

SKALS

- we'll sort it out!

Manual

Weighing Machine

AMV1



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CE

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2 Introduction

Read this user manual thoroughly before using the machine.

The machine is use for weighing potatoes, onions, carrots and other similar products.

The machine can weight portion sizes from 1–50 kg.

The machine can weigh large portions up to 1000 kg.

The machine may be operated in a temperature range of -10 to +40 C°.

The information plate and CE label are positioned on the side of the machine, close to the control panel.

3 Safety

Any persons working in the close vicinity of the machine must not wear loose-fitting clothing as this will be hazardous.

3.1 Pictograms

Two types of pictograms are positioned on the machine. Warnings and instructions.

Warnings



HAZARD - ROTATING PARTS.

Avoid touching or coming into contact with the machine's moving parts. This applies to fingers and clothing, since this can lead to mutilation.



CRUSH HAZARD.

Avoid touching or coming into contact with the machine's moving parts. This applies to fingers and clothing, since this can lead to mutilation.

Instructions



HOOK

Describes where the hook must be positioned when the machine is to be lifted by a crane.



STRAP HERE

Describes where the machine shall be secured during transport.

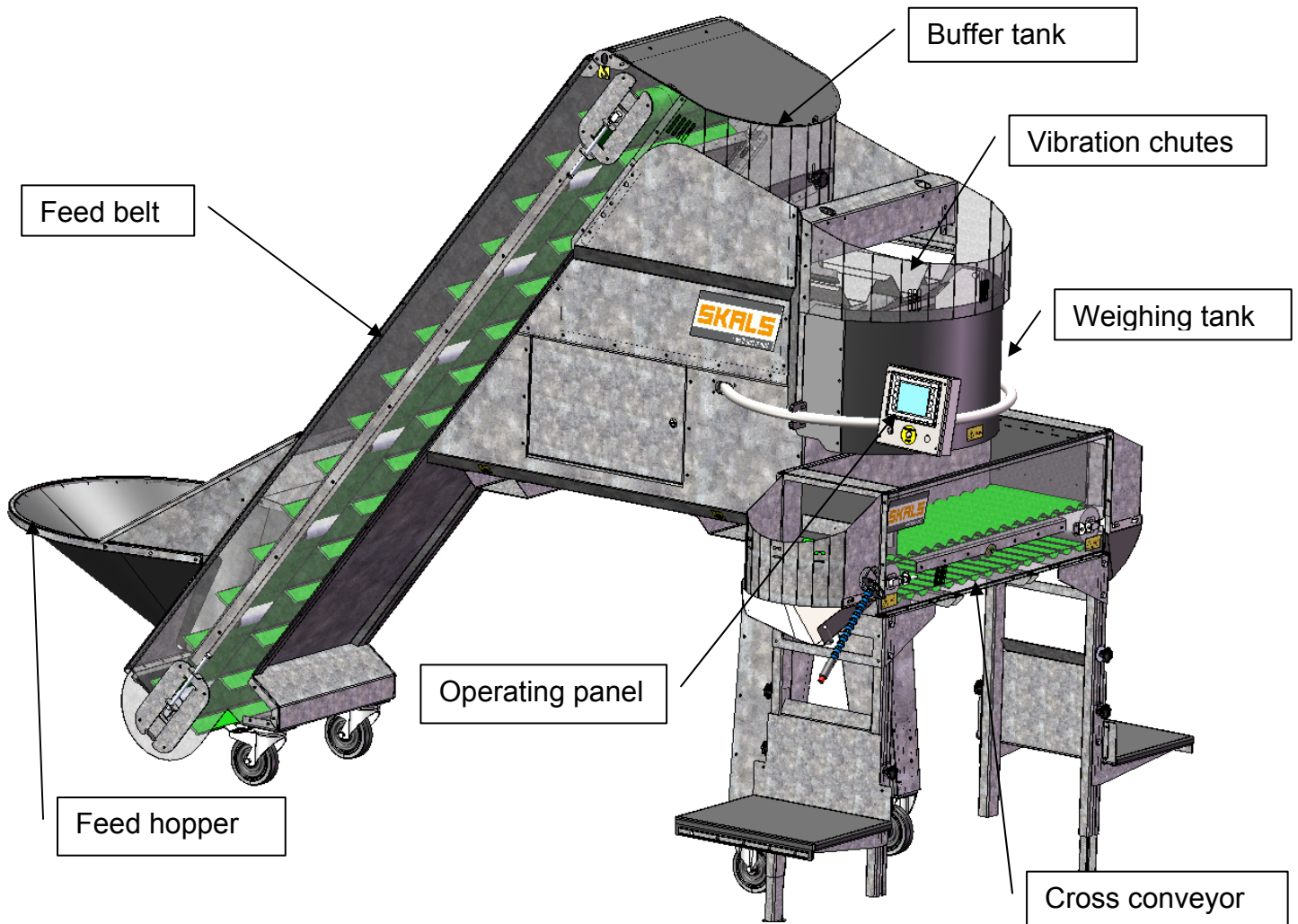


FORKLIFT TRUCK

Describes where the forks must be positioned when lifting with a forklift truck.

4 In general

Description of machine



4.1 Feed belt

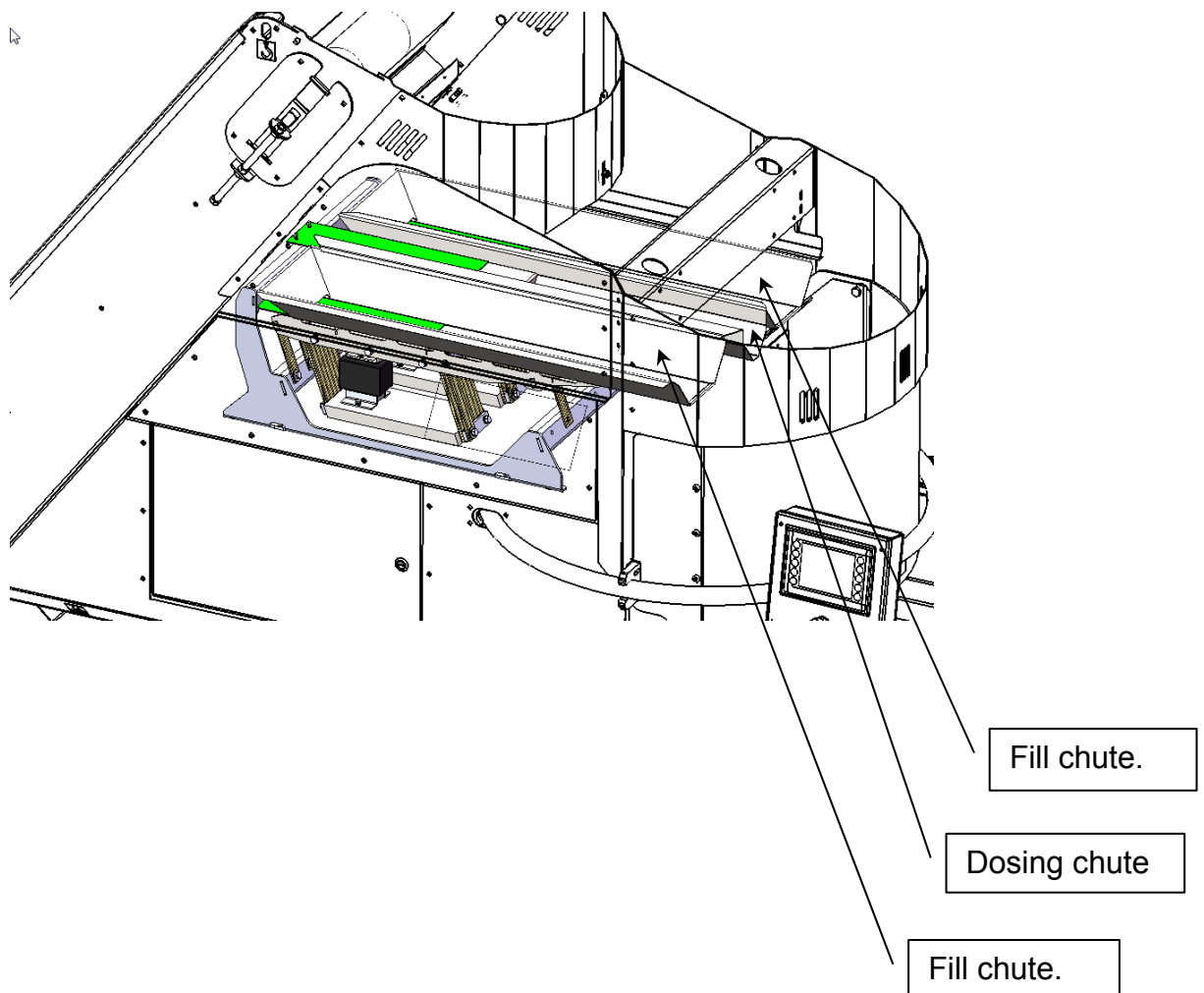
The feed belt transports the products from the feed hopper up to the buffer tank above the vibration chutes. The buffer tank has two sensors that activate and deactivate the feed belt.

To achieve optimal operation, it is important that the feed hopper is always filled with products.

4.2 Vibration chutes

The machine is equipped with three vibration chutes, designed to fill and dose the weighing tank.

All three of the vibration chutes switch on automatically when the weighing tank shall be filled and only two of the chutes operate when dosing for the required weight.

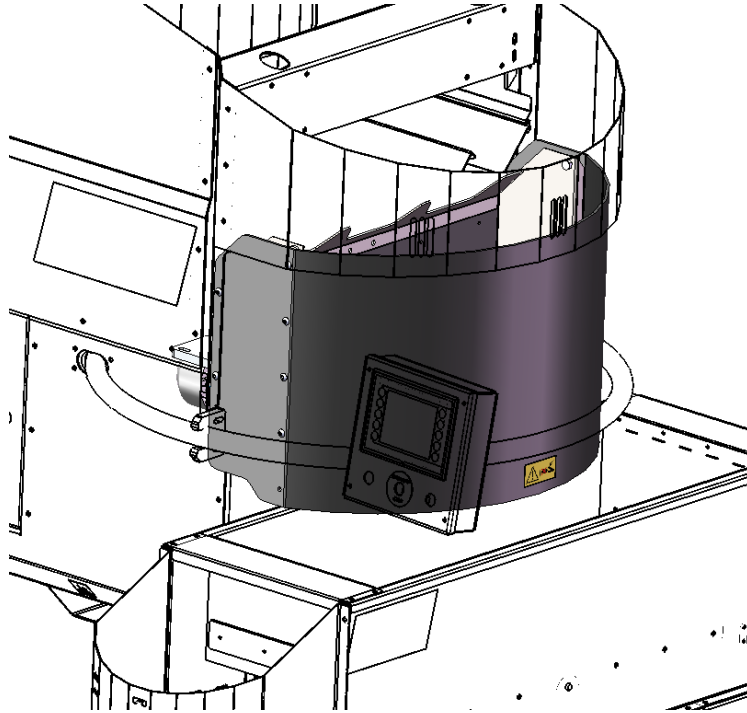


4.3 Weighing tank

The weighing tanks' volume capacity is 57 l.

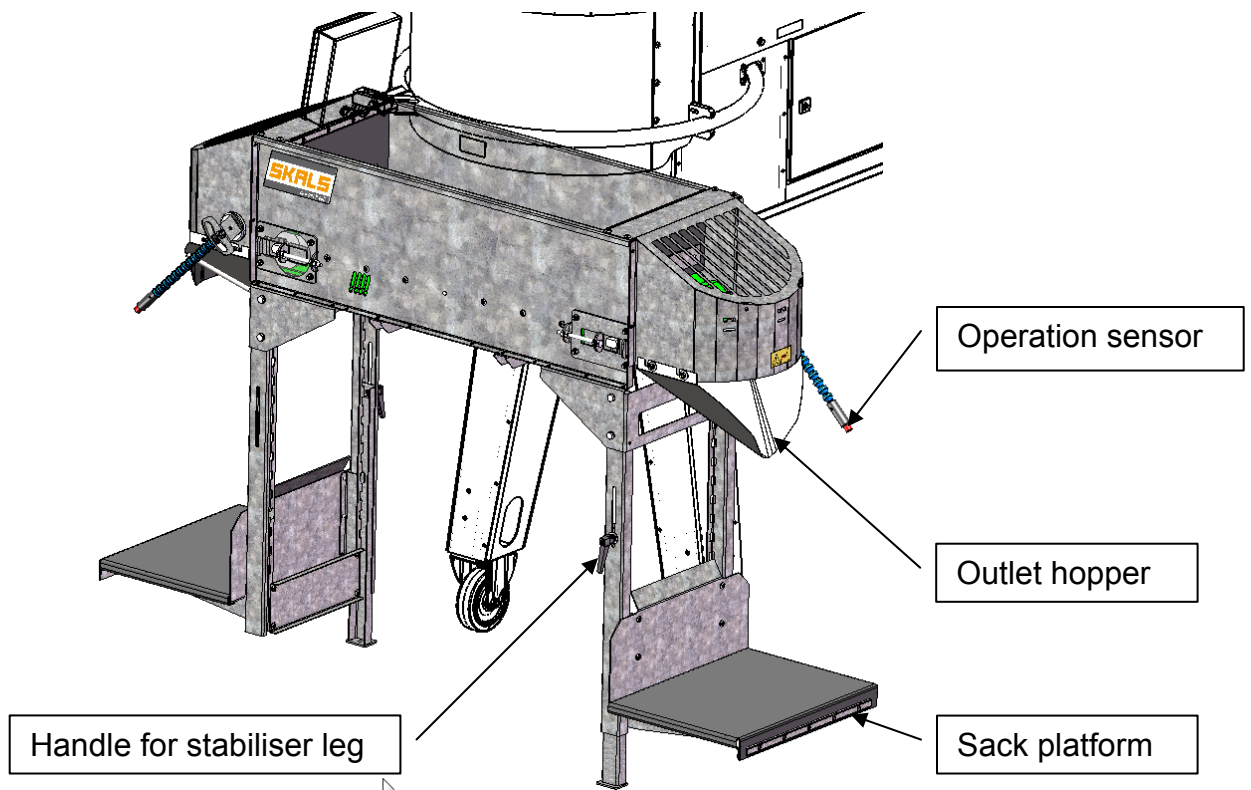
The weighing tank must be checked regularly and if required, cleaned of any soil that has accumulated.

During operation, the weighing tank must not be touched otherwise the weighing result will not be correct.



4.4 Cross conveyor

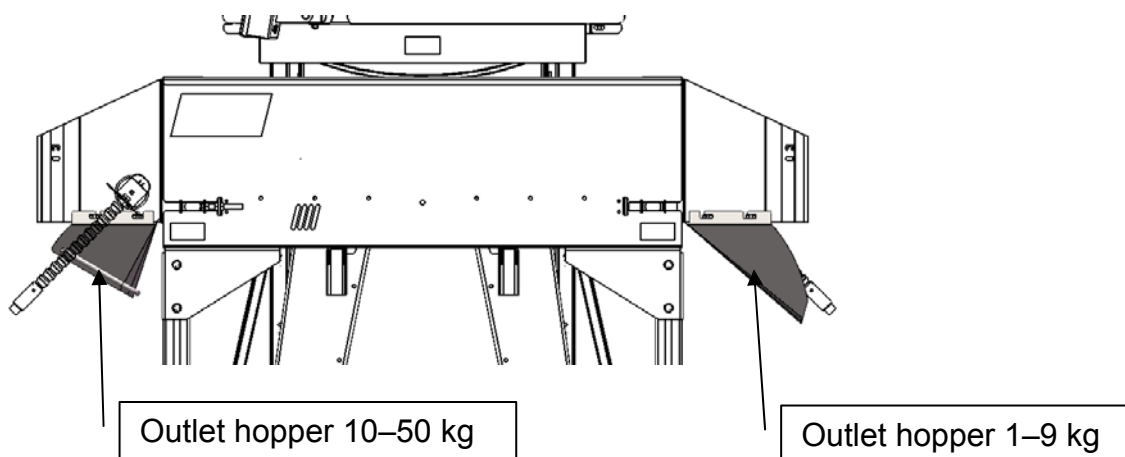
The cross conveyor allows the machine to be operated by two people at the same time.



When the operating sensor is activated on a specific side, the cross conveyor will transport the next portion to that side.

NB: The machine 'remembers' an activation of the operating sensor, even though the cross conveyor is not ready to deliver a portion!

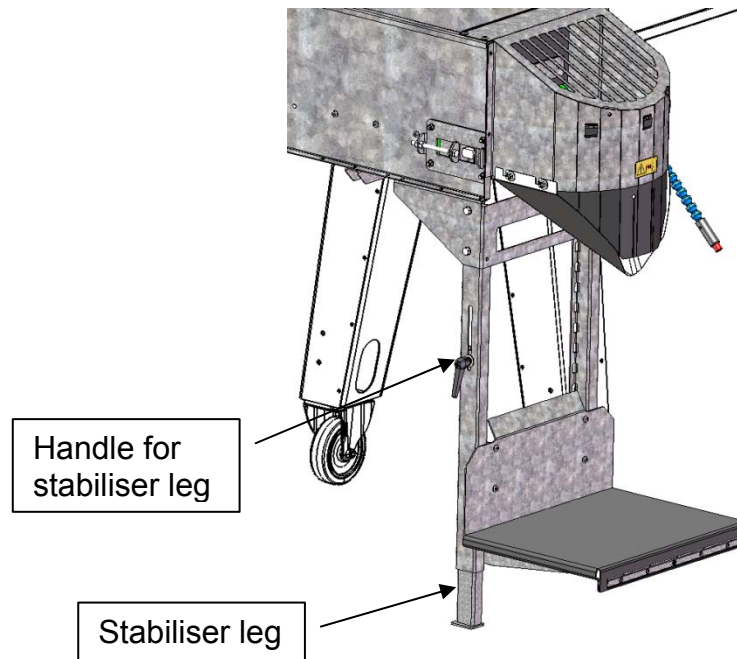
The machine is supplied with four outlet hoppers as standard. Two hoppers for portion sizes 1–9 kg and two hoppers for 10–50 kg.



4.5 Sack platform

When the height of the sack platform shall be changed, loosen the two finger screws on the platform and raised/lower the platform and then re-tighten the finger screws.

When weighing portions that weigh more than 10 kg, lower the stabiliser leg at the sack platform until it supports on the level surface.



4.6 Operating panel

The operating panel consists of a touch display and a stop.

All of the machine's electrical functions are operated via the touch display.

5 Operation

Before commissioning the machine, check it to ensure it has not been damaged during transport.

Any defects must be reported to the dealer immediately.

5.1 Set-up

To ensure correct weighing, the machine must be placed on a stable and level surface.

5.2 Electrical connection

The electrical connection must comply with national applicable regulations.

1 Phase 230 V - N + PE

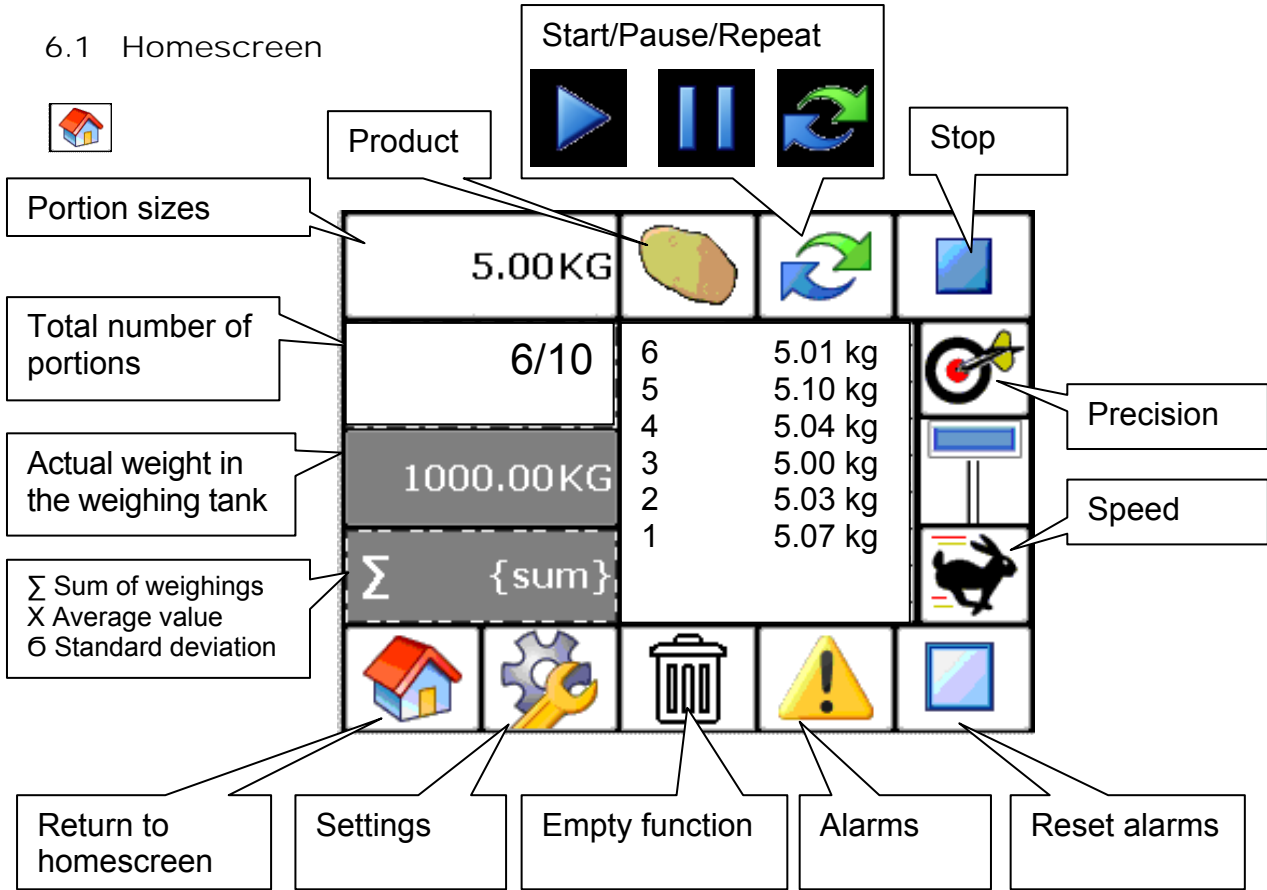
5.3 Start-up

1. Enter the desired portion size and total number of portions that are to be weighed using the operating panel.
2. Next, select the programme that is to be used (potatoes, carrots, onions or optional).
3. Press the "Start" button on the display.
4. The operating sensor is activated.

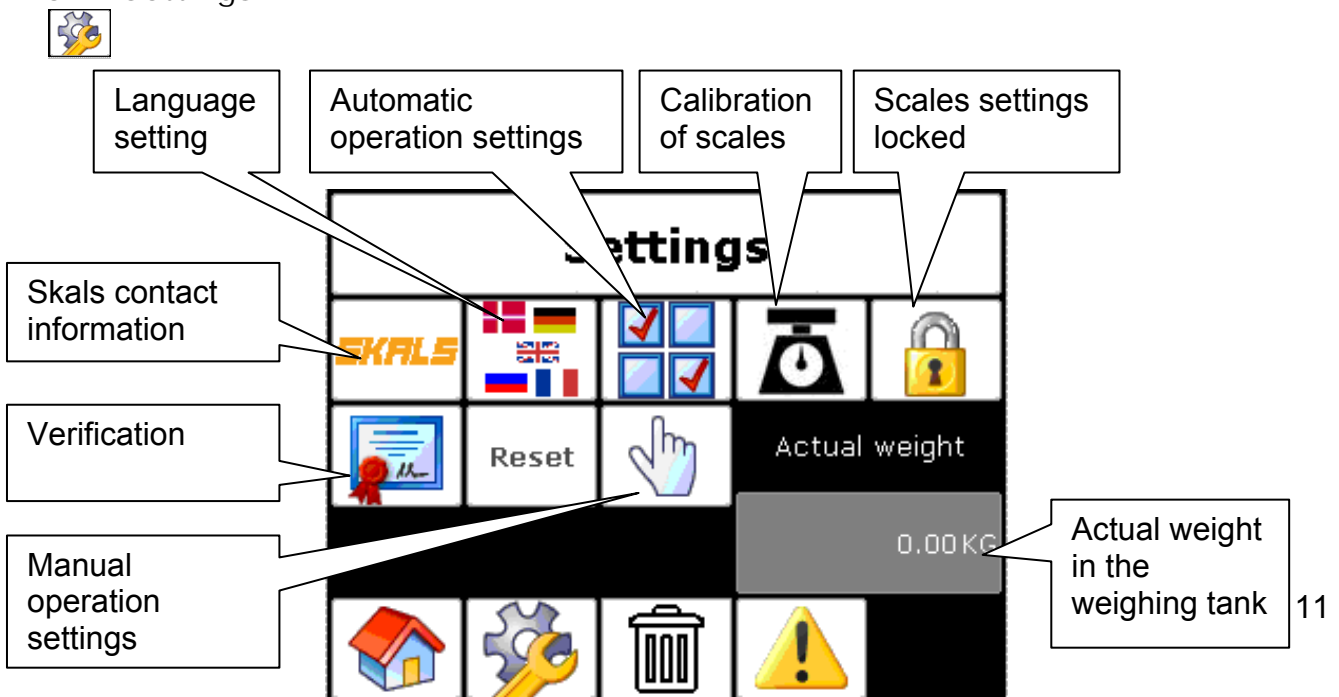
NB: In the case of start-up after the portion size has been changed the machine may initially weigh inaccurately. The machine will regulate this automatically after a few weighings.

6 Control

6.1 Homescreen



6.2 Settings



6.3 Skals



Skals contact information is shown here

Should you have any questions about the machine, contact your dealer in the first instance.

Verification



The verification ID and date of last filling is show here.

6.4 Automatic operation settings



There are four areas that can be set: Feed belt, vibration chutes, weight and cross conveyor, of which the last three are relevant for normal operation.

Feed belt

The screenshots show the following settings:

- Speed, see next image**: Points to the speedometer icon in the top-left of the first screenshot.
- Time setting**: Points to the stopwatch icon in the top-right of the first screenshot.
- Minimum rpm of the drum motor for the feed belt should be set to 700 rpm.**: Points to the '700 rpm' value in the 'Min.' column of the 'Inverter speed' table.
- Maximum rpm of the drum motor for the feed belt should be set to 1500 rpm.**: Points to the '1500 rpm' value in the 'Max.' column of the 'Inverter speed' table.
- Total rpm, the drum motor speed increases every time it accelerates. Should not be changed.**: Points to the '200 rpm' value in the 'Step up' column of the 'Inverter speed' table.
- Total rpm, the drum motor speed lowers every time it de-accelerates. Should not be changed.**: Points to the '200 rpm' value in the 'Step down' column of the 'Inverter speed' table.
- Time interval between automatic change of speed.**: Points to the '1000 ms' value in the 'Step up' column of the 'Timers' table.

Inverter speed	
Min.	Max.
700 rpm	1500 rpm
Step up	Step down
200 rpm	200 rpm

Timers	
Max. filling time	
Step up	Step down
1000 ms	2000 ms

Vibration chutes

Vibrator Plates ?

Dosage flow [g/s]	Dosage flow filling [g/s]
250	7000
Dosage	Filling
75 %	85 %

Estimated flow when dosing

Estimated flow when filling

Vibration power in percent. **Should not be less than 50%**

Vibration power in percent. **Should not be less than 55% and should always be greater than chute 2**

Back to previous menu

Scales

Weight ?

Batches count for Auto tara

20

Motor speed for tank shutter **Should not be changed.**

Total number of portions between each auto taring. See explanation

Scales settings See next image

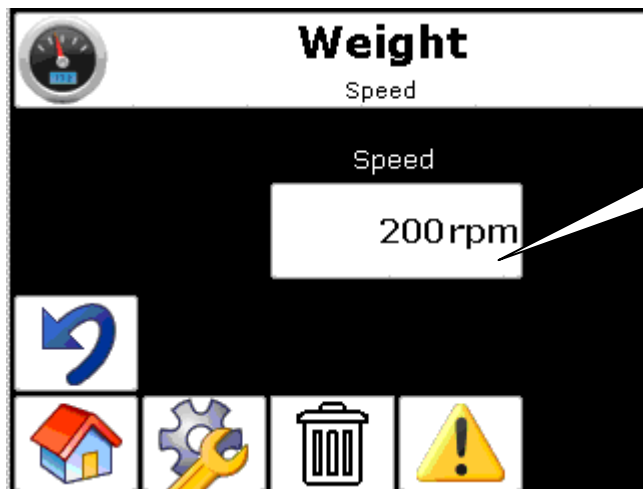
Product specific settings. (potatoes, carrots etc.)

Alarm times **Should not be changed.**

Auto taring

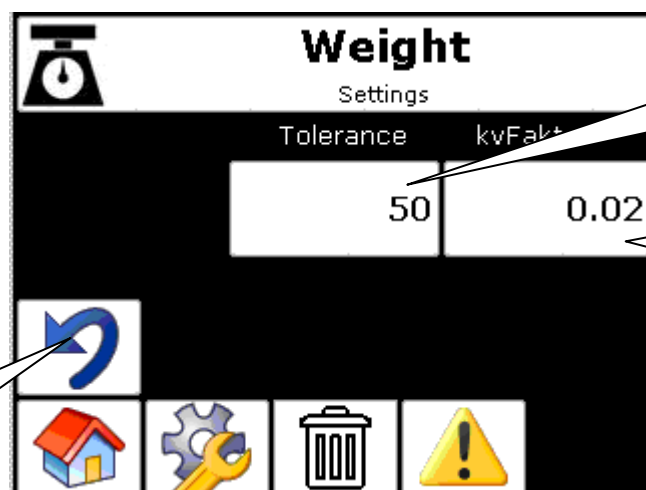
Automatically tares the scales zero point after a set number of portions (e.g. 20). In the case of dirty products, it is relevant to have a low total number of weighings between each auto taring. Build up of dirt in the weighing tank affects the weighing result.

Weight Speed



Weigher opening speed

Weight settings



Tolerance interval in grams, see explanation

Controller parameter

Back to previous menu

Offset 25 kg:

When a double portion is made (over 25 kg), **Offset 25 kg** must be between 1500 and 3500 g to stop around the 25 kg. This is necessary to compensate for the run-on time and prevent the weighing tank from becoming over filled with the first portion.

Tolerance

This is the limit for when the scales begins to be regulated.

If the products that are being weighed weigh up to 100 g, the tolerance must be the same or 10 % greater.

Controller parameter

Parameter that determines how aggressive the controller reacts

Product specific parameters

The screenshot shows a control panel for 'Product' parameters. It includes a question mark icon, a 'Filling setpoint' field with the value 500, and two 't_guess' fields with the value 200. A callout points to the 'Filling setpoint' field, stating it is controlled by a slider on the main page. Another callout points to the 't_guess_a' field, explaining it is a value for portions up to 10kg, where lighter products require a higher value. The bottom of the screen features a navigation bar with icons for home, settings, trash, and warning.

Cross conveyor

The screenshot shows a control panel for 'Cross conveyor' parameters. It includes a question mark icon, 'Emptying time' (2300 ms), 'Speed' (700 rpm), 'Signal offset' (200ms), and 'Signal after run' (200ms). A callout explains the 'Aut. or manual outfeed mode' where 'Manual' is sensor-based and 'Aut.' is automatic. Another callout states that the speed should be between 600 and 900 rpm. A third callout explains that the 200ms delay and run-signal are for the next machine's external signal. The bottom of the screen features a navigation bar with icons for home, settings, trash, and warning, and a 'Back to previous menu' callout.

Empty time

The time that is set to ensure that the belt is completely empty.

Speed

If there are problems with the products coming out of the outlet hopper, reduce the speed.

6.5 Manual operation settings



During manual operation, all of the functions can be set and the machine operated.

NB: In manual operation mode, all of the alarms and sensors are de-activated.

Language



Five languages are available.

- English
- German
- Danish
- French
- Russian

Lock



When the scales are locked, there is limited access to certain functions.

- Scales guide
- Programme 0-3

Scales guide (calibration)



To calibrate the scales, follow the instructions in the display.

Place a known weight in the weighing tank during calibration.


The weighing tank must be clean inside.

Every time the scales are calibrated a new ID number is generated, which can be seen under the verification ID and a date for the last calibration.

Alarms





All of the alarms that can be triggered are shown in the troubleshooting section.

When an error is observed and corrected, the alarm is reset 

6.6 Emptying the machine

If the machine is to be completely emptied, continue to weigh portions without filling the intake hopper with any products. Once the vibration chutes have operated for a longer period than normal, press Stop.

Next, empty the weighing tank and the cross conveyor by accessing the manual settings  and press  to empty.

7 Service and maintenance

During service and maintenance, ensure power has been disconnected at the main switch and the main switch is locked.

7.1 Bearings

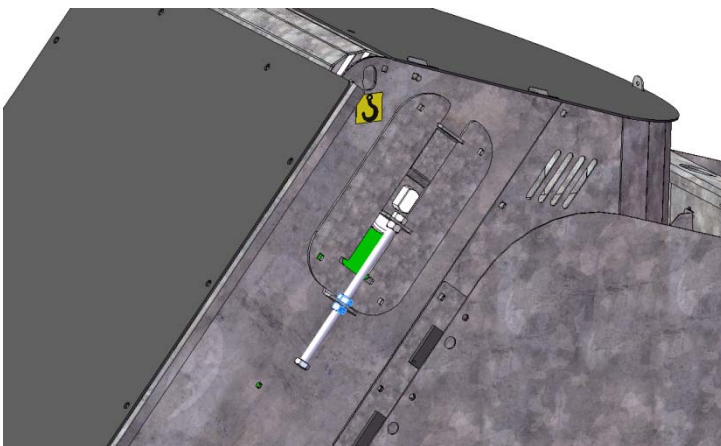
All of the bearings and motors and the loose drum have been lubricated at the factory and require no maintenance.

7.2 Gear

The worm gear that drives the weighing tank's open/close function has been lifetime lubricated with synthetic grease for operation in standard temperature range (-10 to +40 °C).

7.3 Belt

The machine has two PVC belts fitted. A feed belt and a cross conveyor. Both belts must be checked regularly and adjusted if required to ensure a long lifetime.



Tighten the belts by loosening the two nuts marked with blue (on both sides) and then tighten the belt by tightening the top nut. Once the belt has been adjusted, re-tighten the

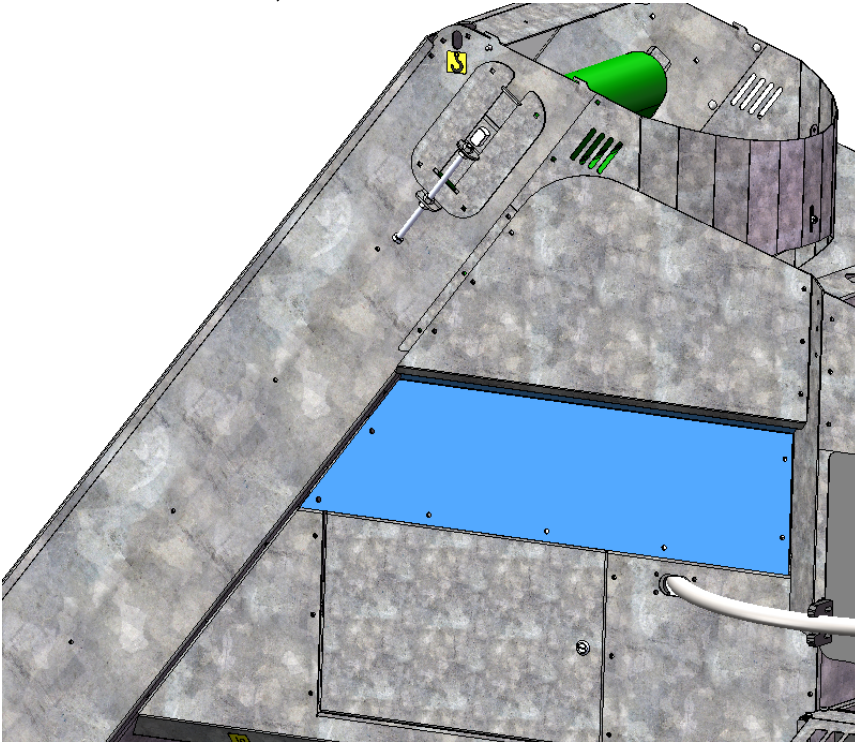
bottom nut. The same procedure is used to adjust the belt to operate in the centre. However, the tightening must only be done in the side the belt moves to.

At all times it is the responsibility of the owner to ensure the belts have been adjusted correctly.

If the belts have not been adjusted correctly, the warranty for the belts is void.

7.4 Vibration chutes

All bolts and vibration chutes should be re-tightened every 200 hours of operation. To access the bolts, remove the screen marked in blue.

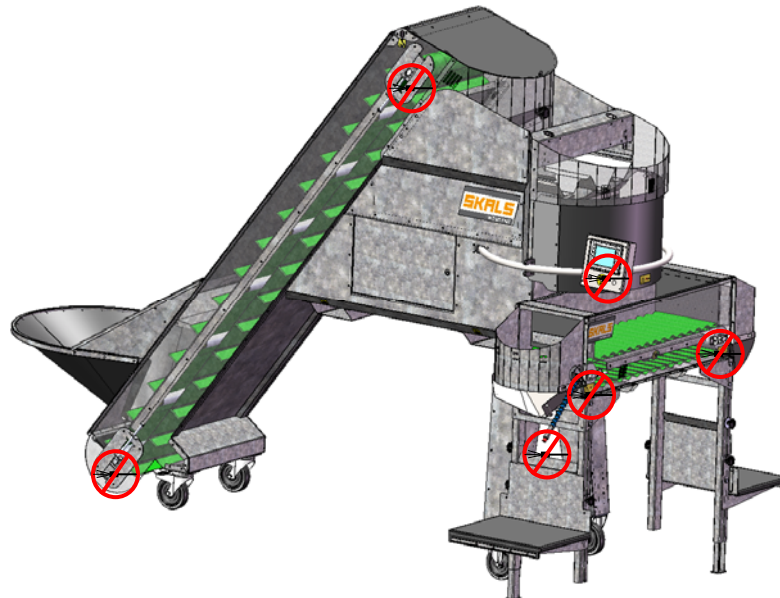


The bolts are marked in blue, and should be tightened to 18 Nm.



7.5 Cleaning

In the case of high-pressure cleaning, direct spraying must be avoided in the following areas: loose drum, gear motors, control cabinet, electronic control box, load cell, connectors and motors on vibrators.

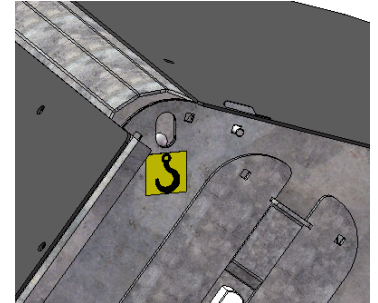
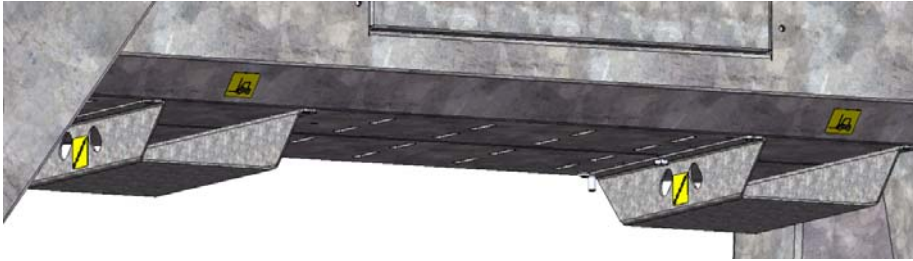


If products with loose skin are being weighed, the vibrator chutes should be cleaned on a daily basis.

Good cleaning and maintenance are important to achieve a high degree of reliable operation and low maintenance costs.

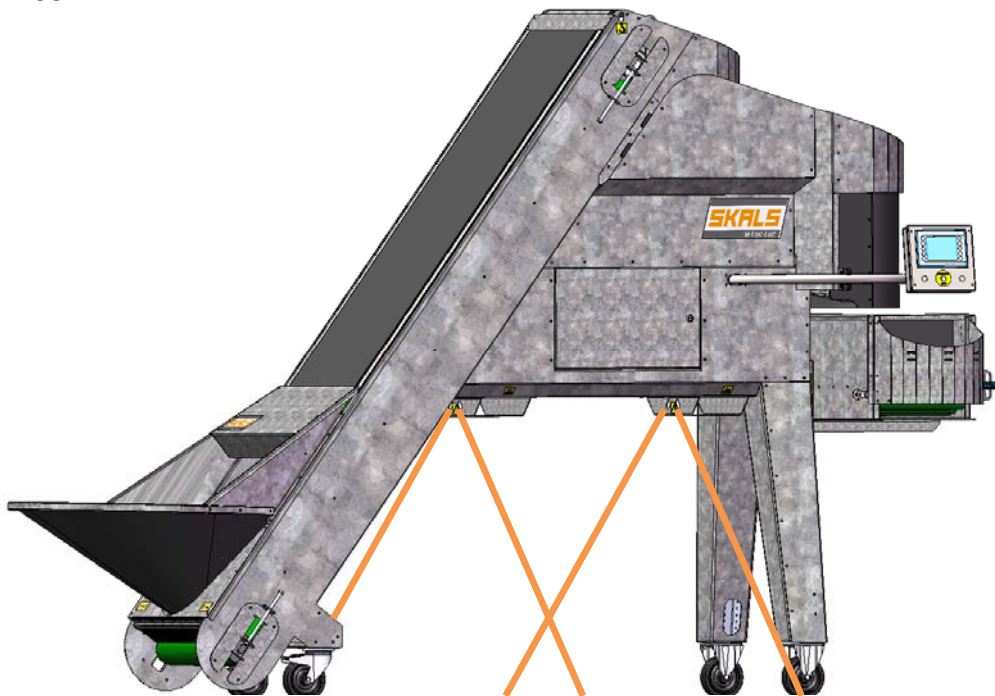
8 Transport

If the machine shall be lifted by crane, this must be done using the integrated lifting points in the top of the machine. If the machine shall be moved by forklift truck, this must be done using the integrated fork pockets.



NB: Always stay well clear of suspended loads.

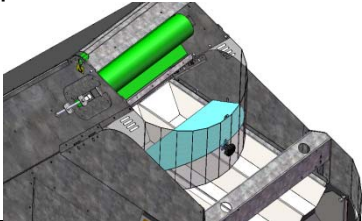
During transport the machine must be secured to the surface, as shown with the orange lines.



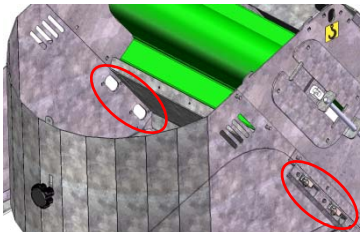
9 Troubleshooting

NB: The machine must ALWAYS be switched off at the main switch when work on mechanical parts shall be carried out.

9.1 Fault described in display.

Alarm text	Cause	Solution
Shutter in weighing tank taking too long to close.	Sensor is not adjusted correctly.	Adjust the sensor closer to the crank plate (distance 1-3 mm).
	Defective sensor.	Check the conductor to the sensor. Replace sensor.
	Foreign bodies are blocking the shutter in the weighing tank.	Remove foreign bodies.
Scales taking too long to fill up.	There are not enough products in the buffer tank.	Fill the intake hopper with products.
	Feed belt not regulating to faster speed.	See other faults.
	Products are blocked in the buffer tank.	Remove the blockage in the buffer tank.
		Set the plate in the buffer tank to the applicable product's size.
	Automatic fuse switched off.	Switch on automatic fuse (see control).
	Fault on all of the frequency converters. Aborting of both belts and scales.	

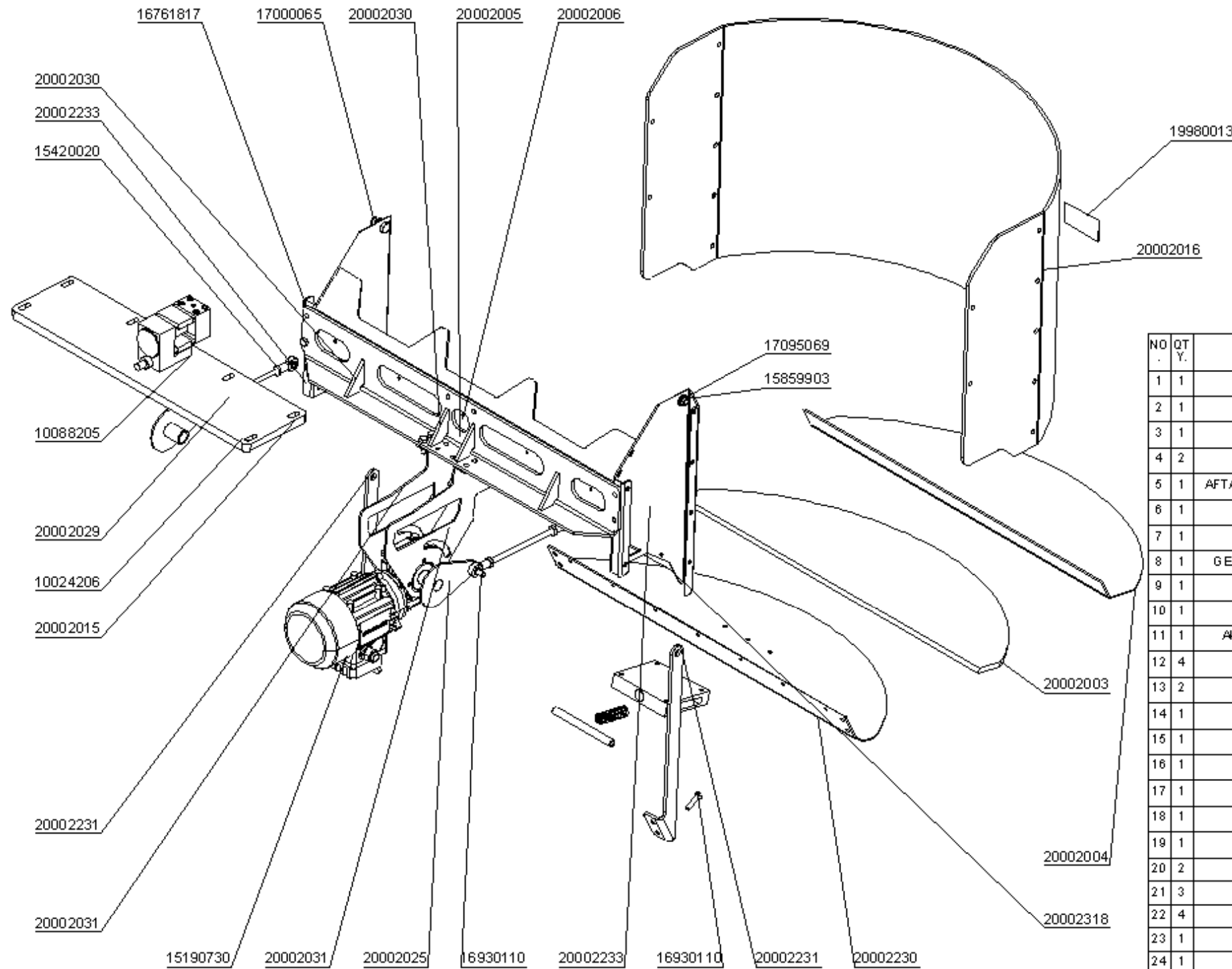
9.2 Other faults.

Error	Cause	Solution
Weighing tank or cross conveyor does not start with operation of operation sensor.	Operation sensor is defective.	Check the conductor to the sensor. Replace sensor.
Buffer tank is not full and the feed belt is not operating.	The top sensor in the buffer tank is dirty or defective.	Clean sensor and reflector. 
Feed belt not regulating to faster speed.	The bottom sensor in the buffer tank is dirty or defective.	Clean sensor and reflector.
	Green LED on sensor must be lit at all times (indicates sensor is in contact with the control system).	Check the conductor to the sensor. Replace sensor.

10 Spare parts list

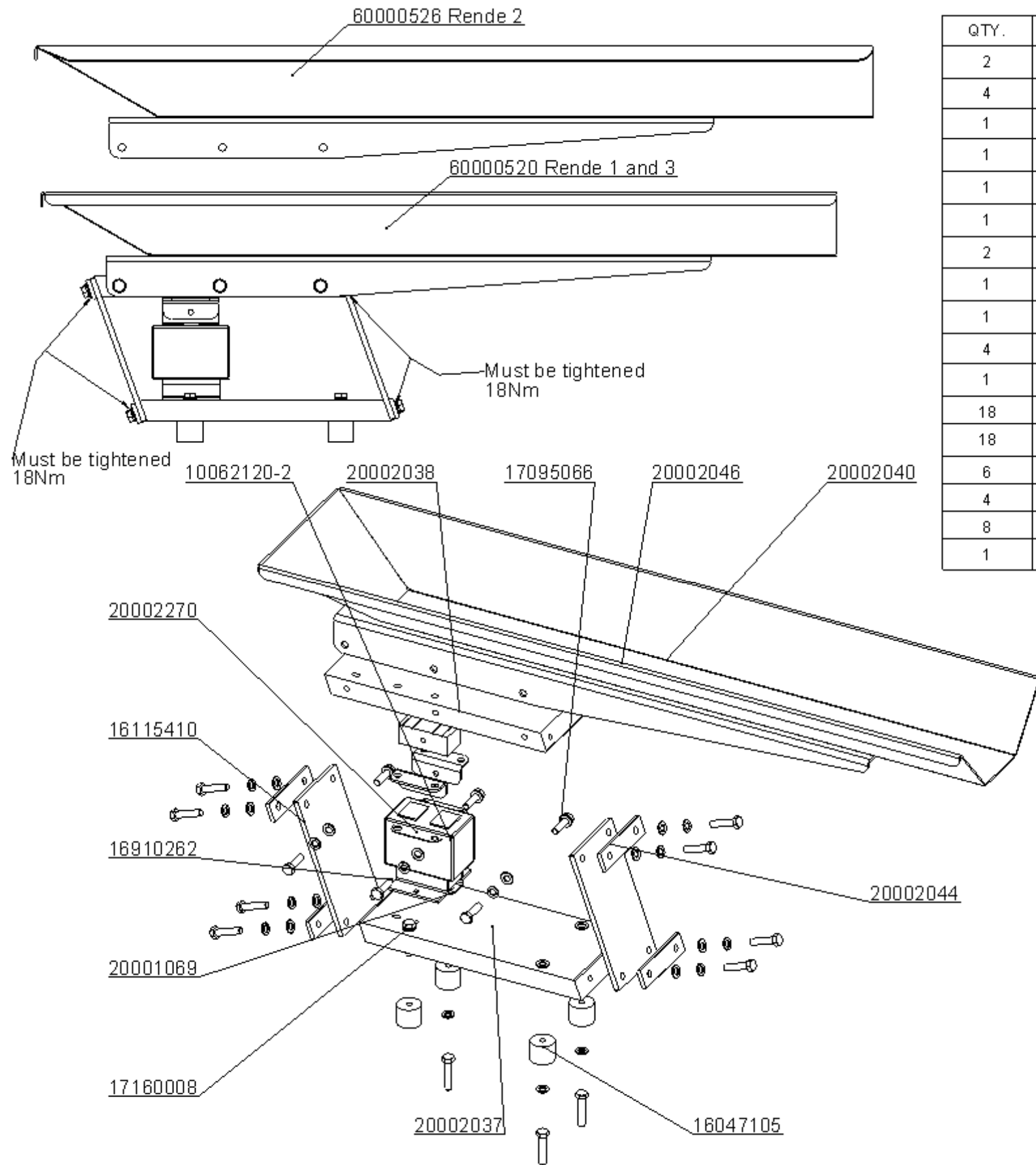
When ordering spare parts, please state machine type, serial number and any product number.

10.1 Weighing tank



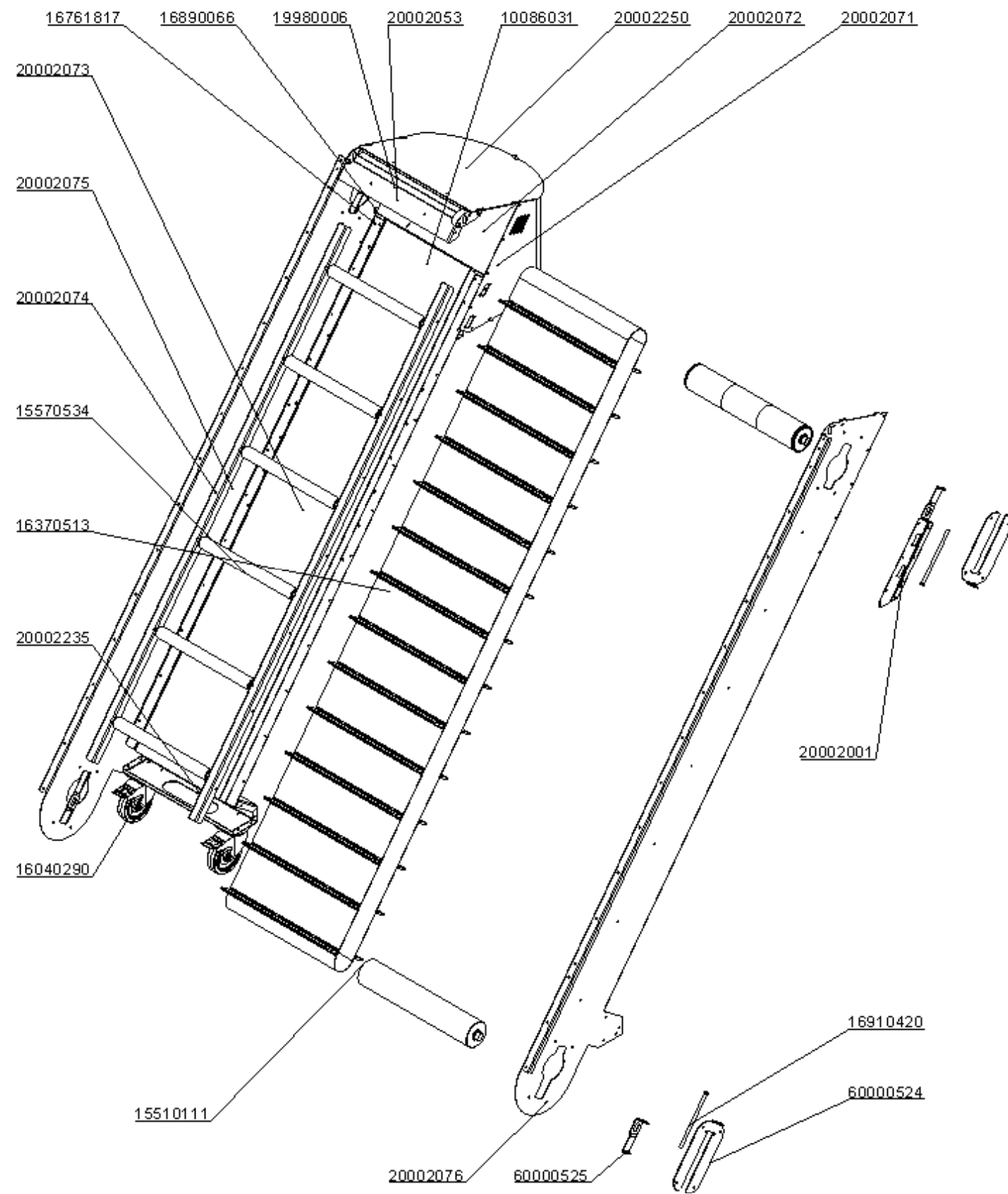
NO.	QTY.	DESCRIPTION	PART NO.	MATERIAL	ENGLISH
1	1	L/B Motorophæng til vejeskål	20002031	4mm. rustfri plade 304	Bracket
2	1	Krumtap m. aksel svejst	60000517	Samling	Crank part 1
3	1	Krumtap u. aksel svejst	60000518	Samling	Crank part 2
4	2	Unbraco flangehoved M8x30	16930110	FZB	Bolt
5	1	AFTAST INDUKT. EZ-A-M12KN08-M1-B2	10024206	El-komponent	Sensor
6	1	Vejecelle SPSX 60 Kg	10088205		Loadcelle
7	1	Understøtning af vejecelle	20002015	15mm. Alu plade 1060	Bracket
8	1	GEARMOTOR 0,18 KW NMRV30 1:30	15190730		Gear
9	1	Pastfeder 5x5x40	16105264		parallel key
10	1	Sikkerhedsudløser til vejeskål	20002020	PE HD 500	Block
11	1	Aksel-sikkerhedsudløser vejeskål	20002023	RF hydraulikrør sv. ø 12/2x134	Shaft
12	4	Leje PHS8A kugleled	15420020		Bearing
13	2	Pindbolte til vejeskål	20002029	RF rundstål AISI 304 ø 8x193	Stud
14	1	Vejeskål plast	20002016	4mm. PE HD 500 SORT	Plast front
15	1	Vejebeholder svejst	60000501	Samling	Weightcontainer welded
16	1	Støddabsorberende indlæg	20002003	10mm. Selvkl. 698x258	Foam inserts
17	1	Gummi indlæg	20002004	Gummi 2,8mm. x698x311	Rupper
18	1	L/B Motorophæng til vejeskål	20002031	4mm. rustfri plade 304	Bracket
19	1	Vinkelbeslag til vejecelle svejst	60000521	Samling	Bracket
20	2	Gevindform . skrue M8x12	16761817	Torx, 7516T080162	Skrue
21	3	Stålsætskrue M8x25	16910260	8,8 Eforz. HFC 473	Bolt
22	4	Låsemøtrik M8	17000062	HFC 840 ELFO RZ.	Nut
23	1	Stålsætskrue M10x25	16910316	8,8 Eforz. HFC 473	Bolt
24	1	L/B Klap i vejebeholder	20002230	3mm. Rustfri plade	Sheet metal part
25	1	L/B Side til klap H/V	20002231	5mm. Rustfri plade 304	Sheet metal part
26	1	FARE klemningsfare	19980013	Label	Label
27	1	Sodemann Fjeder 23010	16115245		Spring
28	2	Igus igidur GM_10 12 14_07_2	15859903		Plastbearing
29	1	Rustfri Pinolskrue M6x10	16920145	Rustfri	Bolt
30	1	Øverste gummiindlæg i vejebeholder	20002318	Gummi 2,8mm. x 698x327	Rubber
31	3	RF Skive ø 10 Facet	17095069		Washer
32	1	Låsemøtrik M10	17000065	Rustfri A4 DIN 985	Nut
33	1	L/B Side til klap H/V	20002231	5mm. Rustfri plade 304	Sheet metal part

10.2 Vibrator chute



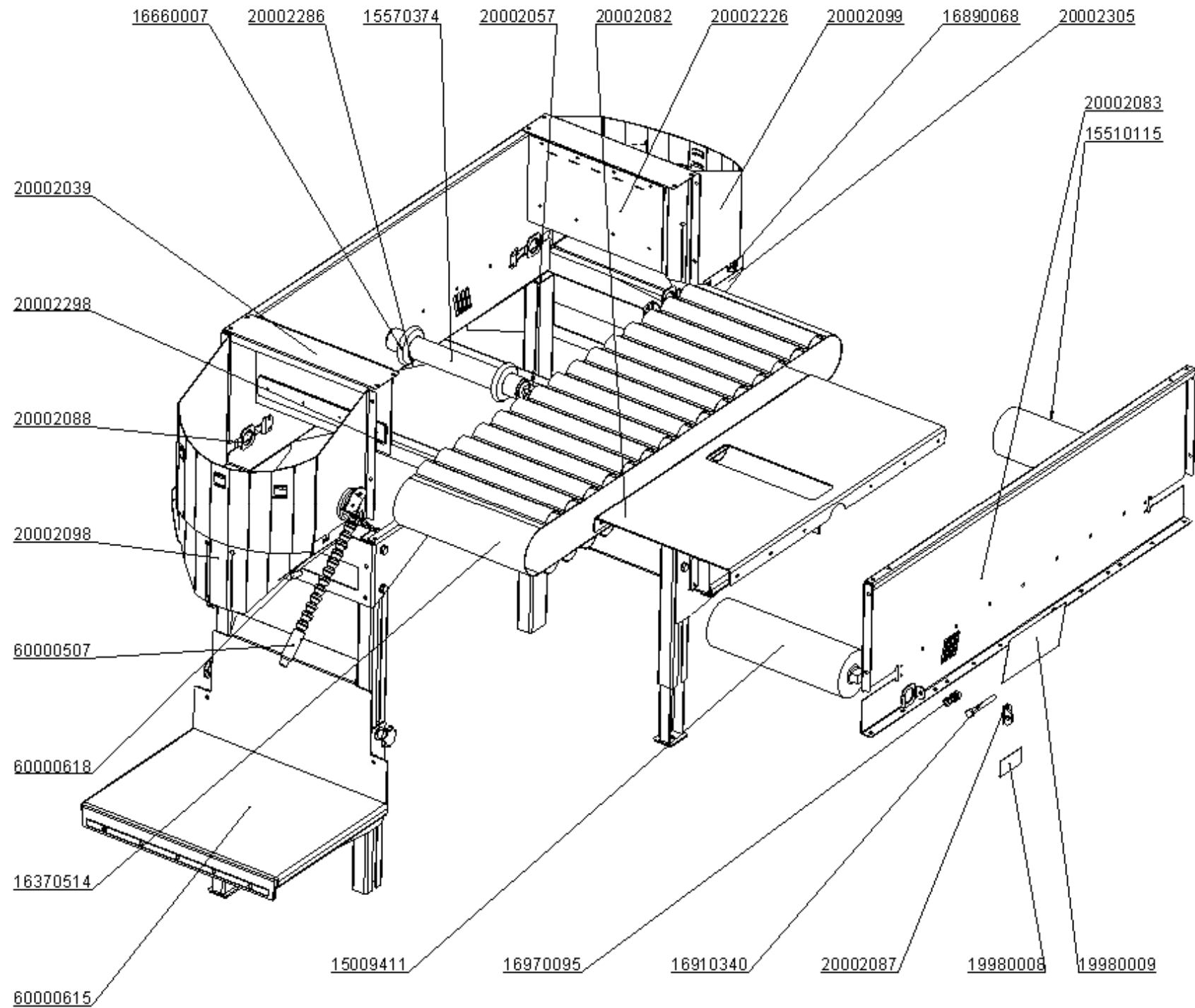
QTY.	PART NO.	DESCRIPTION	MATERIAL	English(GB)
2	20002045	Beslag for montage af jernkerne	3mm Rustfri plade 304	Bracket
4	20002044	Støtteplade til fiberfjedre	5mm rustfri plade 304	Plate for spring
1	20002040	Vibratorrende	2mm rustfri plade 304	Plate for vibrator
1	20002046	Bundplade for vibratorrende	3mm Rustfri plade 304	Bottom plate for vibrator
1	20002038	Topplade parallelogram vibrator	25mm Alu plade 1060 el. tilsv.	Top plate
1	20002037	Bundplade for parallelogram	25mm plade Domex 240 el. tilsv. Fladstål	Bottom plate
2	16115410	Fiberfjeder	Composite	Spring
1	10062120-1	Jernkerne til elektromagnet	Stål	Iron core
1	10062120-2	Elektromagnet W ZA W 080 X00 A01 100%ED		Electromagnet
4	16047105	GUMMIOPH HGT022 30X25/C M845SH	Gummi	Rubber mounts
1	20001069	L/B Kabelbeslag	2mm. galvaniseret stålplade 62x22	Bracket
18	17095066	Skive M8 Facet	HFC 9167 8.8 Elforz.	Washer
18	17160008	SKIVE Ø8 Centerfjeder STÅL Z DIN 128		Washer
6	16910262	Stålsætskrue M8x30	8,8 Elforz. HFC 473	Bolt
4	16910266	Stålsætskrue M8x40	8,8 Elforz. HFC 473	Bolt
8	16910264	Stålsætskrue M8x35	8,8 Elforz. HFC 473	Bolt
1	20002270	L/B Sims til elektromagnet	1mm. Rustfri plade	Sims

10.3 Feed belt



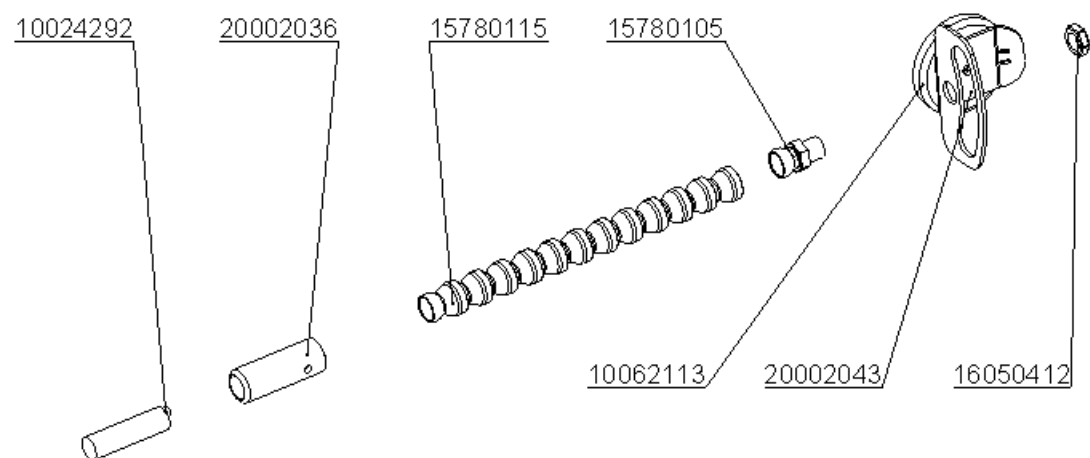
NO.	QTY.	PART NO.	DESCRIPTION	MATERIAL	Description GB
1	1	20002075	L/B Transportør venstre side	2mm Galv. plade	Sheet metal part
2	1	20002071	L/B Front til transportbånd	2mm Galv. plade	Sheet metal part
3	2	20002074	L/B Understøtning f. bånd	3mm. Galvaniseret plade	Sheet metal part
4	6	15570534	TRANSP.RL.PVC. Ø50x2,8	PVC	Conveyor roller
5	1	20002073	L/B Bundplade til transportør	2mm Galv. plade	Sheet metal part
6	1	20002072	L/B Nedløbsplade f. front	2mm. varmgalvaniseret stålplade	Sheet metal part
7	1	20002235	L/B Beslag til hjul under fødebånd	3mm. Galv. plade	Sheet metal part
8	1	20002076	L/B Transportør højre side	2mm Galv. plade	Sheet metal part
9	2	16040290	Hjul transport drejlig m. topplade	Indkøbt vare	Wheel
10	1	20002002	L/B Plade i bufferkammer	2mm. Galv. plade	Plate i buffer
11	2	16890020	Bræddebolte 8x20 kv. 4,6		Bolt
12	3	16761817	Gevindform. skrue M8x12	Torx, 7516T080162	Bolt
13	4	60000525	beslag for tromle galv.	4mm. stålplade domex 240 el. tilsv.	Sheet metal part
14	4	60000524	Båndstrammerbeslag galv.	4mm stålplade domex 240 el. tilsv.	Bracket
15	2	10086030	Refleks føler E3Z-R86H		Sensor
16	1	15510111	LØSTROMLE Scandrive light ø113x612 m. bremseleje		Idler pulley
17	1	16370513	Bånd 610 x 5805 medb. T-60 L=605mm	2 M24 AG	Conveyor belt
18	4	16890066	Bræddebolte 8x16 kv. 4,6		Bolt
19	1	20002096	L/B Beslag til følere	2mm. Galv. plade	Bracket for sensor
20	1	15009412	TROMLEMOTOR 113S SL=590 0,38m/s m. kabel		Drum motor
21	4	16910420	Stålsætskrue M12x240	8,8 Efforz. HFC 473	Bolt
22	2	19980006	Label- Krog		Label
23	2	10086031	REFLEX SPEJLE39-R1S	Plast	Reflex
24	1	20002053	L/B Topplade v. løftesjer	3mm. Galv. plade	
25	1	20002001	L/B Plade til reflekser	2mm. Galv. plade	Bracket
26	1	20002250	L/B Låg til fødebånd	3mm PE HD 300 Sort	Lid
27	1	16890130	Bræddebolte 10x20 kv. 4,6		Bolt
28	1	16050044	Spændegreb M12 indst 450-60		Handle

10.4 Cross conveyor



NO.	QTY.	PART NO.	DESCRIPTION	MATERIAL	Description GB
1	1	20002082	L/B Bundplade til tværbånd	3mm. varmgalvaniseret stålplade	Sheet metal part
2	2	20002083	L/B Sideplade til tværbånd	2mm. Galv. plade	Sheet metal part
3	1	15009411	Belt Drive 113S 0,33 kW 1,44ms SL 340		Drum motor
4	1	15510115	Idler 113S SL 340		Idler pulley
5	1	16370514	Bælgelbånd 360 x 2480 2 M24 AG	2 M24 AG med 1 M12 AG bølge	Conveyor belt
6	4	20002087	L/B Båndstrammer til tværbånd	5mm. RF stålplade 304	Bracket
7	4	20002088	L/B Båndstrammer til tværbånd	3mm. RF stålplade 304	Bracket
8	2	20002099	Tragt til tværbånd	2mm. galvaniseret stålplade	Sheet metal part
9	2	20002098	Gummiforhæng til tragt	3mm gummi m. 1 lag lærred	Rubber plate
10	2	20002057	L/B Understøtning f. tværbånd part 2	3mm. varmgalvaniseret stålplade	Sheet metal part
11	1	19980009	Label Skals logo STR:100x200MM	Klistermærke	Skals label
12	2	60000615	Komplet sækkeplatform til tværbånd	Samling	Complete platform
13	2	20002039	L/B Plade til gummiforhæng	1,5mm. Galv. plade	Rubber plate
14	2	19980008	FARE roterende dele	Label	Label
15	1	20002056	L/B Understøtning tværbånd part 1	3mm. varmgalvaniseret stålplade	Sheet metal part
16	2	60000507	Komplet kapacitiv føler	Samling	Complete sensor
17	2	20002226	Gummi v. udløb på tværbånd	3mm. Gummi	Rubber plate
18	2	16890068	Bræddebolte 8x20 kv. 4,6		Bolt
19	1	17095066	Skive M8 Facet	HFC 9167 8.8 Eforz.	Washer
20	1	17000062	Låsemøtrik M8	HFC 840 ELFORZ.	Nut
21	4	20002286	L/B Vinkelplade til bøjle for tværbånd	3mm galv. plade	Sheet metal part
22	1	20002056	L/B Understøtning tværbånd part 1	3mm. varmgalvaniseret stålplade	Sheet metal part
23	4	20002298	L/B Vægtklods til udløbsklap	3mm Galv. plade	Weight block
24	1	60000618	Udløbsstragt 10-50kg svejst	Svejesamling	Funnel
25	1	15570374	Transportrulle 1700 PVC Ø50		Conveyor roller
26	2	16660007	Båndbærring	Indkøbt	Rubber ring
27	1	16910340	Stålsætskrue M10x90	8,8 Eforz. HFC 473	Bolt
28	1	20002305	L/B plade del til udløbsstragt 1-9kg	1,5mm Rustfri plade	Sheet metal part
29	3	16970095	Møtrik M10	HFC 9832	Nut

Complete capacitive sensor



NO.	QTY.	PART NO.	DESCRIPTION	MATERIAL	Description GB
1	12	15780115	KØLERØR LOCKLINE 1/2" 508-60	Plast	Lockline 1/2"
2	1	10024292	AFTAST KAPACITIV CP18 - 30N PNP	Plast	Sensor
3	1	20002036	Mundstykke til føler M18	POM sort	Nozzle
4	1	10062113	MAGNET Ø75	Elgalvaniseret	Magnet
5	1	20002043	L/B Håndtag til magnet	3mm. galv. plade	Sheet metal part
6	1	15780105	LOCKLINE 3/8" 518-04	Plast	Socket
7	1	16050412	KONTRAMØTRIK 3/8"	Galvaniseret	Nut

11 Diagrams

12 EU Declaration of Conformity

Manufacturer	
Company name:	A/S Skals Maskinfabrik
Address:	Hovedgaden 56
	DK-8832 Skals, Denmark
Telephone:	+45 87 25 62 00

hereby declares that

Machine:	Weighing machine
Brand:	AMV1
Type, serial no., year:	

Has been manufactured in conformity with the:

- 1 Machinery Directive 2006/42/EC
- 2 Low Voltage Directive (LVD) 2006/95/EC
- 3 Electromagnetic Compatibility (EMC) Directive 89/336/EEC and the amended 93/68/EEC.

Title:	Production Manager
Name:	Søren Lund Madsen
Company:	A/S Skals Maskinfabrik

Date: _____

Signature:  _____



EL - DOCUMENTATION

Vægt 3 Render/ Weight 3 lines

Kunde: Skals Maskinfabrik
Hovevejgaden 58
8832
Skals



Konstruktør: SGT

Sidst udskrevet: 12/10/2012 11:00:40 PM

Sidst ændret: 11/18/2012


Godk.:

Sagsnr: 2010-11-24

Side F1 af 27

Antal brugte sider: 25

Contents

TITEL	Last correction date	Page number
DATA		
Plant data		
Plant data	5/27/2009 2:17:38 PM	T1
Diagram_Vægt	10/22/2012 9:48:20 PM	T2
Main circle		
Main circle Inverter	11/27/2012 9:42:28 AM	1
Main circle Inverter	11/27/2012 9:49:32 AM	2
Main circle Inverter	11/27/2012 9:49:16 AM	3
Current PLC	11/27/2012 9:48:42 AM	4
Operatør / Panel	12/10/2012 10:54:12 PM	6
Modul 1 - Input	11/27/2012 9:40:46 AM	7
Modul 1 - Input	12/10/2012 10:47:24 PM	8
Modul 1 - Input	12/10/2012 10:51:56 PM	9
Modul 4 - Output	12/10/2012 10:51:38 PM	10
Modul 1 - Input	12/10/2012 10:55:16 PM	11
Modul 1 - Input	12/10/2012 10:56:02 PM	12
Sync signal	11/27/2012 9:37:28 AM	13
Part list	12/10/2012 10:55:02 PM	15
Part list		
Layout	12/10/2012 10:56:48 PM	20
Mekanisk PLC		
Components list	11/18/2012 5:14:22 PM	25
	12/10/2012 10:56:48 PM	26
Components list		
		
Kunde: Skals Maskinfabrik Hovevejsgaden 58 8832 Skals		
Konstruktør: SGT Sidst udskrevet: 12/10/2012 11:00:40 PM Sidst ændret: 12/10/2012 Godk.:		Sagsnr: 2010-11-24 Side II af 27 Antal brugte sider: 25

DATA

WIRE COLOR

Main power

Black L1-L2-L3 - 380/230V
 Light blue Neutral
 Green/Yellow Grounding

Pilot power

Red 230/24 pilot power
 Dark blue 24V DC pilot power
 Orange External pilot power
 Purple Analog

WIRE NUMBER

Pilot power

1. = + (plus)
 2. = - (minus)
 3. Pilot signal
 4 - 21 Pilot signal



Kunde: Skals Maskinfabrik
 Hovedgaden 58
 8832
 Skals

Konstruktør: SGT

Godk.:

Sidst udskrevet: 12/10/2012 11:00:40 PM

Sidst ændret: 5/27/2009

Side titel: Plant data

Sagsnr: 2010-11-24

Side T1 af 27

Antal brugte sider: 25

Controlbox data

Current : 1x230V+N+PE
 Full load current : 3 A
 Frequency : 50 Hz
 Control current : TN-C-S
 Max. short-circuit current : 6 KA
 Max. supply fuse : 16 A
 Kw load : 2 Kw



Kunde: Skals Maskinfabrik
 Hovedgaden 58
 8832
 Skals

Konstruktør: SGT

Godk.:

Sidst udskrevet: 12/10/2012 11:00:40 PM

Sidst ændret: 10/22/2012

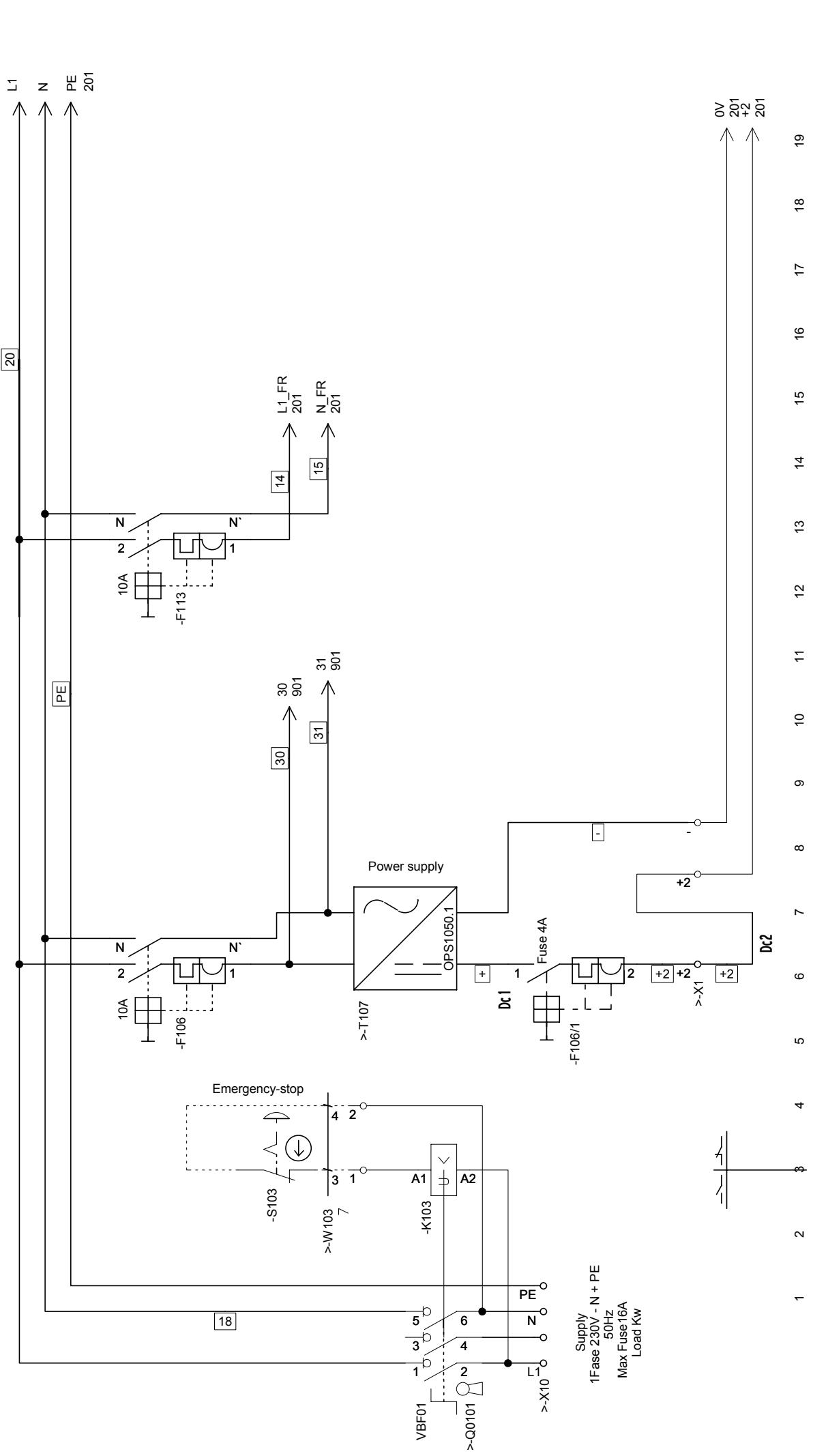
Side titel: Plant data

Sagsnr: 2010-11-24

Side T2 af 27

Antal brugte sider: 25

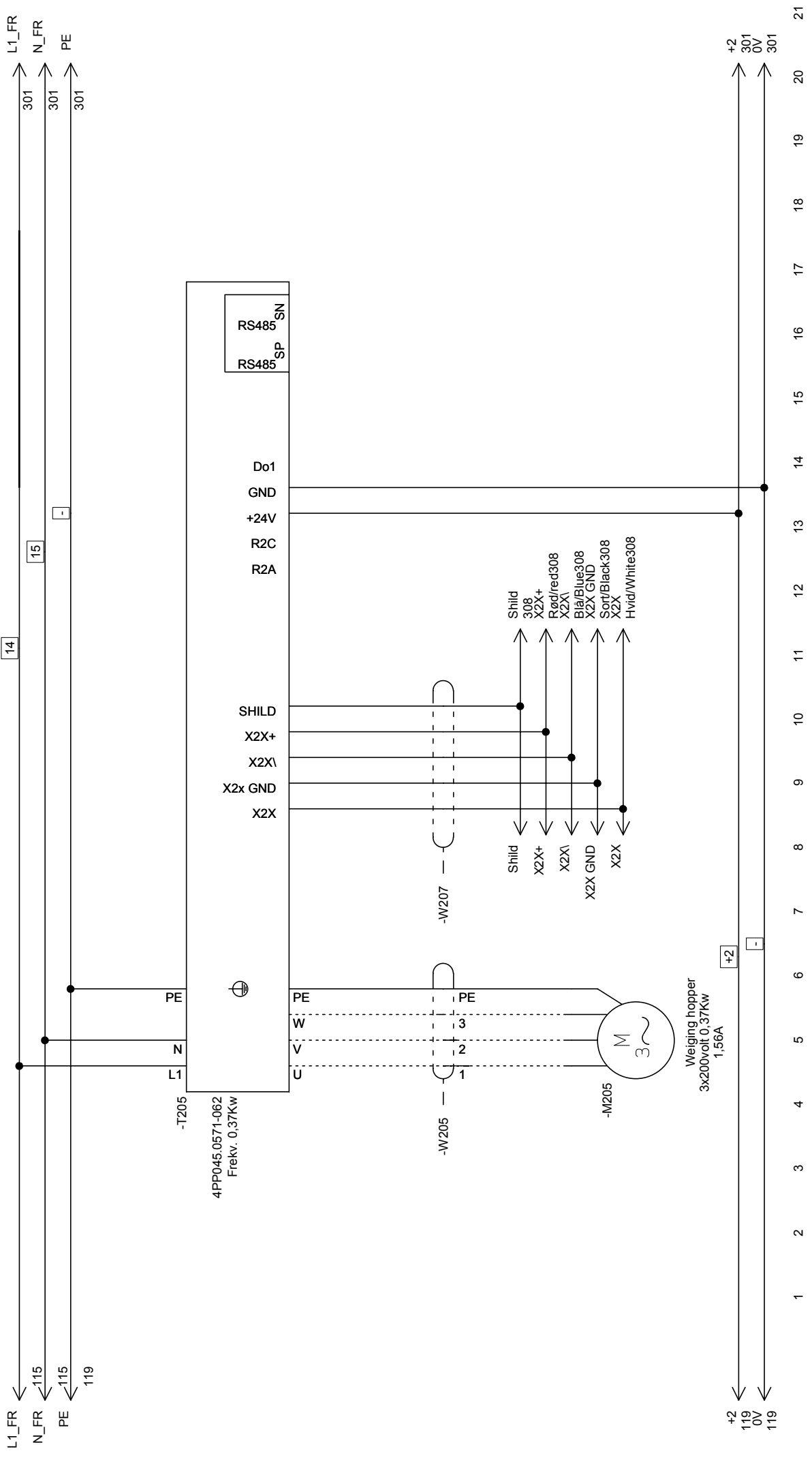
Diagram




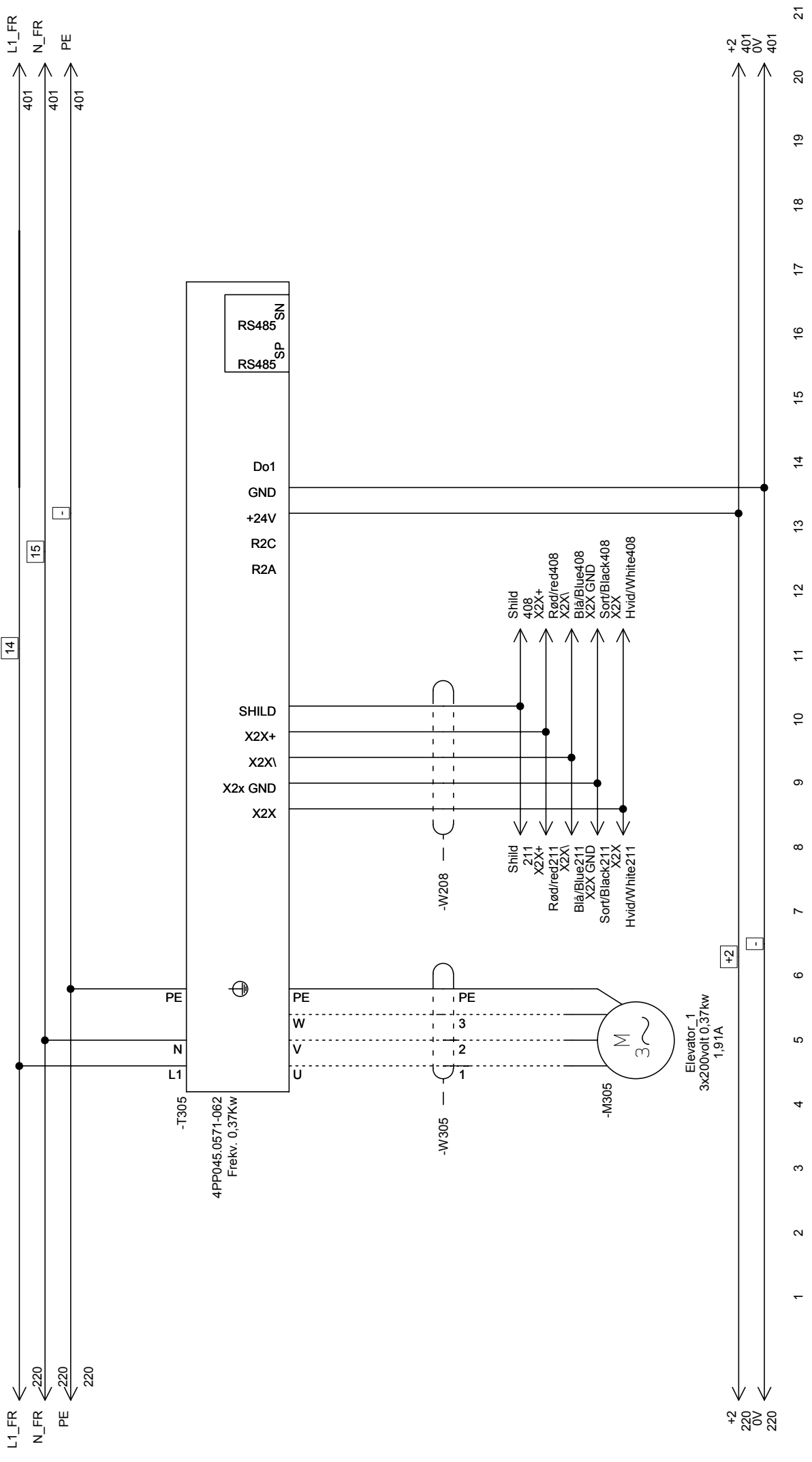
Kunde: Skals Maskinfabrik
Hovedgaden 58
8832
Skals


Konstruktør: SGT
Godk.:
Sidst udskrevet: 12/10/2012 11:00:40 PM
Sidst ændret: 11/27/2012
Side titel: Main circle

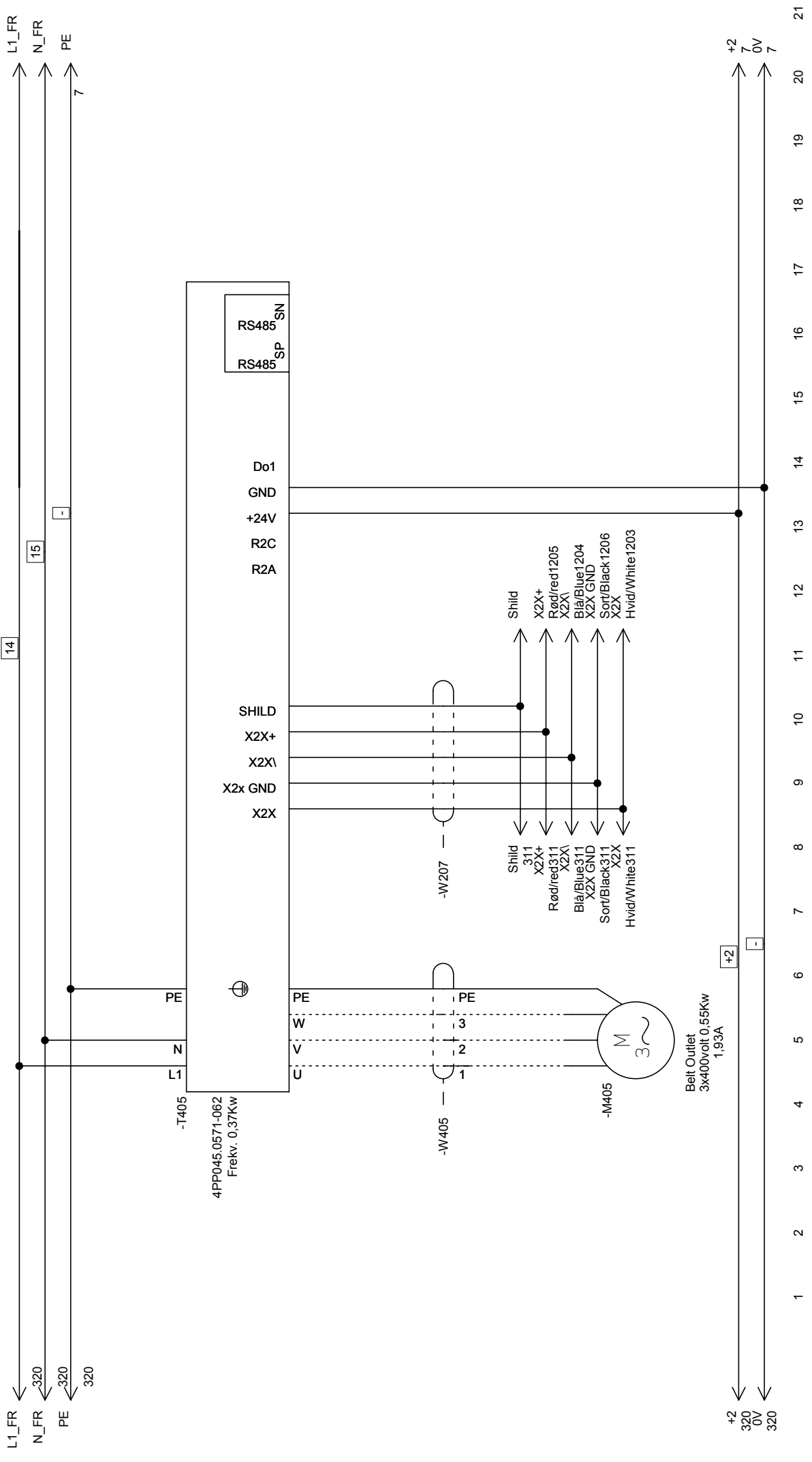
Sagsnr: 2010-11-24
Side 1 af 27
Antal brugte sider: 25




	Kunde: Skals Maskinfabrik Hovedgaden 58 8832 Skals		Konstruktør: SGT		Sagsnr: 2010-11-24		
			Godk.:				
			Sidst udskrevet: 12/10/2012 11:00:42 PM				
			Sidst ændret: 11/27/2012		Side 2 af 27		
Side titel: Main circle Inverter				Antal brugte sider: 25			



	Kunde: Skals Maskinfabrik Hovedgaden 58 8832 Skals		Konstruktør: SGT	Sagsnr: 2010-11-24
			Godk.:	
			Sidst udskrevet: 12/10/2012 11:00:42 PM	
			Sidst ændret: 11/27/2012	Side 3 af 27
Side titel: Main circle Inverter			Antal brugte sider: 25	



	Kunde: Skals Maskinfabrik Hovedgaden 58 8832 Skals		Konstruktør: SGT	Sagsnr: 2010-11-24
			Godk.:	
			Sidst udskrevet: 12/10/2012 11:00:42 PM	
			Sidst ændret: 11/27/2012	Side 4 af 27
Side titel: Main circle Inverter			Antal brugte sider: 25	

X20BT 9400 -K605		21o	22o	23o	24o	25o	26o	(875)
		11o	12o	13o	14o	15o	16o	
X20DO 2322 -K604		21o	22o	23o	24o	25o	26o	(1175)
		11o	12o	13o	14o	15o	16o	
X20CS 1030 -K603		21o	22o	23o	24o	25o	26o	(1075)
		11o	12o	13o	14o	15o	16o	
X20D02633 -K602		21o	22o	23o	24o	25o	26o	(975)
		11o	12o	13o	14o	15o	16o	
X20BT 9300 -K601		21o	22o	23o	24o	25o	26o	(875)
		11o	12o	13o	14o	15o	16o	

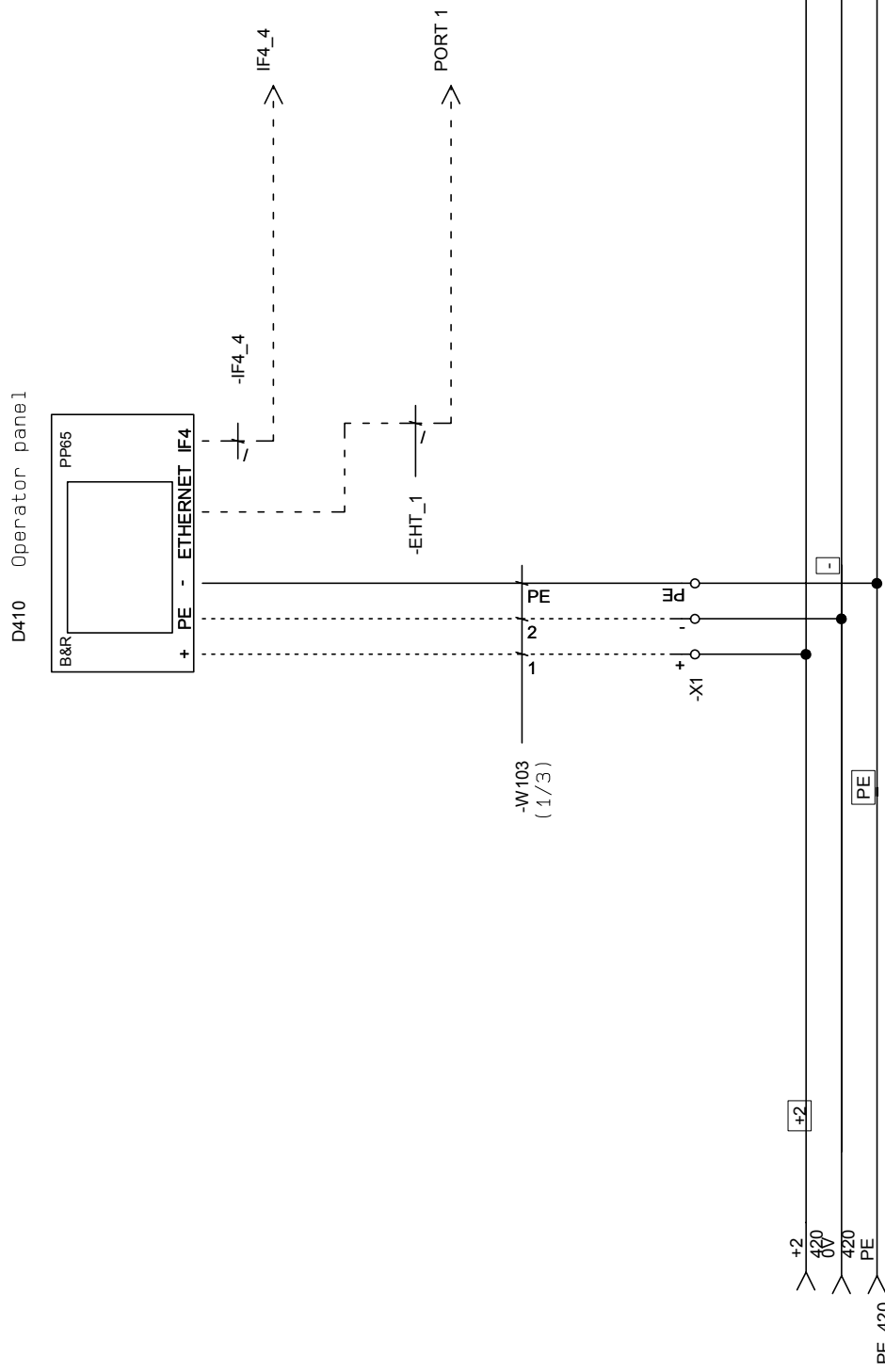
BUS Panel Vibration modul Analog Bus Output Input Weight



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
													Konstruktør: SGT						
													Godk.:						
													Sidst udskrevet: 12/10/2012 11:00:42 PM						
													Sidst ændret: 12/10/2012						
													Side titel: Current PLC						
													Sagsnr: 2010-11-24						
													Side 6 af 27						
													Antal brugte sider: 25						

Kunde: Skals Maskinfabrik
Hovedgaden 58
8832
Skals

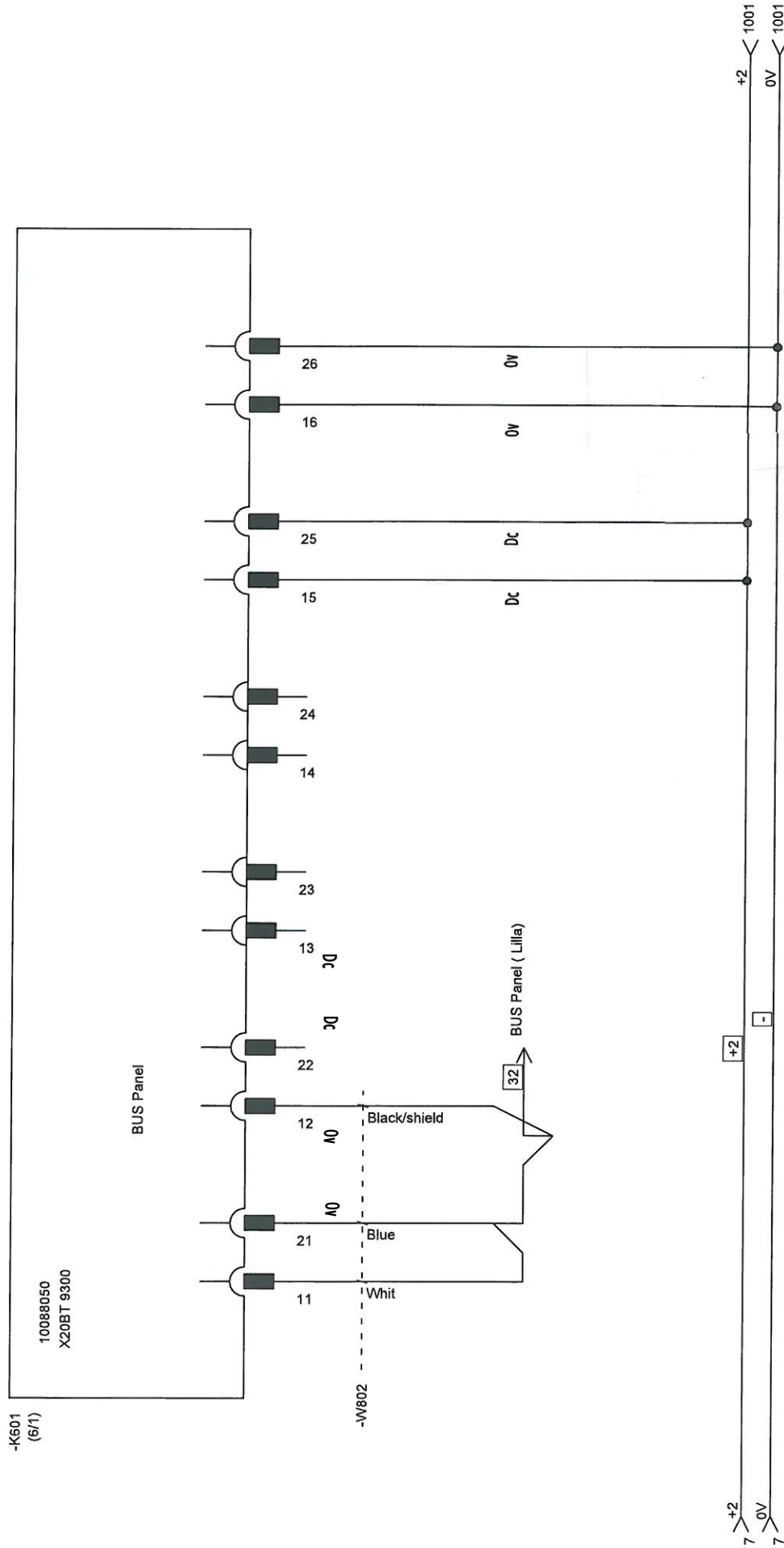




Kunde: Skals Maskinfabrik
 Hovedgaden 58
 8832
 Skals

Konstruktør: SGT
 Godk.:
 Sidst udskrevet: 12/10/2012 11:00:42 PM
 Sidst ændret: 11/27/2012
 Side titel: Operatør / Panel

Sagsnr: 2010-11-24
 Side 7 af 27
 Antal brugte sider: 25



1

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Kunde: Skals Maskinfabrik
Hovedgaden 58
8832
Skals

Konstruktør: SGT

Godk.:

Sidst udskrevet: 12/10/2012 11:00:42 PM

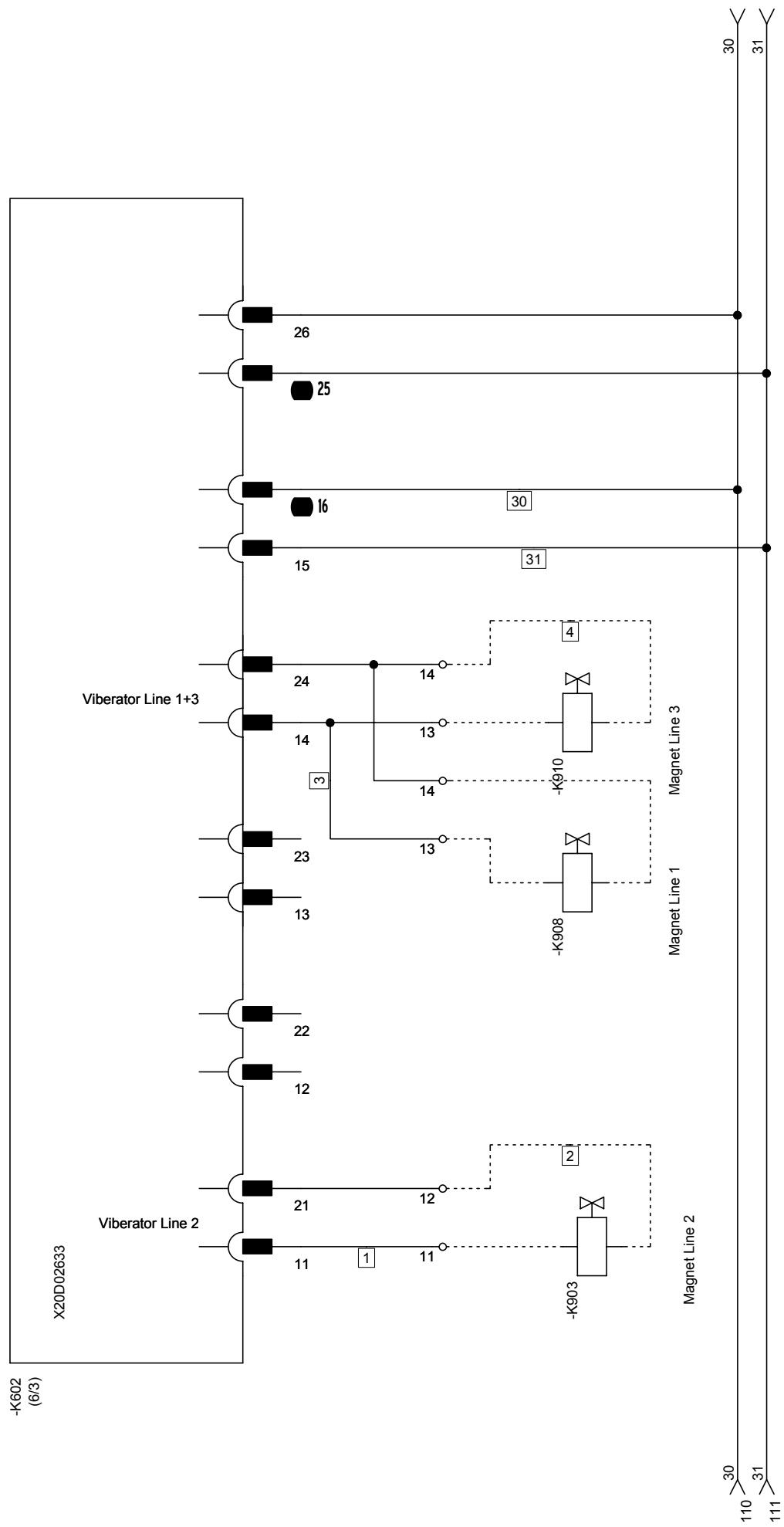
Sidst ændret: 12/10/2012

Side titel: Modul 1 - Input


Sagsnr: 2010-11-24

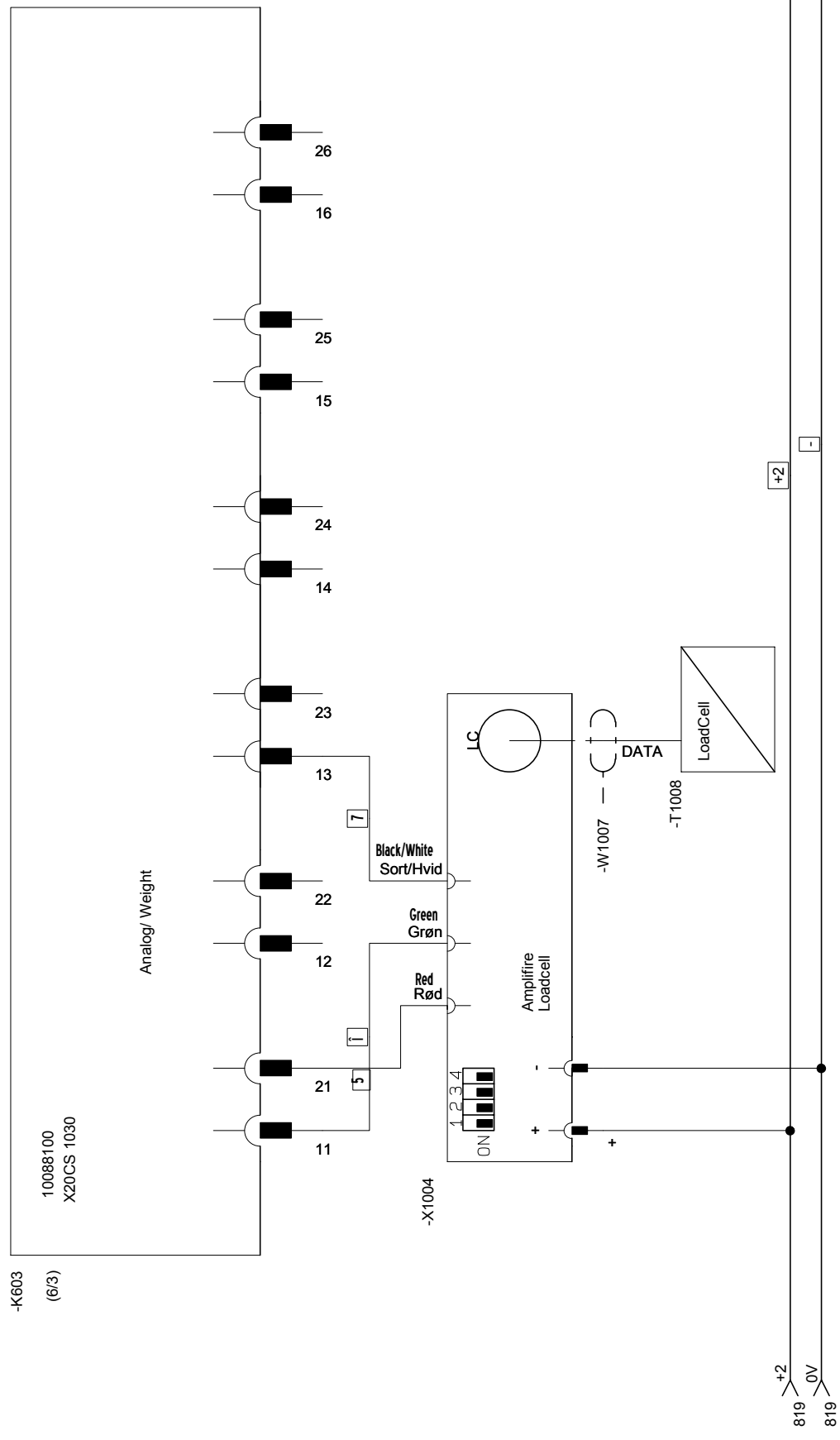
Side 8 af 27

Antal brugte sider: 25



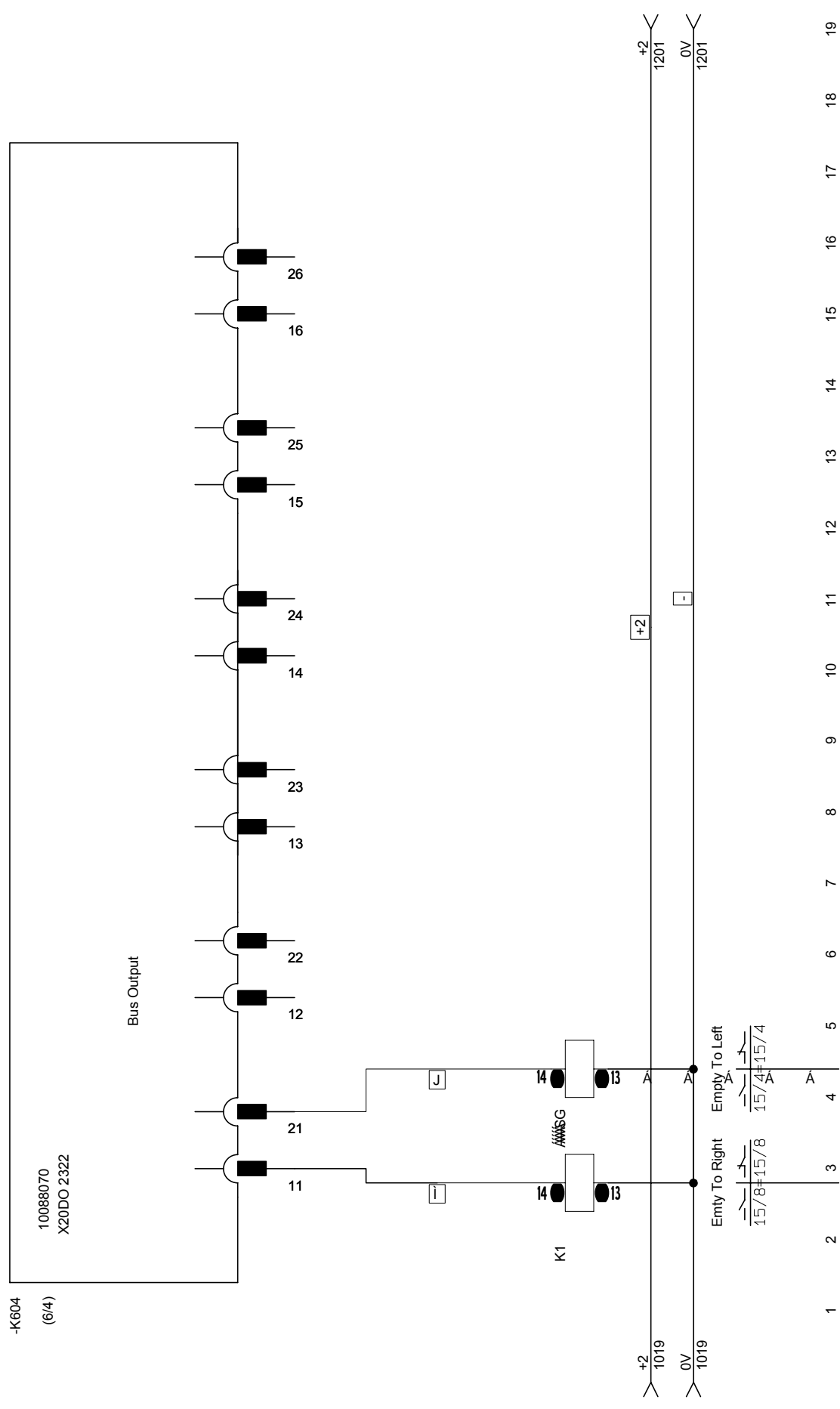
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19


	Kunde: Skals Maskinfabrik Hovedgaden 58 8832 Skals		Konstruktør: SGT	Sagsnr: 2010-11-24
			Godk.:	
			Sidst udskrevet: 12/10/2012 11:00:42 PM	Side 9 af 27
			Sidst ændret: 12/10/2012	Antal brugte sider: 25
		Side titel: Modul 1 - Input		

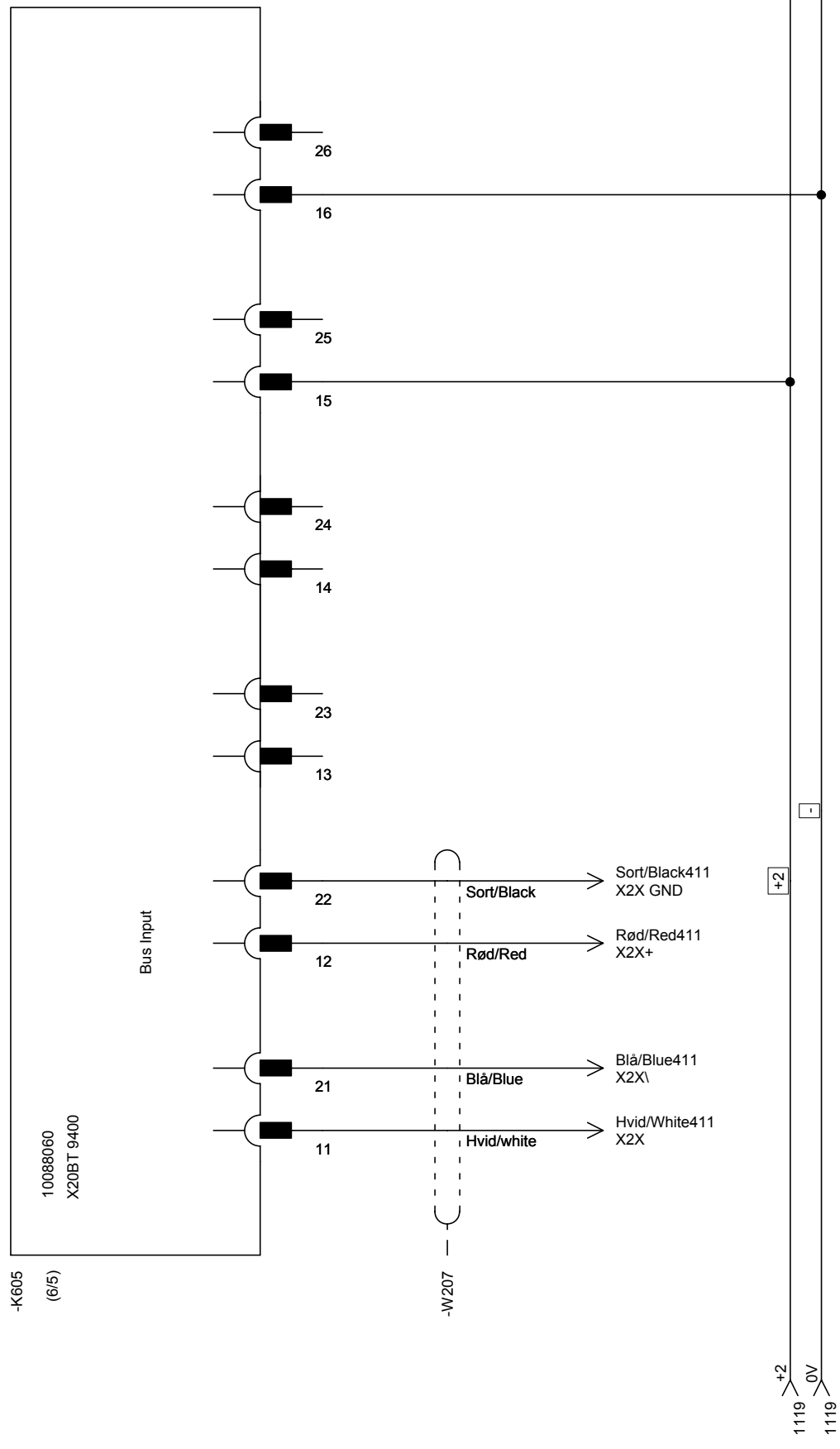


1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Kunde: Skals Maskinfabrik Hovedgaden 58 8832 Skals																		
Konstruktor: SGT Godk.: Sidst udskrevet: 12/10/2012 11:00:42 PM Sidst ændret: 12/10/2012 Side titel: Modul 1 - Input																		
Sagsnr: 2010-11-24 Side 10 af 27 Antal brugte sider: 25																		



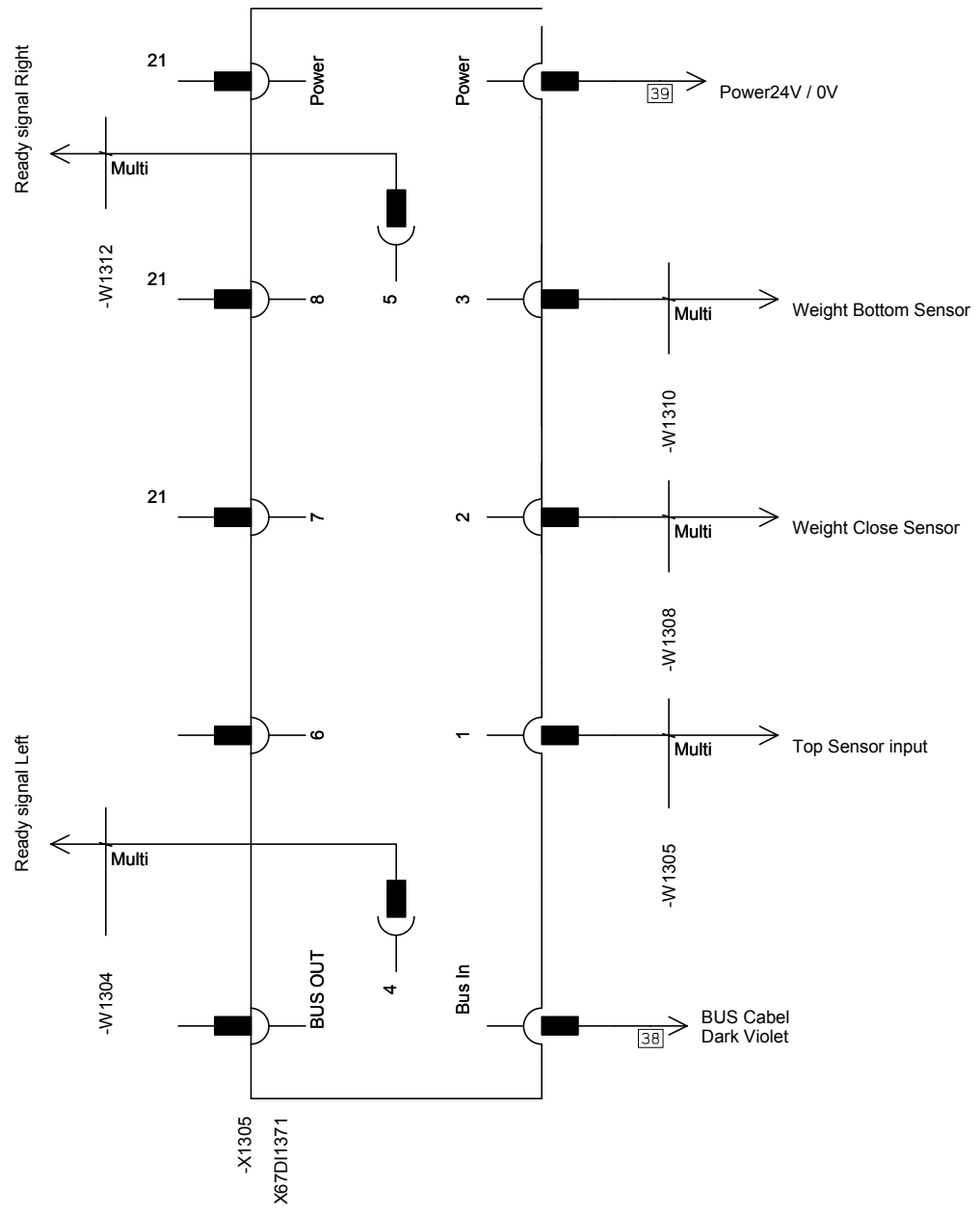


	Kunde: Skals Maskinfabrik Hovedgaden 58 8832 Skals										Konstruktør: SGT		Sagsnr: 2010-11-24	
											Godk.:			
											Sidst udskrevet: 12/10/2012 11:00:42 PM		Side 11 af 27	
											Sidst ændret: 12/10/2012		Antal brugte sider: 25	
										Side titel: Modul 4 - Output				



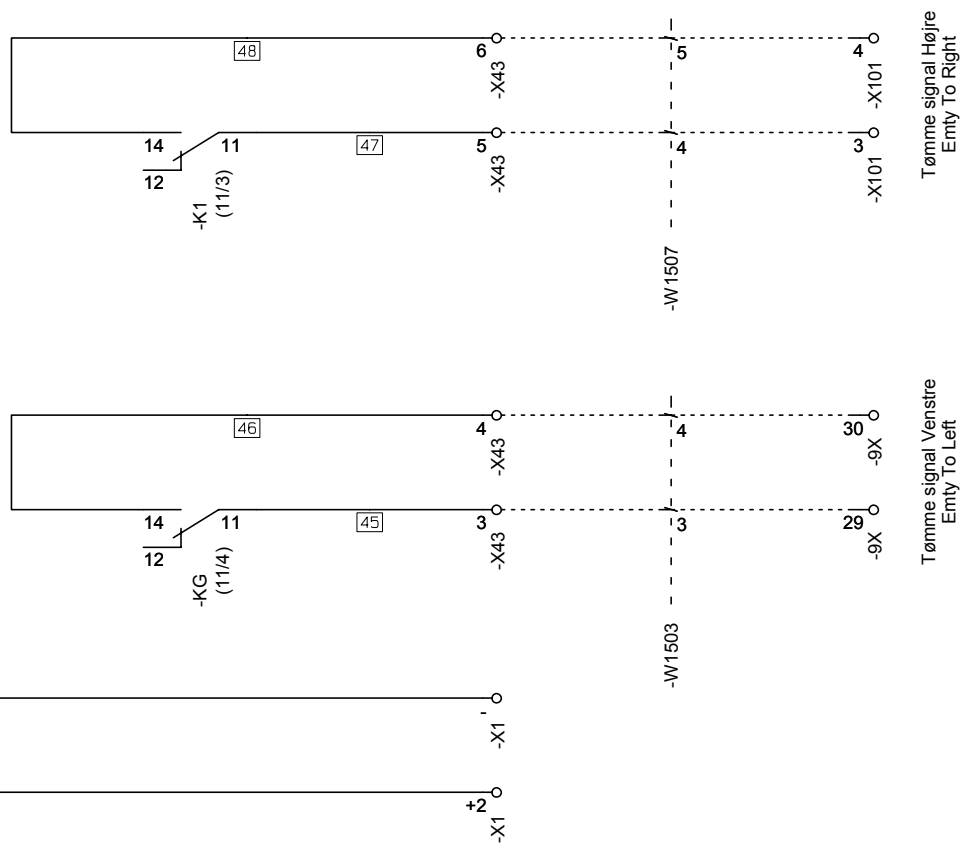
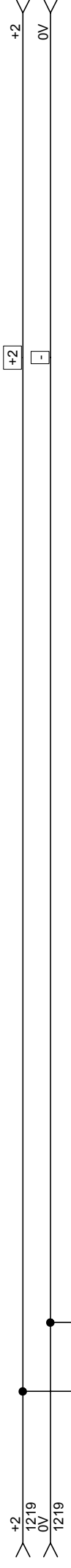
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19

	Kunde: Skals Maskinfabrik Hovedgaden 58 8832 Skals	Konstruktør: SGT Godk.: Sidst udskrevet: 12/10/2012 11:00:42 PM Sidst ændret: 12/10/2012 Side titel: Modul 1 - Input	Sagsnr: 2010-11-24
	Antal brugte sider: 25		Side 12 af 27



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Kunde: Skals Maskinfabrik Hovedgaden 58 8832 Skals													Konstruktør: SGT		Sagsnr: 2010-11-24			
													Godk.:					
													Sidst udskrevet: 12/10/2012 11:00:42 PM					
													Sidst ændret: 11/27/2012		Side 13 af 27			
													Side titel: Modul 1 - Input		Antal brugte sider: 25			





1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
<p>Kunde: Skals Maskinfabrik Hovedgaden 58 8832 Skals</p>																		
<p>Konstruktør: SGT</p>																		
<p>Godk.:</p>																		
<p>Sidst udskrevet: 12/10/2012 11:00:42 PM</p>																		
<p>Sidst ændret: 12/10/2012</p>																		
<p>Side titel: Sync signal</p>																		
<p>Sagsnr: 2010-11-24</p>																		
<p>Side 15 af 27</p>																		
<p>Antal brugte sider: 25</p>																		



Part list


Layout



Inside cabinet



Backside cabinet

		Projekt titel: Vægt, 3 Render/ Weight, 3 lines Kunde: Skals Mias kinifabrik Side titel: Mekanisk PLC Side reference: Side reference beskrivelse:	Konstr.: SGT Godk.: Sidst udskrevet: 12/10/2012 Sidst ændret: 11/18/2012	Sags nr: 2010-11-24 Projekt rev: Side rev: Side 25 af 27 Antal brugte sider: 25
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Pos.	Component	Part no.	Type	Manufacturer	Source	Description	Position
1	-9X	4008190444884	ZDK 1.5 167430	Weidmüller	Wexøe A/S	Double feed through terminal	15/4
2	-EHT_1						7
3	-IF4_4						7
4	-K601	10088050	X20BT 9300				6/1
5	-K602	10088080	X20D02633				6/3
6	-K603	10088100	X20CS 1030				6/3
7	-K604	10088070	X20D0 2322				6/4
8	-K605	10088060	X20BT 9400				6/5
9	-K903						9/3
10	-K908						9/8
11	-K910						9/10
12	-K1103	4536854407956	G2R-1-SNDI 24DC	OMRON Electronics	A/S	Relay, plug-in, 5-pin, SPDT, 10A, mech & LED indicators, coil suppress	11/3
13	-K1104	4536854407956	G2R-1-SNDI 24DC	OMRON Electronics A/S		Relay, plug-in, 5-pin, SPDT, 10A, mech & LED indicators, coil suppress	11/4
14	-M205						2/5
15	-M305						3/5
16	-M405						4/5
17	-Q0101	3389110201000	VBF01	Telemecanique	Telemecanique	Main switch disconnecter 20A 3P	1/1
18	-T107	10088190	OPS1050.1				1/7
19	-T205	10065160	4PP045.0571-062				2/6
20	-T305	10065160	4PP045.0571-062				3/6
21	-T405	10065160	4PP045.0571-062				4/6
22	-T1008		Type SPSS 150kg				10/8
23	-W103						1/3
24	-W205						2/4
25	-W207		Bus Dark Violet				2/8
26	-W208		Bus Dark Violet				3/8
27	-W305						3/4
28	-W405						4/4

Project title: Vægt 3 Render/ Weight 3 lines		Project no.:	Project rev.:	Page	26
Customer:		DCC:		Scale:	1:1
Page title:	Components list	Drawing no.:	Page rev.:	Previous page:	25
Filename:	Vægt_2 Render_V2	Constructor (project/page)	Last printed:	Next page:	27
Page ref.:		Appr. (date/sign)	Last correction:	Number of pages:	25



Pos.	Component	Part no.	Type	Manufacturer	Source	Description	Position
29	-W802						8/2
30	-W1007						10/7
31	-W1304						13/4
32	-W1305						13/5
33	-W1308						13/8
34	-W1310						13/10
35	-W1312						13/12
36	-W1503						15/3
37	-W1507						15/7
38	-X1	4008190077969	ZDU 2,5	Weidmüller	Wexøe A/S	Feed through terminal	1/8
39	-X1	4008190444884	ZDK 1.5	Weidmüller	---	Double feed through terminal	15/2
40	-X10	4008190996765	ZDU 16	Weidmüller	---	Feed through terminal	1/1
41	-X10	4008190996769	ZPE 16	Weidmüller	---	PE terminal	1/1
42	-X43	4008190444884	ZDK 1.5	Weidmüller	---	Double feed through terminal	15/8
43	-X101	4008190444884	ZDK 1.5	Weidmüller	---	Double feed through terminal	15/9
44	-X1004	10088220	RS185 69314011 4140				10/4
45	-X1305	10088110	X67DI1371				13/5
46	=V1+K1 -F106	3303430215561	21556	Merlin Gerin	Merlin Gerin	Mcb iDPN 1P+N C10	1/6
47	--- -F106/1	5703847533049	1492-RFB424				1/6
48	--- -F113	3303430215561	21556	Merlin Gerin	Merlin Gerin	Mcb iDPN 1P+N C10	1/13
49	--- -K103	3250614565144	MZ528N	HAGER	HAGER	Under voltage release MZ528N	1/3
50	--- -S103	3389110888706	ZB4BS44	Telemecanique	Telemecanique	Mushroom pushbutton red Ø30, push-turn	1/3
51	--- -X1	4008190077969	ZDU 2,5	Weidmüller	Wexøe A/S	Feed through terminal	1/8
52	D410	10088010	4PP045.0571-062				7

PCSCHEMATIC Automation

Project title: Vægt 3 Render/ Weight 3 lines		Project no.:	Project rev.:	Page	27
Customer:		DCC:		Scale:	1:1
Page title: Components list		Drawing no.:	Page rev.:	Previous page:	26
Filename: Vægt_2 Render_V2		Constructor (project/page)	Last printed: 12/10/2012	Next page:	
Page ref.:		Appr. (date/sign)	Last correction: 12/10/2012	Number of pages:	25

