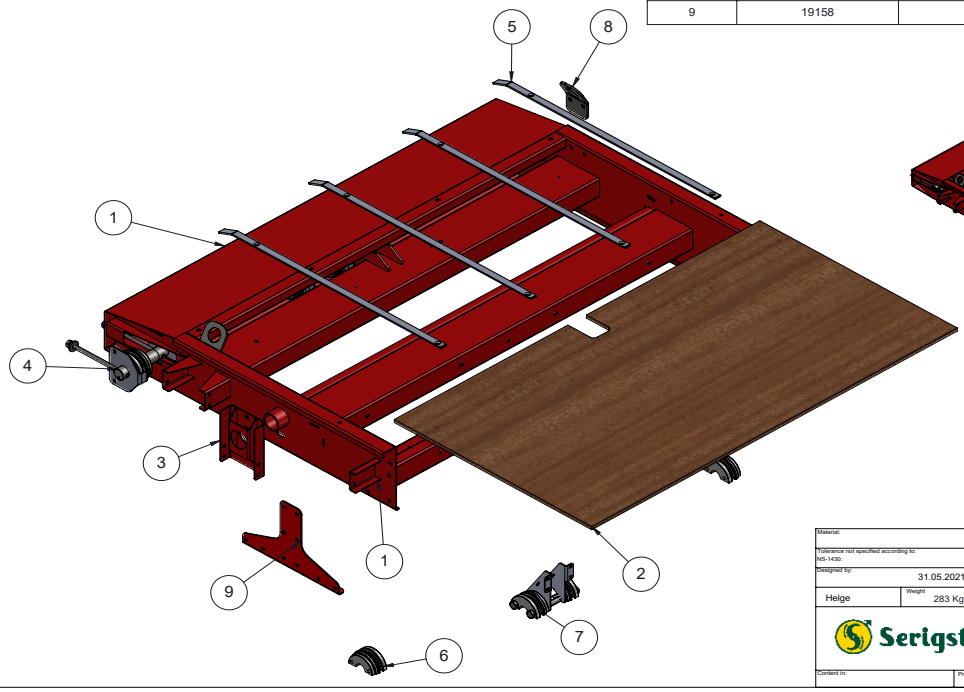
Material:		Thickness:	Surface treatment:
Tolerance not specified according to: NS-1430:		Sheet scale: 1:20	Drawing number: 19160
Designed by:	13.08.2019		Revision: T2
	Weight: 353.443	Projection: A3	
Serigstad			Komplett midtseksjon
Content in:	Project: Heavy Duty Kutter	Replaced by: Helge	

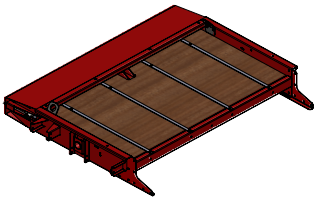
SPARE PARTS





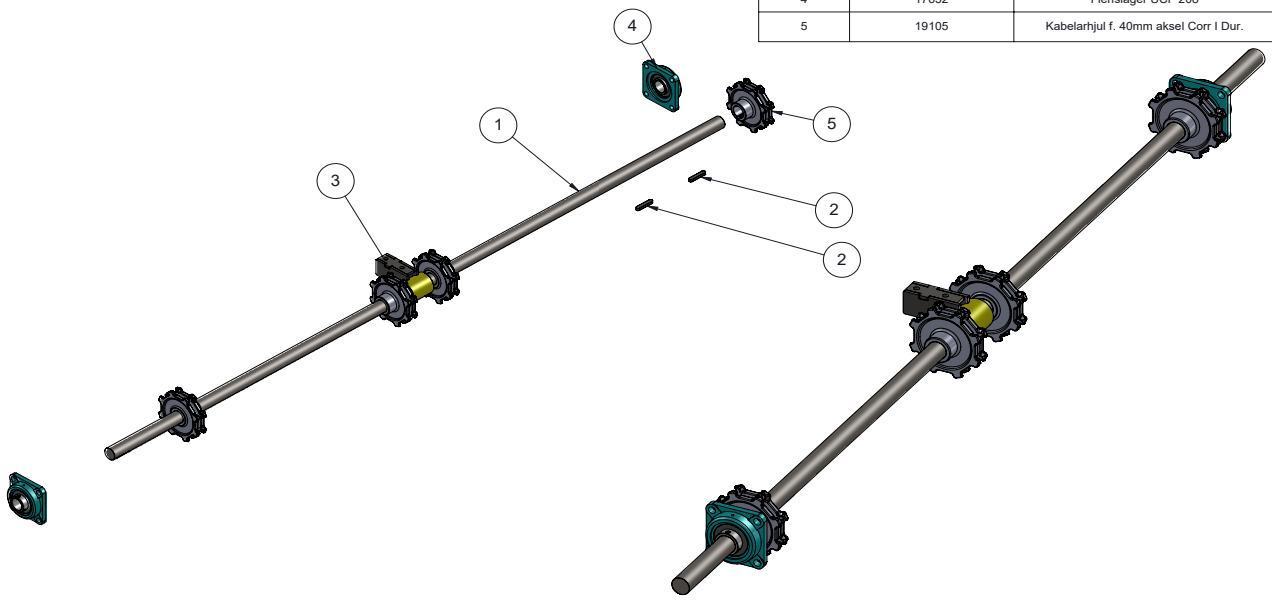
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	19115	Sveist bakseksjon magasin	1
2	19126	Bakre bunnplate vannfast 15 mm	1
3	19125	Sveist beinfeste	2
4	19135	Stramme aksel komplett	2
5	19132	Slitelist for bakseksjon	4
6	19141	Plast halvdel støtterull	2
7	19140	Monterte midtre støtteruller	1
8	19203	Heiseøre	2
9	19158	Skjøtestykke	2

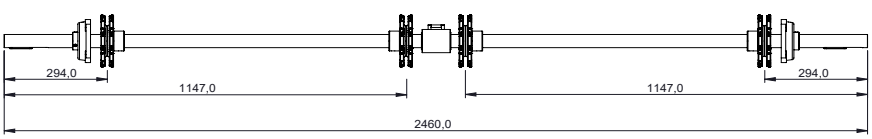




Material:		Thickness:	Surface treatment:
Tolerance not specified according to: NS-1430:		Sheet scale: 1:20	Drawing number: 19110
Designed by: 31.05.2021			Revision: T2
Helge	Weight: 283 Kg	Projection: A3	Komplett bakseksjon magasin
Serigstad			
Content in:	Project:	Replaced by:	

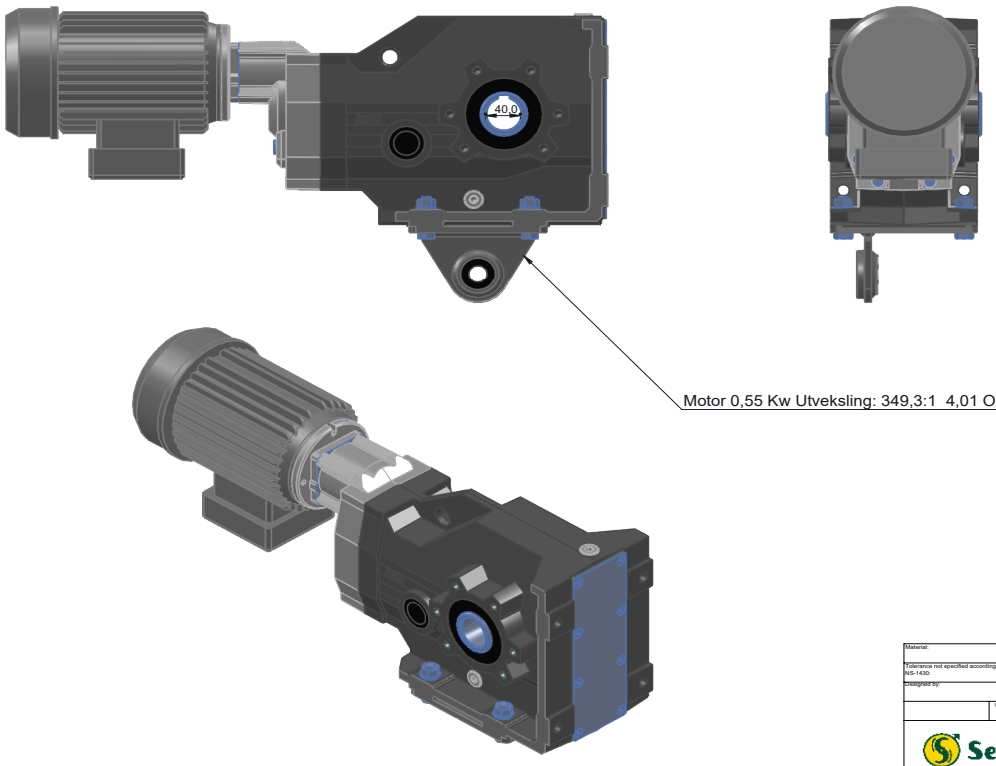
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	19201	Drivaksel for bunn magasin	1
2	Parallel key A12 x 8 x 63 DIN 6885		6
3	19190	Montert lagerstøtte	1
4	17652	Flenslager UCF 208	2
5	19105	Kabelarhjul f. 40mm aksel Corr I Dur.	4



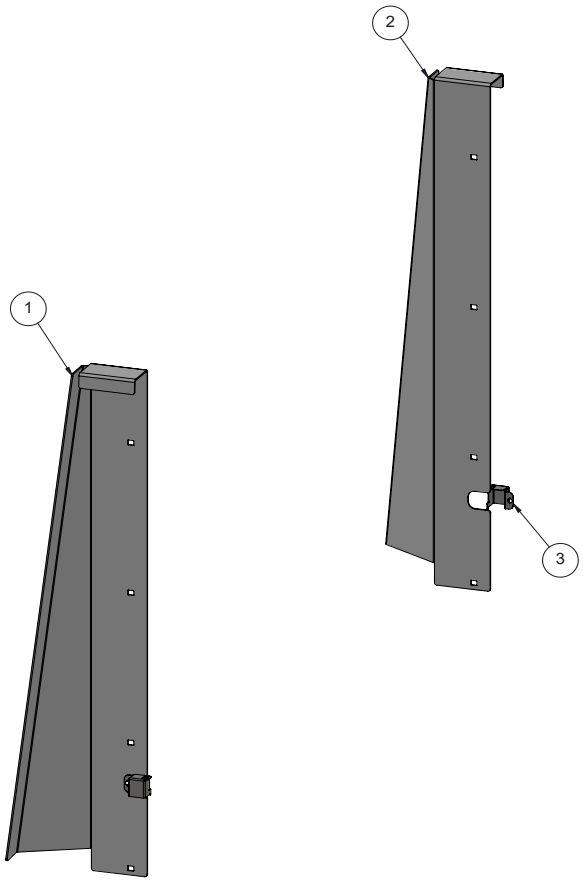


Material:		Thickness:	Surface treatment:
Tolerance not specified according to: NS-1430: Medium		Sheet scale: 1:20	Drawing number: 19200
Designed by: 25.05.2021			Revision: T2
Helge	Weight: 28.96	Projection: A3	Drivlinje med aksel og kabelarhjul
Serigstad			
Content in:	Project:	Replaced by:	

SPARE PARTS



Material:	Thickness:	Surface treatment:	
Tolerance not specified according to: NS-1430:	Sheet scale: 1:5	Drawing number: 19211	Revision: T1
Designed by: 28.05.2019	Weight	Projection: A3	M_X84C_C_349,30_-F_BR_N_A_-R_D_B3.3d Motor H side
Serigstad			
Content in:	Project: Test	Replaced by: Helge	

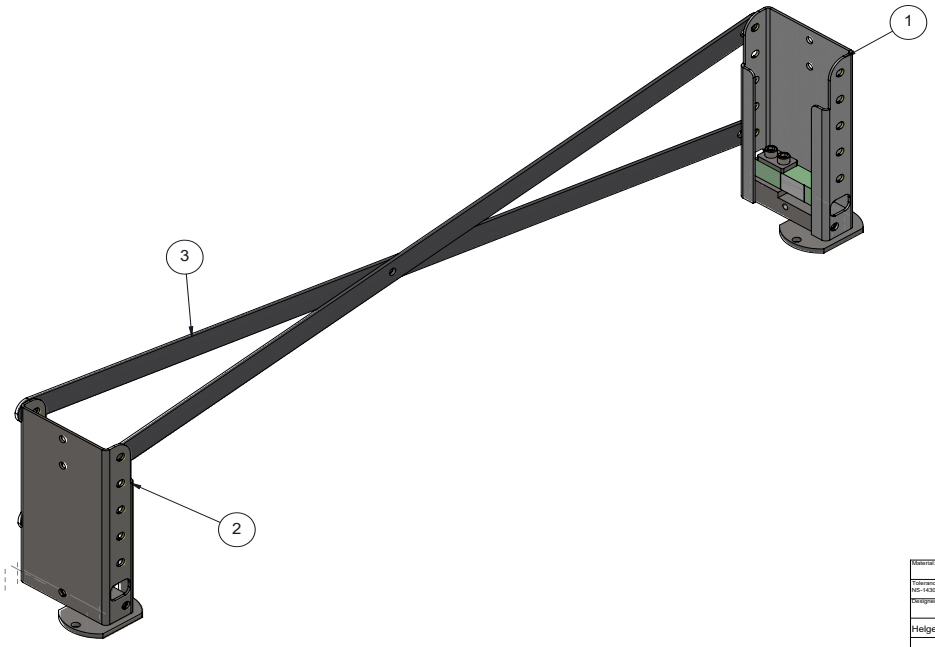


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	19162	Endeplate	1
2	19163	Endeplate	1
3	17520	Omron foto brakett	2

Material:	Thickness:	Surface treatment:	
Tolerance not specified according to: NS-1430:	Sheet scale: 1:50	Drawing number: 19215	Revision: T1
Designed by: 05.09.2019	Weight	Projection: A3	Bakre endeplater med sensorholder
Serigstad			
Content in:	Project:	Replaced by: Helge	

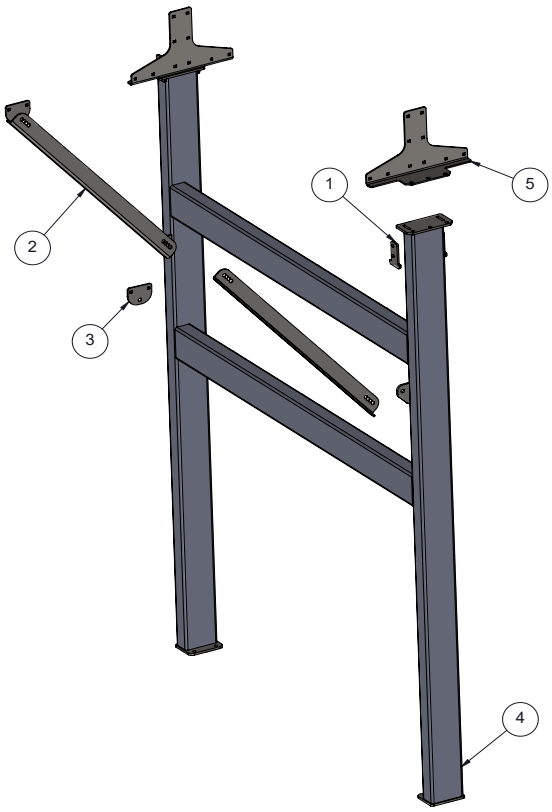
SPARE PARTS

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	71085	Kombifot 1 med veiecelle	1
2	Mirror 71085	Kombifot 1 med veiecelle	1
3	71043	Stag for stativ matebord	2



Material:	Thickness:	Surface treatment:	
Tolerance not specified according to: NS-1430:	Sheet scale: 1:20	Drawing number: 71090	Revisjon: T1
Designed by: 12.10.2018			
Helge	Weight	Projection: A3	Kpl. beinsett 1 f. veieceller
Serigstad Agri AS			
Content in:	Project: Exactfeeder	Replaced by: Helge	

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	19262	Feste	4
2	19263	Støttestag for bein	2
3	19264	Feste for stag	2
4	19255	Sveist beinsett	1
5	19266	Brakett for stativ	2



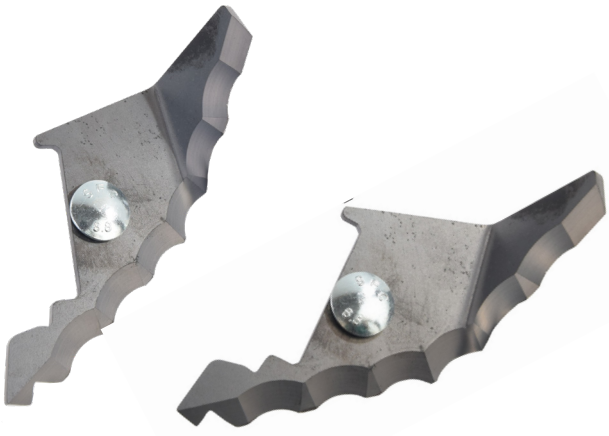
Pos 5 kan benyttes på anlegg som er montert horisontalt.
Hvis innlasting gjøres fra side, hvor sideplater er fjernet, anbefales det et ekstra stativ montert hvor sideplate fjernes

Pos 1 benyttes når matebord monteres med stigning.

Material:	Thickness:	Surface treatment:	
Tolerance not specified according to: NS-1430:	Sheet scale: 1:50	Drawing number: 19250	Revisjon: T2
Designed by: 19.09.2019			
	Weight: 202.34	Projection: A3	Stativ
Serigstad			
Content in:	Project: Test	Replaced by: Helge	

CHAIN LINKS
Art.nr. 7465120

CAM LOCK FASTENING SCREW PHOTO
Art.nr. 7996014



KNIFE R BEND W/ WAVY EDGES
Art.nr.19272

KNIFE L BEND W/ WAVY EDGES
Art.nr. 19271

KNIFE R BEND MAXIFEEDER
Art.nr. 19273

KNIFE L BEND MAXIFEEDER
Art.nr. 19001

SPARE PARTS

Spare parts can be obtained from your local Serigstad supplier, or directly from Serigstad.

If the part required is not shown in any of the previous pages contact your local Serigstad supplier or Serigstad directly for the correct part.

Use appropriate PPE when removing and replacing spare parts.

Follow the guidelines for disposing of the replaced parts.

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