

AUTOMATIC BATTER-BREADING MACHINE

Mod. MINI



GASER

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4. INTRODUCTION

Before using or handling the machine, you must read this manual carefully.

The instructions in this document are, whenever possible, accompanied by illustrations to help with understanding of how to start, use and clean the machine.

This manual is subject to amendment.

4.1 Safety

It is forbidden to make any change or modification to the machine without the prior written permission of our technical department. Use of the machine in these conditions could cause accidents, in which case INDUSTRIAS GASER S.L. accepts no liability for improper use of the machine.

The machine has been designed for use with food products and must be used in the way described in this manual. Any use other than the specified one will involve risk for the user and for the machine. INDUSTRIAS GASER S.L. accepts no liability either for damage to the machine or personal injury or injury to third parties that this use might cause.

4.2 Hygiene

All of the materials used in the manufacture of the machine and which come into contact with food comply with Regulation 1935/2004. Consequently, the machine has the CE mark.

It is not recommended to use detergents containing chlorine, any of its derivatives or any other product that could damage the construction materials of the machine.

5. TECHNICAL SPECIFICATIONS

1. Automatic battering and breading
2. Can be fully dismantled for ease of cleaning
3. Easy maintenance
4. Made from stainless steel and plastics suitable for use with food
5. Mounted on 4 legs with stainless steel wheels
6. Tray support at outlet
7. Blower to remove excess batter
8. Reversible direction for emptying bread
9. Variable belt speed from 9 to 15 metres/minute
10. Produces 2000 to 3000 pieces/hour
11. Usable width 150 mm
12. Motor power (single-phase) 184 W
13. Dimensions of assembled machine: 1440 × 500 × 1100 mm
14. Dimensions of packaged machine: 1300 × 700 × 700 mm
15. Machine weight: 110 kg

6. RECEIPT AND START-UP

6.1 Receipt

When you receive the machine, you must first check that it is in perfect conditions, without any damage, dents or knocks.

If there is any problem, we advise you notify the distributor or INDUSTRIAS GASER S.L. directly.

6.2 Assembly

The MINI model batter-breading machines are supplied disassembled. These machines essentially comprise 9 parts (Image 1).

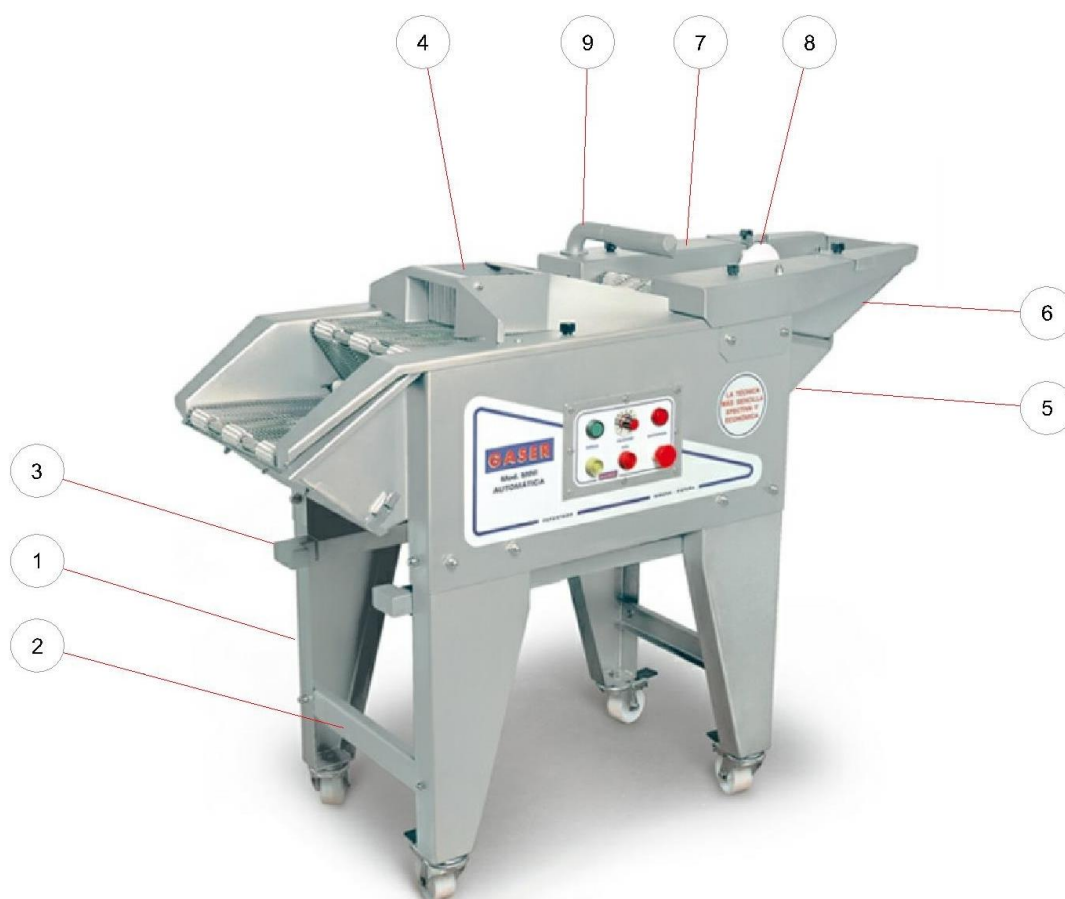


Image 1. Main parts

The process for assembling the machine is described below.

1. Fit each of the legs (Pos. 1, Image 1) using the 3 screws and the 3 M10 cap nuts. The legs include the guides for the tray supports.
2. Once the legs have been attached, attach the two crossbars (Pos. 2, Image 1) using the screws and M8 nuts.
3. Next, add the two tray supports (Pos. 3, Image 1).
 - 3.1. Put the tray supports into their guides (Pos. 41 and 42, Overview). The supports should be assembled as shown in Image 2. The ends of the supports, located below the machine, have a nut screwed on for attaching them.

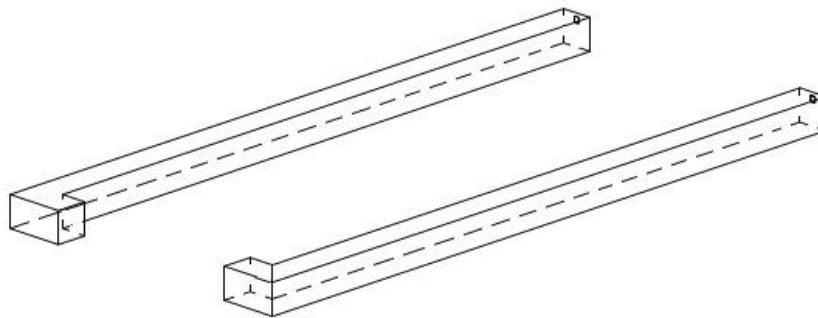


Image 2. Tray supports

- 3.2. Once the supports have been put in place, locate the two washers and screw the two M6 screws into the threaded holes in the supports.
4. Next attach the breeder (Pos. 4, Image 1). Fit the slots into the curved part of the breeder tank then lower it so that the pivots go into the corresponding holes.
5. After this, assemble the batter tank support (Pos. 5, Image 1). Tighten the 4 M8 screws from the outside of the machine.
6. Next, attach the batter tank (Pos. 6, Image 1), placing it on its support and sliding it until the lug enters the mounting hole.
7. The next step is to assemble the batter belt (Pos. 7, Image 1). Support it on the bread tank, fitting it into place and fixing it with two knobs (Pos. 34, Overview).
8. Next fit the batter roller (Pos. 8, Image 1), fitting it into the guides on the batter belt.
9. Finally, fit the air outlet unit (Pos. 9, Image 1). Fit the air outlet elbow (Pos. 44, Overview) into its hole and then fit the air outlet mouth (Pos. 45, Overview), angling it towards the battering area.

6.3 Start-up

1. It is important that when the machine starts working, it is completely clean to ensure it operates properly.
2. The MINI model breading machine works on single phase 220 V 50 Hz electrical current.
3. To start breading, first turn the machine on using the ON/OFF position selector knob (Pos. 54, Overview). Once the machine is in the ON position, press the green "START" button (Pos. 6, Control panel overview) and control the belt speed using the speed controller (Pos. 7, Control panel overview).
4. The user must make sure the belt is turning in the forward direction and not in reverse. To change the direction of the belt, use the reverse switch (Pos. 55, Overview).
5. Next pour 4 to 5 litres of batter into the batter tank. The batter level must not be higher than half way up the batter roller (Pos. 46, Overview).
6. Next fill the breader with 8-10 kilograms of breadcrumbs, always with the machine turned on. For correct breading, the bread level must be between 1 and 2 centimeters from the top of the curtain vanes (Pos. 3, Complete MINI breader overview). Excess bread will affect the operation of the machine

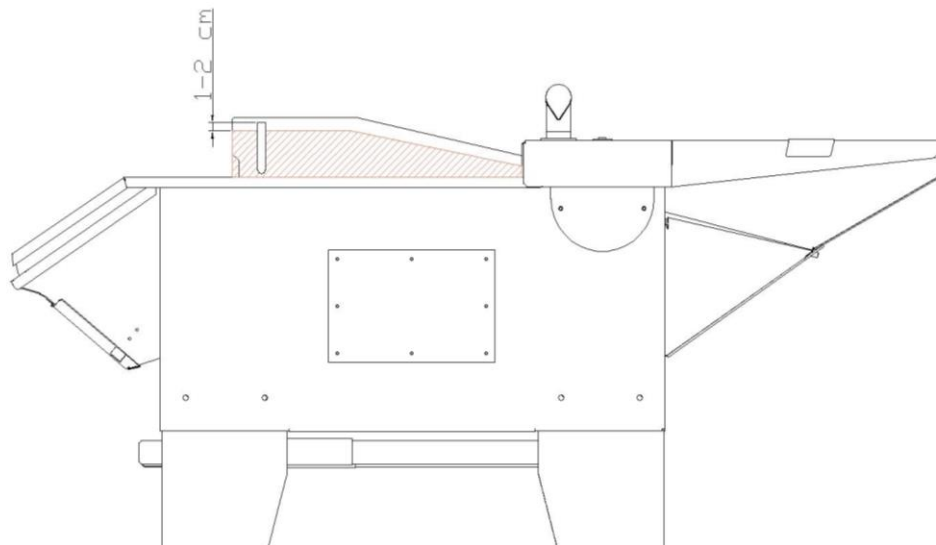


Image 3. Bread level

7. The machine is ready for breading.

6.4 Notes

1. The wire mesh battering and breading belts must operate under tension. You should also remember that they loosen in use. There is a shaft for tensioning them (Pos. 11 and 12, Overview). To use this, slide both ends in the appropriate direction by the same amount. Working with the wire mesh belts loose or too tense can cause damage.

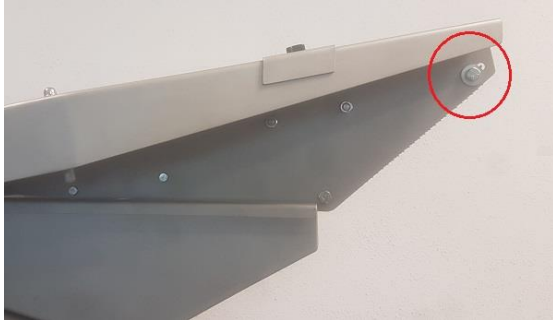


Image 4. batter belt tensioner



Image 5. Breading belt tensioner

2. The controls (Pos. 16, Overview) can be mounted on either side of the machine. To do this, simply swap the panel for the blank cover (Pos. 19, Overview) from the other side by disconnecting the plug and reconnecting it on the opposite side.

7. CLEANING

When you have finished using the machine, it must be cleaned. To do so, follow these steps:

1. Remove the air blower outlet mouth (Pos. 45, Overview) and the blower outlet elbow (Pos. 44, Overview).



Image 6. Mouth removal



Image 7. Elbow removal

2. Remove the batter roller (Pos. 46, Overview).



Image 8. Batter roller removal

3. Once the batter has been emptied using the valve (Pos. 40, Overview), disassemble the batter belt chassis (Pos. 35, Overview) by removing the two knobs (Pos. 34, Overview). Next remove the batter tank (Pos. 36, Overview).



Image 9. Emptying batter tank



Image 10. Removing knobs



Image 11. Batter belt removal



Image 12. Removing batter tank

4. Remove the breader (Pos. 15, Overview).



Image 13. Breader removal

5. To empty the bread, use the direction reverser (Pos. 55, Overview) and empty it through the discharge door (Pos. 26, Overview). First, run the belt in forward direction to remove accumulated bread. Next, open the discharge door and reverse the direction of the belt.



Image 14. Opening the discharge door



Image 15. Use direction reverser

6. Remove the breading belt (Pos. 29, Overview) by removing the two knobs (Pos. 34, Overview).



Image 16. Removing knobs



Image 17. Breading belt removal

7. Clean the disassembled components with pressurised water and dry well, if possible with air. Clean the machine's chassis with a damp cloth. Never clean it with pressurised water.



Image 18. Chassis ready for cleaning

8. To reassemble the machine, repeat the process described above in reverse order.

8. MAINTENANCE

1. Periodically check the condition of all moving parts: belt, rollers, gears and bearings.
2. Periodically check the condition of the gear motor.
3. Periodically check the general condition of the machine.
4. If any of the rods on the wire mesh belts break, replace the broken rod with a new one using a connecting tube. The connecting tube must always be situated where there are no rollers.

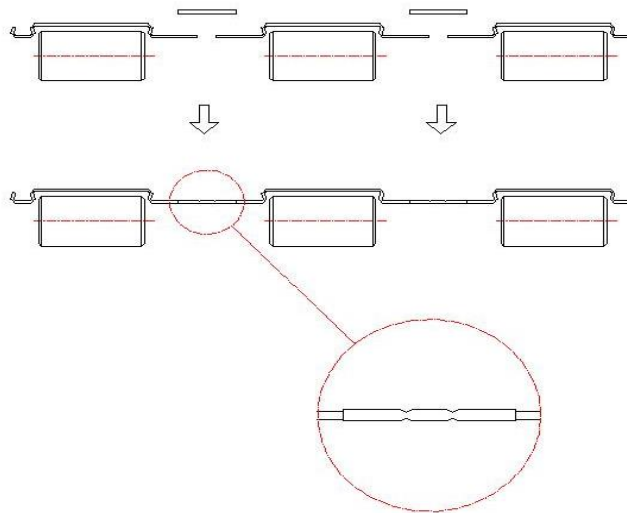


Image 20. Belt rod repair

5. When reassembling the belt on its chassis, remember that the smooth side is the upper face and that the ends of the wires must always face in the opposite direction to the forward motion.



Image 21. Belt fitting

9. TROUBLESHOOTING

The table below lists the problems that might occur with the machine, their potential causes and how to solve them.

Problem	Cause	Solution
The machine does not start	Machine unplugged	See manual "6.2. Start-up", point 4
	The batter tank is not correctly positioned	Locate it using its own centring pieces.
The belt makes a noise	Electronic fault	Completely disconnect the machine for 5-10 seconds
	Incorrect belt tension	See manual "6.3. Notes", point 1
	The mesh is twisted	Straighten, repair or replace affected area. See manual "8. Maintenance", points 4 and 5
The pieces are deformed as they pass through the breader.	The tooth rollers are worn.	See manual "8. Maintenance", point 1
	There is insufficient bread.	See manual "6.2. Start-up", point 6
	The batter is not correct.	The batter should be smoother or colder.
The bread forms lumps	There is too much batter and it is coming into contact with the bread.	See manual "6.2. Start-up", point 5

10. GENERAL DIAGRAM

10.1 Overview

Number	Description	Reference	Units
1	MINI BREADER CHASSIS	40010100	1
2	FRONT LEG	40130100	2
3	BACK LEG	40130200	2
4	LEG CROSSBAR	40130300	2
5	UNIT COMPLETE DRIVE SHAFT BREADING BELT	44670000	1
6	UNIT COMPLETE DRIVE SHAFT BATTER BELT	44680000	1
7	UNIT COMPLETE BEARING HOUSING LEFT BREADING BELT	44620000	1
8	UNIT COMPLETE BEARING HOUSING RIGHT BREADING BELT	44630000	1
9	UNIT COMPLETE BEARING HOUSING BATTER BELT	44640000	2
10	UNIT COMPLETE SHAFT BREADING BELT PASSIVE ROLLER	44760000	3
11	UNIT COMPLETE TENSIONING SHAFT BREADING BELT	44560000	1
12	UNIT COMPLETE TENSIONING SHAFT BATTER BELT	44770000	2
13	UNIT LOWER SHAFT COMPLETE BATTER BELT	44790000	2
14	UNIT COMPLETE SHAFT BATTER BELT LOWERING ASSEMBLY	44780000	1
15	UNIT COMPLETE MINI BREADER	44820000	1
16	UNIT CONTROL PANEL	40250000	1
17	UNIT ELECTRICAL CABINET	40260000	1
18	UNIT GEAR MOTOR	PLEASE CONSULT	1
19	BLANK CONTROL PANEL COVER	40160800	1
20	PANEL INSIDE PROTECTOR	40250200	1
21	SWITCH PROTECTOR	40250500	1
22	LOWER TURBINE	40300000	1
23	DRIVE GEARS	40091000	1
24	MOTOR AXIS	40091100	1
25	GEAR END WASHER	40000500	5
26	BREADER TANK DISCHARGE DOOR	40160600	1
27	BREADER DISCHARGE DOOR LATCH	40160700	2
28	BATTER TANK SUPPORT	40161000	1
29	BREADING BELT CHASSIS	40030100	2
30	MESH SLIDING PLATFORM	40030200	1

31	DUST PROTECTION COVER	40031200	1
32	BREADER CONVEYOR BELT	44710000	1
33	BREADER BELT POSITION GUIDE PIVOT	40010500	2
34	M8 FIXING KNOB	00040200	6
35	BATTER BELT CHASSIS	40040100	2
36	BATTER TANK	40020100	1
37	DRIVE GEAR SIDE SPACER	40040300	
38	SAFETY MICROSWITCH	40041500	1
39	BATTER WIRE MESH CONVEYOR BELT	44720000	1
40	STAINLESS G 1/2" H-H STOPCOCK	SI0136LP12	1
41	RIGHT TRAY SUPPORT ANGLE	40130500	1
42	LEFT TRAY SUPPORT ANGLE	40130600	1
43	GEAR TRAIN COVER	40160500	1
44	AIR BLOWER OUTLET ELBOW	PLEASE CONSULT	1
45	AIR BLOWER OUTLET MOUTH	PLEASE CONSULT	1
46	BATTER ROLLER	40190100	1
47	BATTER ROLLER FIXING BRACKET	40190200	2
48	BATTER ROLLER GUIDE CHANNEL	44570000	2
49	SIDE GUIDE PIVOT	40190400	4
50	BLUE POLYAMIDE WHEEL WITH STAINLESS STEEL BRAKE	SI0125NOX9RX	4
51	LS-11 LIMIT SWITCH	EL0220LS11	1
52	COVER CONNECTOR GLAND	EL0220PMA20G	1
53	SINGLE PHASE PLUG 1409-19	EL0220CEM	1
54	GENERAL SWITCH	EL1320IL20A	1
55	REVERSE KNOB	44970000	1
56	BREADER ON-OFF STICKER	PA023040OFON	1
57	D-120 ROUND BREADER STICKER	PA0230D120	2
58	TRIANGULAR FRONT MINI STICKER	PA0230FT40	2
59	BREADER REAR COVER STICKER	PA0230TP40	1
60	CE MARKING	PA0230CE	1

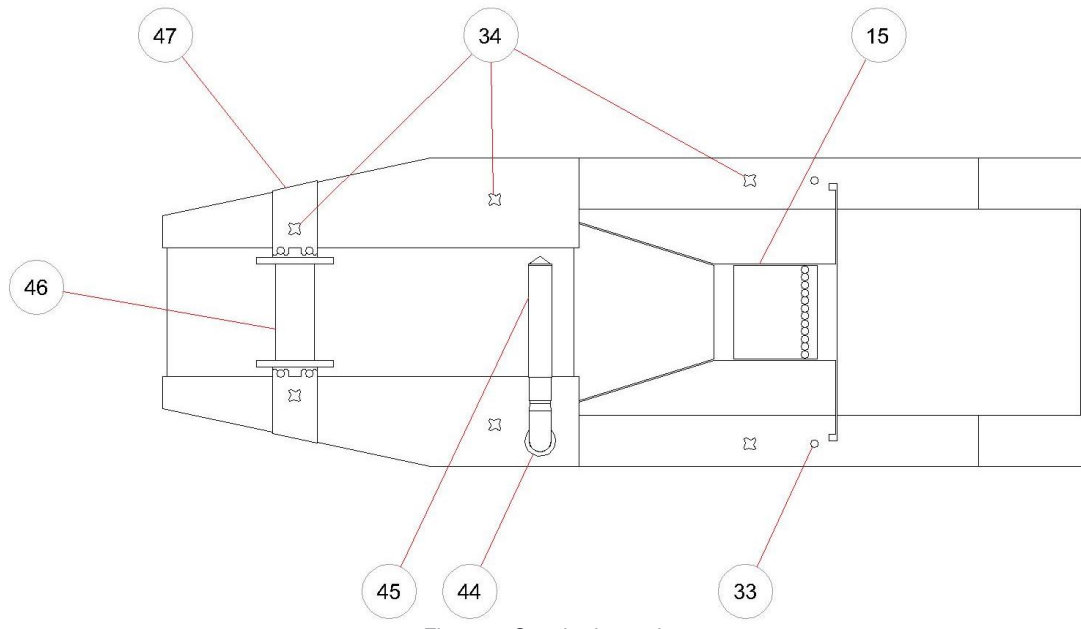


Figure 1. Standard overview 1

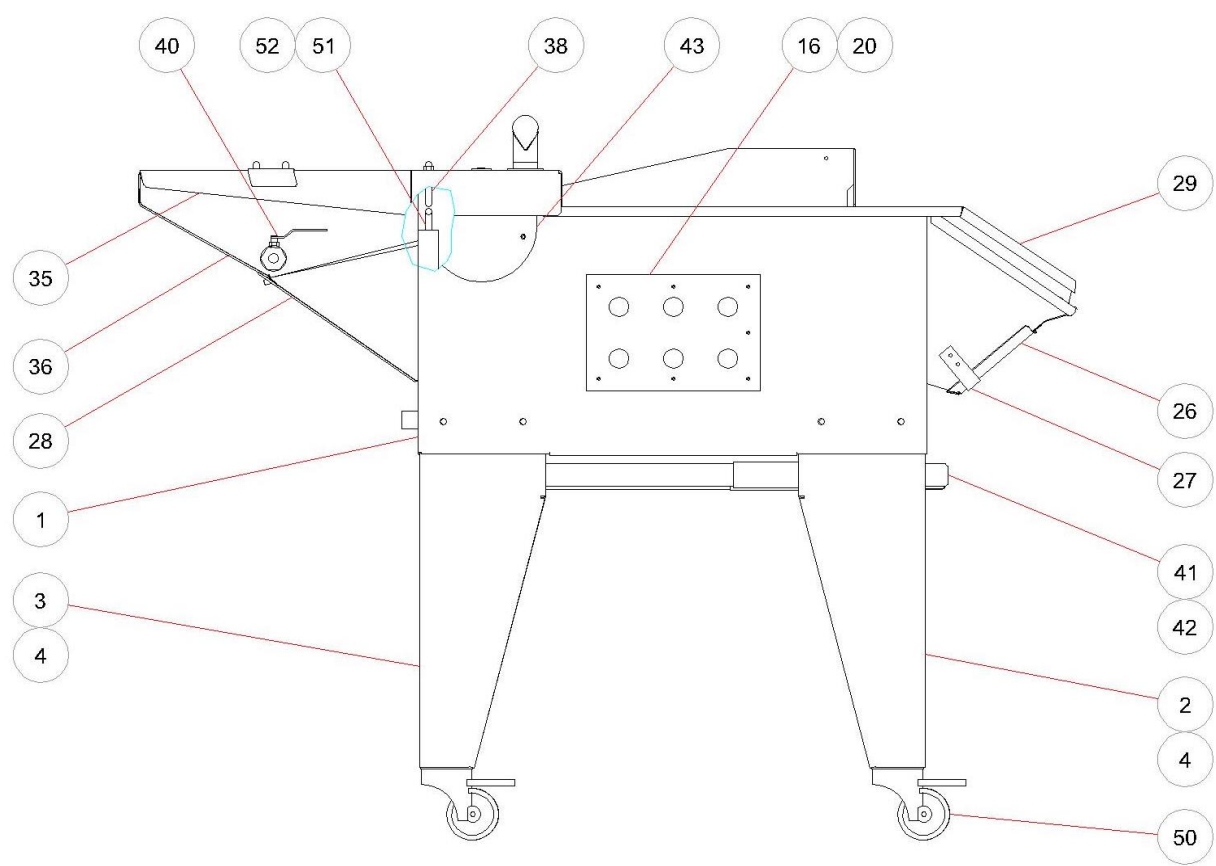


Figure 2. Standard overview 2

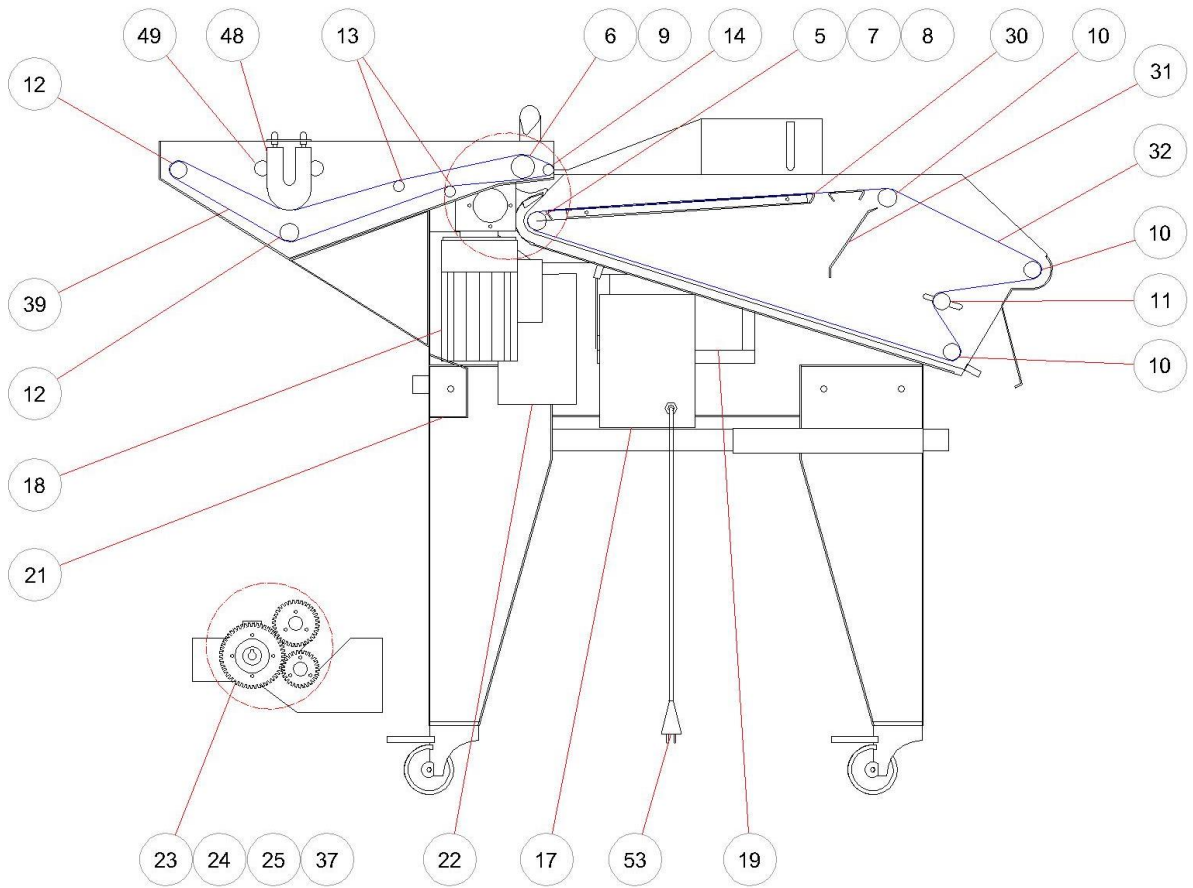


Figure 3. Standard overview 3



Figure 4. Standard overview 4



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Figure 5. Standard overview 5

10.2 Overview complete breading belt drive shaft

Ref. 44670000

Number	Description	Reference	Units
1	BREADING BELT DRIVE GEAR UNIT	44580000	1
2	BREADING BELT DRIVE SHAFT	40030400	1
3	BREADING BELT TOOTH ROLLER	40000100-R	3
4	DRIVE SHAFT SPACING ROLLER	40031400	2
5	GEAR END WASHER	40000500	1
6	E-15 DIN 471 STAINLESS CIRCLIP	SI0109E150471	2
7	VITON FPM 70 SHA Ø13 x 2.5mm O-RING	SI06090132.5	4

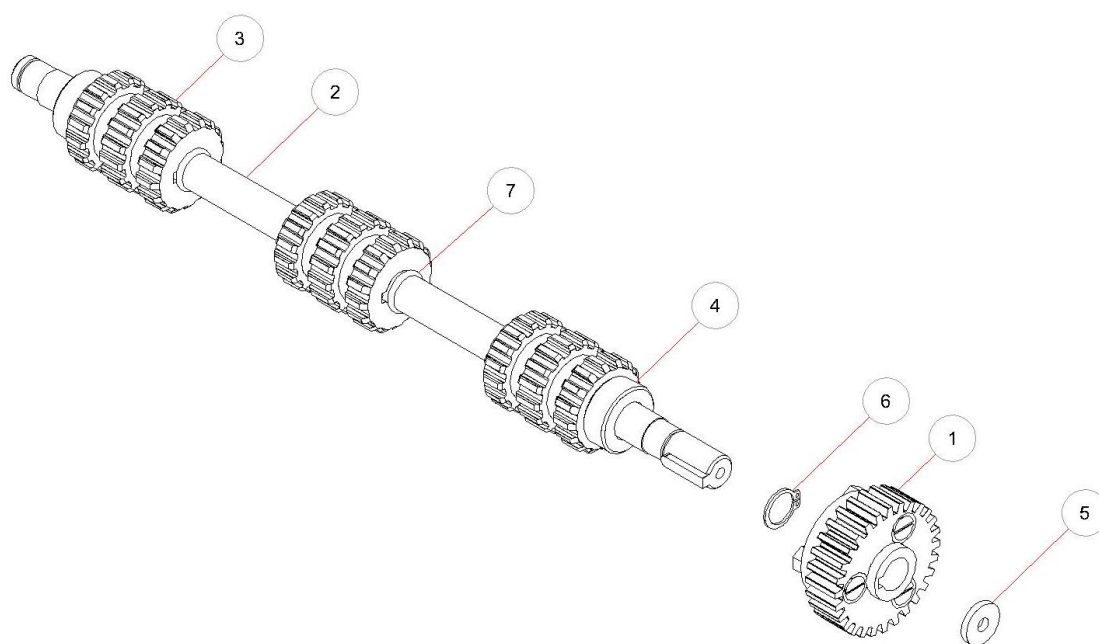


Figure 8. Overview complete breading belt drive shaft

10.2.1 Overview complete breading belt drive gears

Ref. 44580000

Number	Description	Reference	Units
1	BREADING BELT DRIVE GEARS	40031000	1
2	DRIVE GEAR SPACER	40001100	1
3	STAINLESS SCREW M6x30 DIN963	FE0108M060300963	3
4	HEX NUT M6 DIN934	FE0108M060000934	3

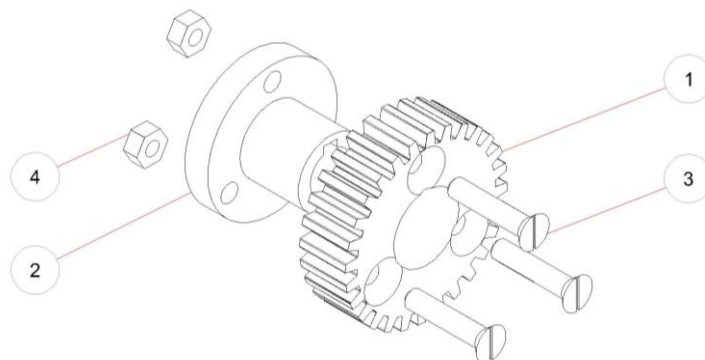


Figure 9. Overview complete breading belt drive gears

10.3 Overview batter belt drive shaft

Ref. 44680000

Number	Description	Reference	Units
1	BATTER BELT DRIVE GEAR UNIT	44590000	1
2	BATTER BELT DRIVE SHAFT	40040400	1
3	BREADING BELT TOOTH ROLLER	40000100-R	2
4	CRANK REAR SPACER	40041300	1
5	BATTER BELT CRANK	40041400	2
6	GEAR END WASHER	40000500	1
7	E-15 DIN 471 STAINLESS CIRCLIP	SI0109E150471	2
8	VITON FPM 70 SHA Ø13 x 2.5mm O-RING	SI06090132.5	4

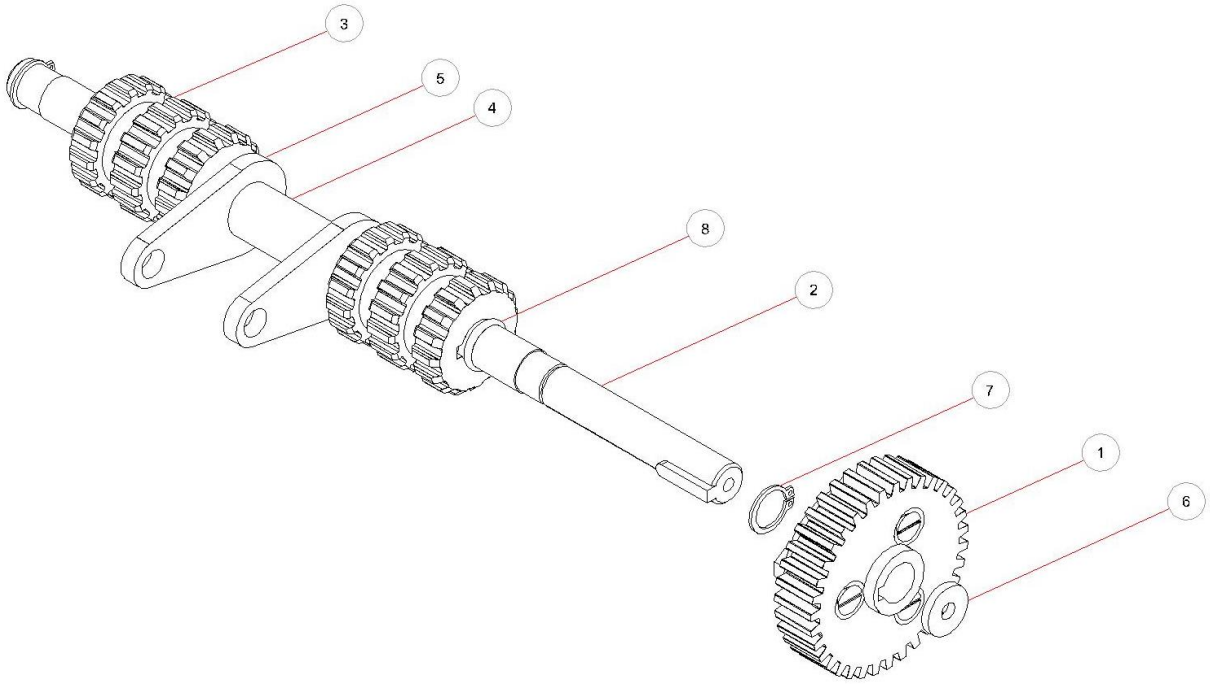


Figure 10. Overview batter belt drive shaft



10.3.1 Overview batter belt drive gears

Ref. 44590000

Number	Description	Reference	Units
1	BATTER BELT DRIVE GEARS	40041000	1
2	DRIVE GEAR SPACER	40001100	1
3	STAINLESS SCREW M6x30 DIN963	FE0108M060300963	3
4	HEX NUT M6 DIN934	FE0108M060000934	3

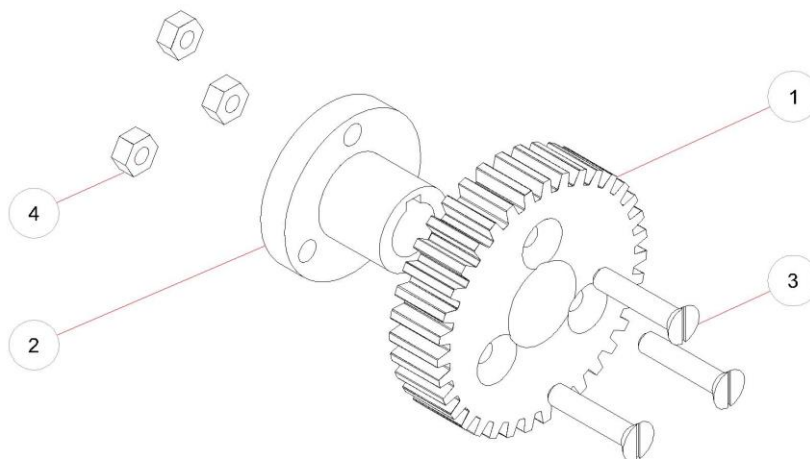


Figure 11. Overview batter belt drive gears

10.4 Overview complete breading belt left/right bearing housing

Overview complete left bearing housing, Ref. 44620000

Overview complete right bearing housing, Ref. 44630000

Position	Description	Reference	Units
1	BREADING BELT RIGHT BEARING HOUSING	40030700	1
	BREADING BELT LEFT BEARING HOUSING	40030800	1
2	BEARING	SI010962022RS	1
3	RETAINING SEAL	SI0109I350472	1
4	STAINLESS CIRCLIP	SI0209R351607	1

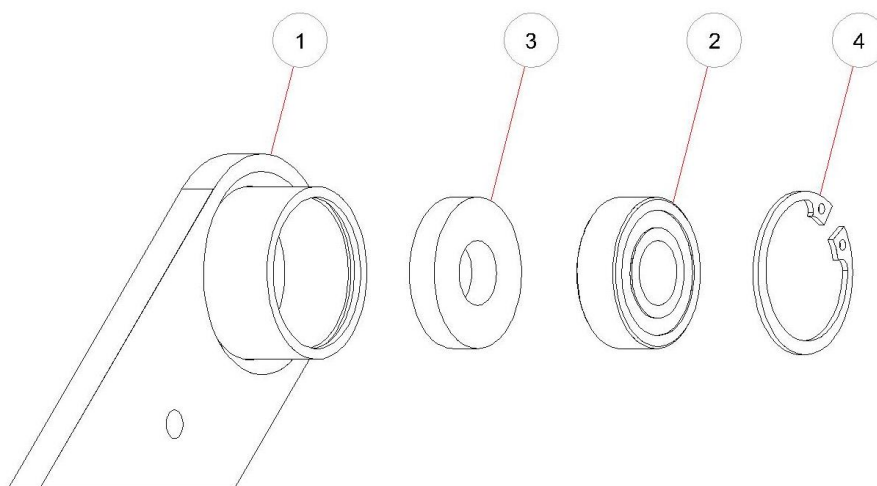


Figure 12. Overview complete breading belt left/right bearing housing

10.5 Overview complete batter belt bearing housing

Ref. 44640000

Number	Description	Reference	Units
1	BATTER BELT BEARING HOUSING	40040700	1
2	BEARING	SI010962022RS	1
3	RETAINING SEAL	SI0109I350472	1
4	STAINLESS CIRCLIP	SI0209R351607	1

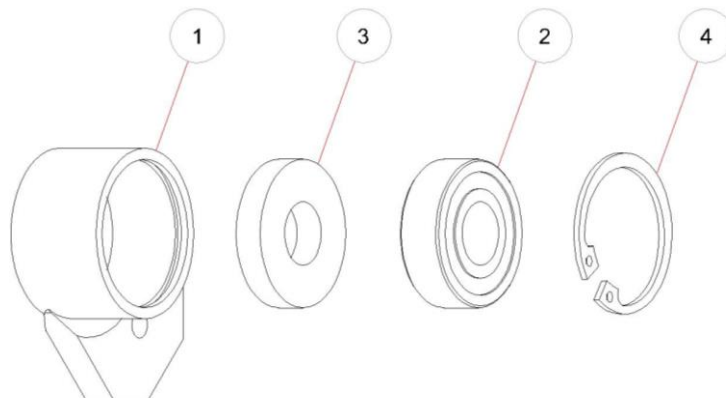


Figure 13. Complete batter belt bearing housing

10.6 Overview complete breading belt passive rollers

Ref. 44760000

Number	Description	Reference	Units
1	BREADING BELT PASSIVE ROLLER AXLE	40030500	1
2	BREADING BELT SMOOTH ROLLER	40000300	3
3	VITON FPM 70 SHA Ø13 x 2.5mm O-RING	SI06090132.5	6

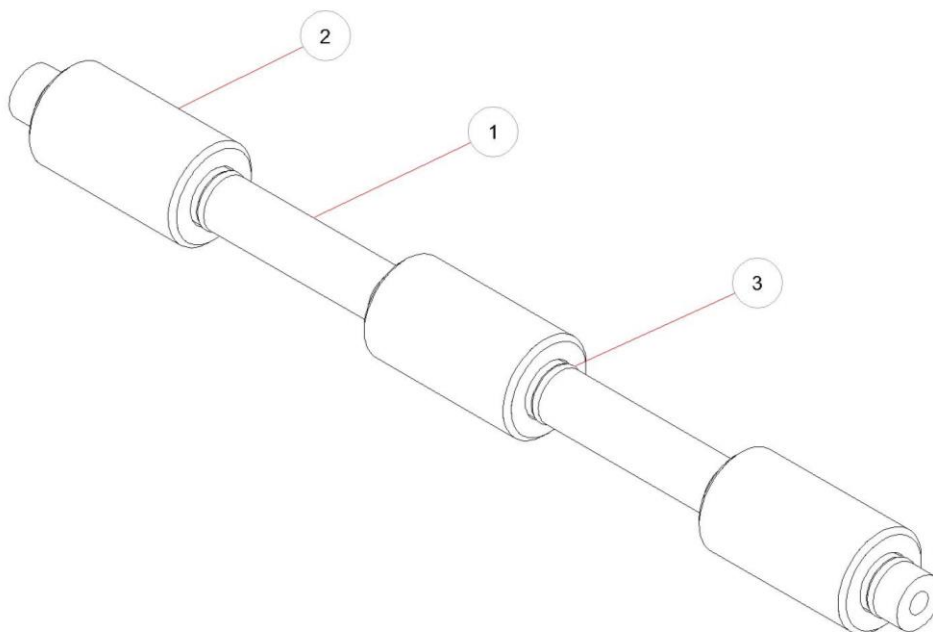


Figure 14. Overview complete breading belt passive roller axle

10.7 Overview complete breading belt tensioning shaft

Ref. 44560000

Number	Description	Reference	Units
1	BREADING BELT PASSIVE ROLLER AXLE	40030500	1
2	BREADING BELT TENSIONING ROLLER	40031500	3
3	O-RING VITON FPM 70 SHA Ø13 x 2.5mm	SI06090132.5	6

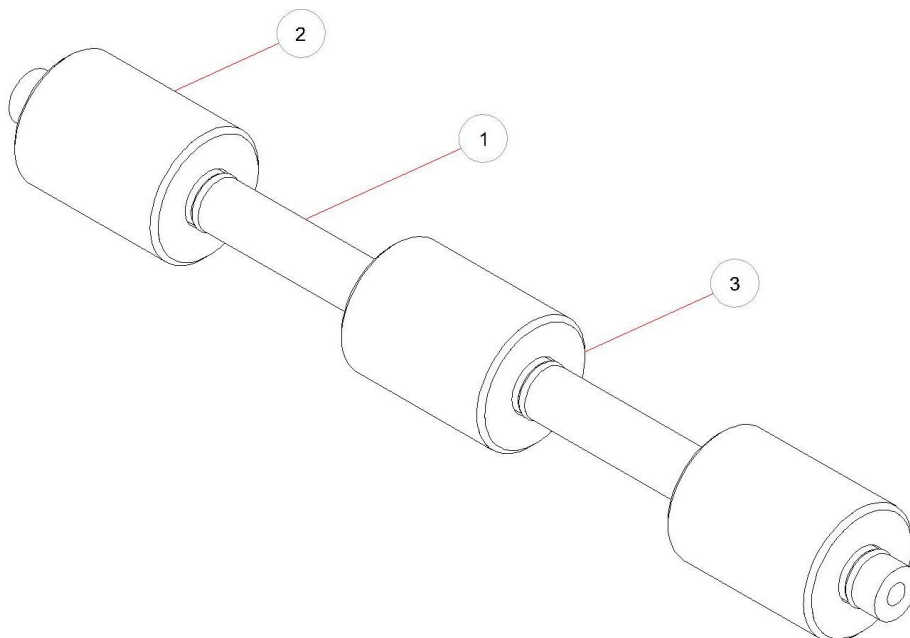


Figure 15. Overview complete breading belt tensioning shaft

10.8 Overview complete batter belt tensioning shaft

Ref. 44770000

Number	Description	Reference	Units
1	BATTER BELT PASSIVE ROLLER AXLE	40040500	1
2	BATTER BELT TENSIONING ROLLER	C3000300	2
3	VITON FPM 70 SHA Ø13 x 2.5mm O-RING	SI06090132.5	4

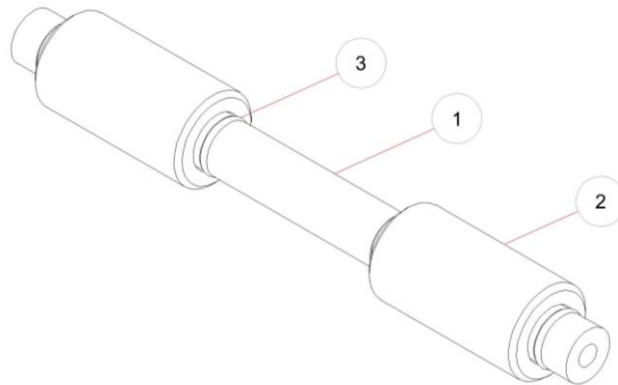


Figure 16. Overview complete batter belt tensioning shaft

10.9 Overview complete batter belt lower shaft

Ref. 44790000

Number	Description	Reference	Units
1	BATTER BELT LOWER SHAFT	40040800	1
2	BATTER BELT LOWER ROLLER	40040900	2
3	VITON FPM 70 SHA Ø6x2.5mm O-RING	SI06090062.5	4

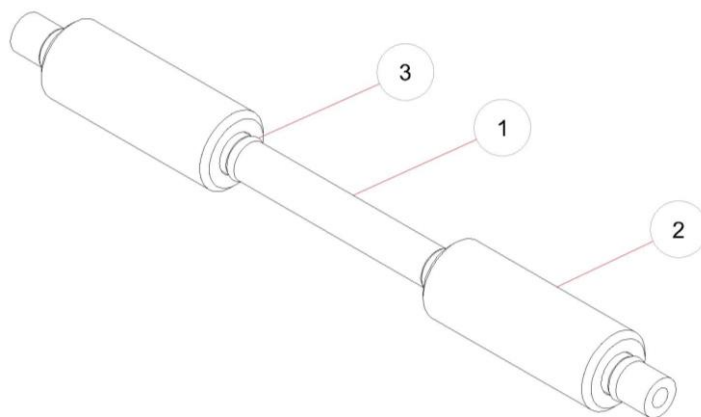


Figure 17. Overview complete batter belt lower shaft

10.10 Overview complete batter belt lowering unit

Ref. 44780000

Number	Description	Reference	Units
1	BATTER BELT LOWERING SECTION ROLLER AXLE	40041700	1
2	CRANK FRONT SPACER	40041200	1
3	BATTER BELT LOWERING SECTION ROLLER	40041800	4
4	VITON FPM 70 SHA Ø6x2.5mm O-RING	SI06090062.5	8

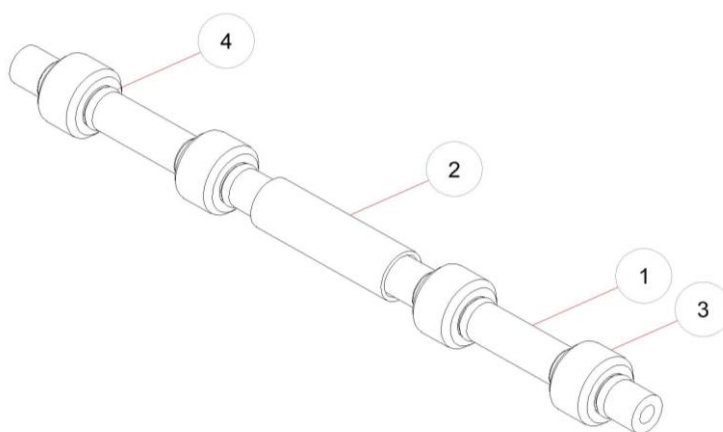


Figure 18. Overview complete batter belt lowering unit shaft

10.11. Complete MINI breader overview

Ref. 44820000

Number	Description	Reference	Units
1	MINI BREADER	40180100	1
2	OUTLET CURTAIN SUPPORT ROD	40180200	1
3	OUTLET CURTAIN VANES	40180300	12

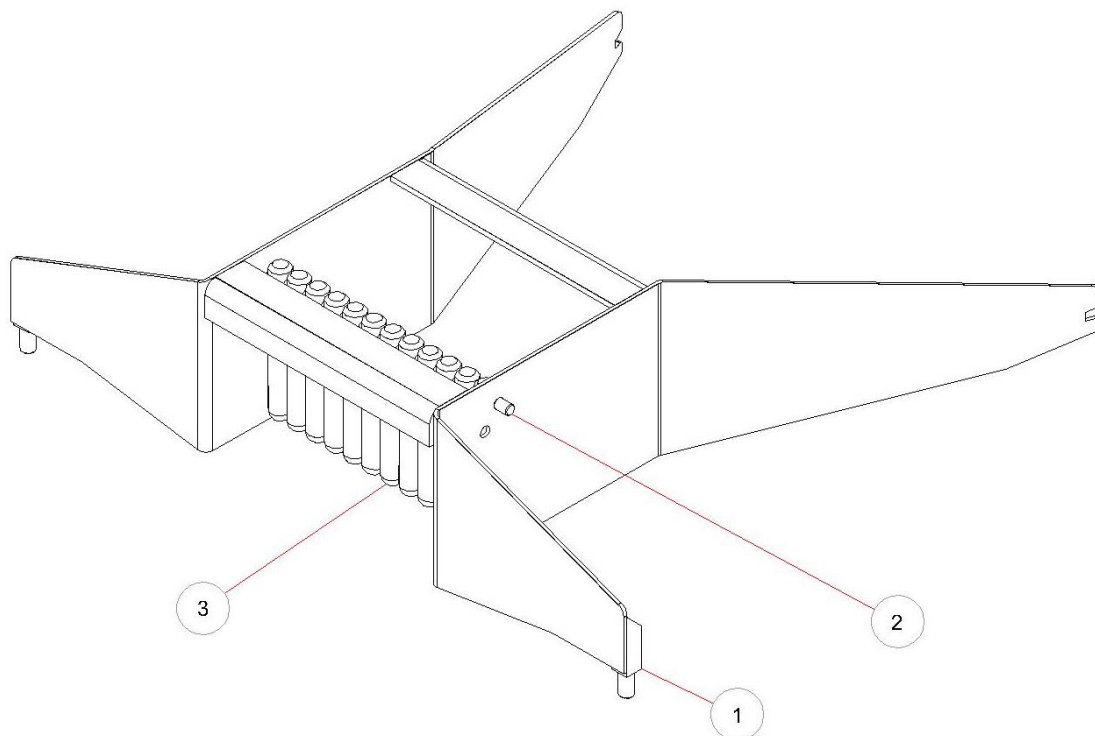


Figure 19. Complete COMPACT breader overview

10.12 Gear motor overview

Ref. PLEASE CONSULT

Position	Description	Reference	Units
1	BREADER MOTOR	PLEASE CONSULT	1
2	MINI GEARBOX	SI0525BR03020090	1

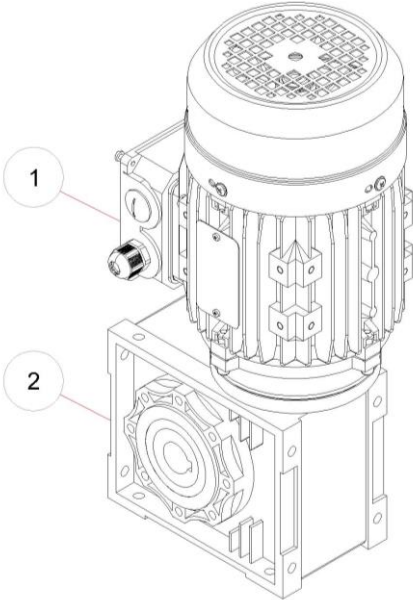


Figure 20. Gear motor overview

10.13 Control panel overview

Ref. 40250000

Number	Description	Reference	Units
1	CONTROL PANEL	PA0230COM40	1
2	RED LED D-22 24V	EL2120PRD2224V	1
3	GREEN LED D-22 24V	EL2120PVD2224V	1
4	EMERGENCY STOP	44930000	1
5	RED PUSH BUTTON Ø22	44920000	1
6	GREEN PUSH BUTTON Ø22	44910000	1
7	POTENTIOMETER	EL102010KM22	1
8	POTENTIOMETER PROTECTOR	EL1020PPD22	1

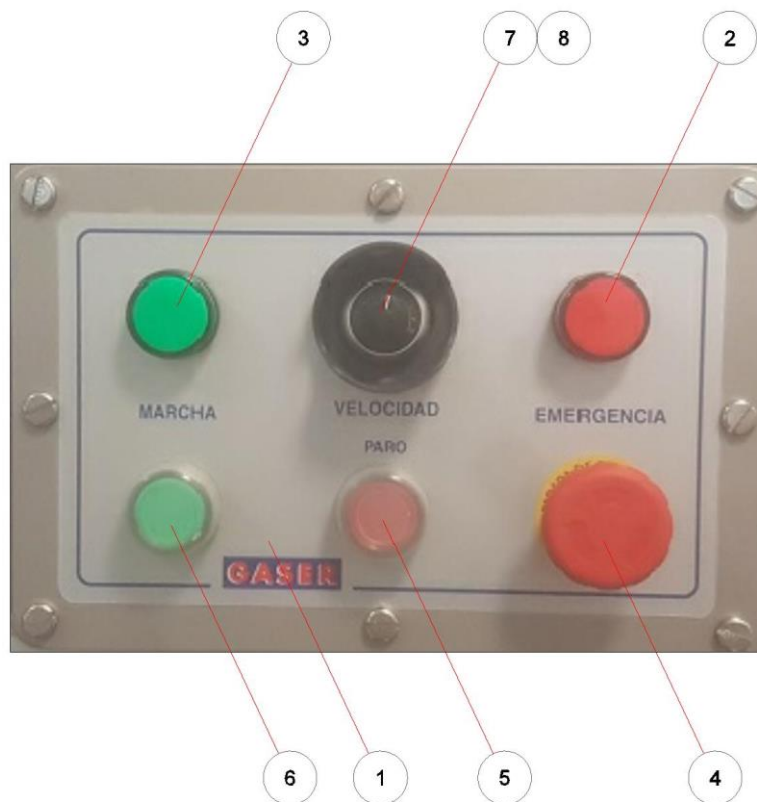


Figure 21. Control panel overview

10.14 Electrical cabinet overview

Ref. 40260000

Number	Description	Reference	Units
1	ELECTRICAL CABINET	EL0220UCP320	1
2	PM-20 PUSH-FIT GLAND	EL0208RPM20	2
3	PM-20 GLAND NUT	EL0208TPM20	2
4	4mm ² EARTH TERMINAL	EL0220BWPE04	1
5	MINI-CONTACTOR	EL0220MCGMC6	1
6	CIRCUIT BREAKER 6A "C" I+N	EL0402MG6ACIN	1
7	CIRCUIT BREAKER 2A "C" 1P	EL0402MGI02A	1
8	FREQUENCY TRANSVERTOR	PLEASE CONSULT	1
9	40W TRANSFORMER	EL1420TP401S	1
10	COMPLETE 8 POLE FEMALE CONNECTOR	EL0220C08P	1
11	COMPLETE 12 POLE FEMALE CONNECTOR	EL0220C12P	1
12	NARA 12 POLE FEMALE CONNECTOR	EL0220C12PHN	1
13	ELDON LSK502 CABINET KEY	EL0220LSK502	1
14	MY 7A 8 PIN RELAY BASE	EL0220PYF08AN	1
15	MY 5A 15 PIN RELAY BASE	EL0220PYF14AN	1
16	M20 METAL GLAND	EL0808M20	1
17	M20 METAL GLAND NUT	EL0820PM20	1
18	RECESSED 3P FEMALE CONNECTOR	EL0821CHE3P	1
19	RS RECESSED 3P FEMALE CONNECTOR	EL0821CHE3PRS	1
20	RECESSED 5P FEMALE CONNECTOR	EL0821CHE5P	1
21	RS FREE-HANGING 3P FEMALE CONNECTOR	EL0821CMA3PRS	1
22	MY2IN 24AC RELAY	EN0920RMY214N24	1
23	MY4IN 24AC RELAY	EN0920RMY414N24	1

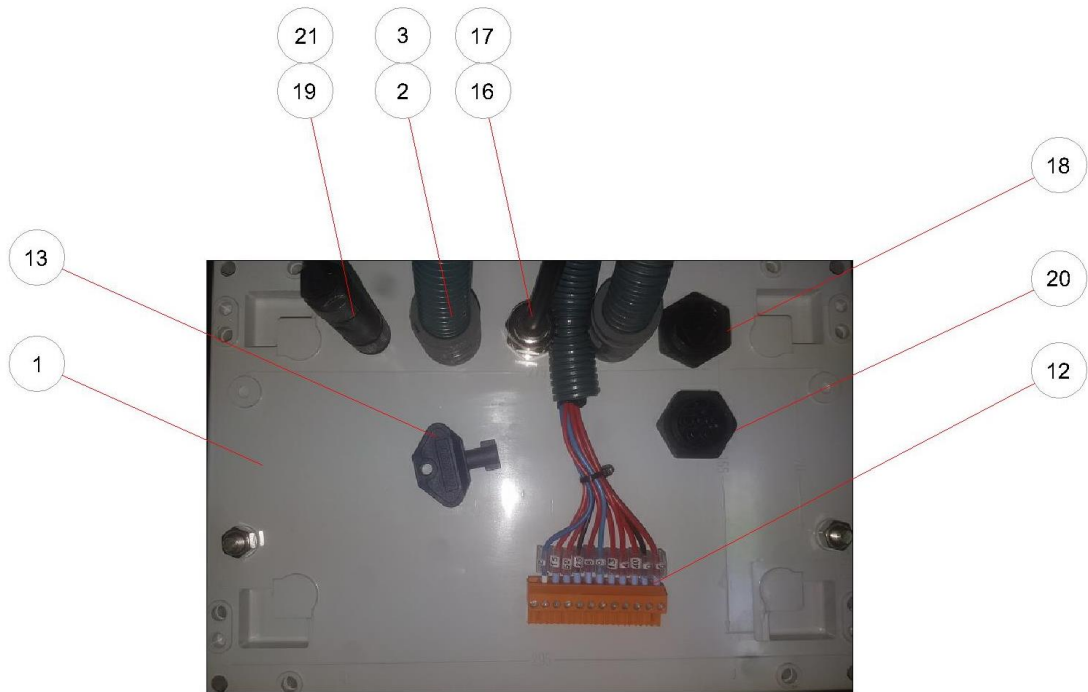


Figure 22. Electrical cabinet overview 1

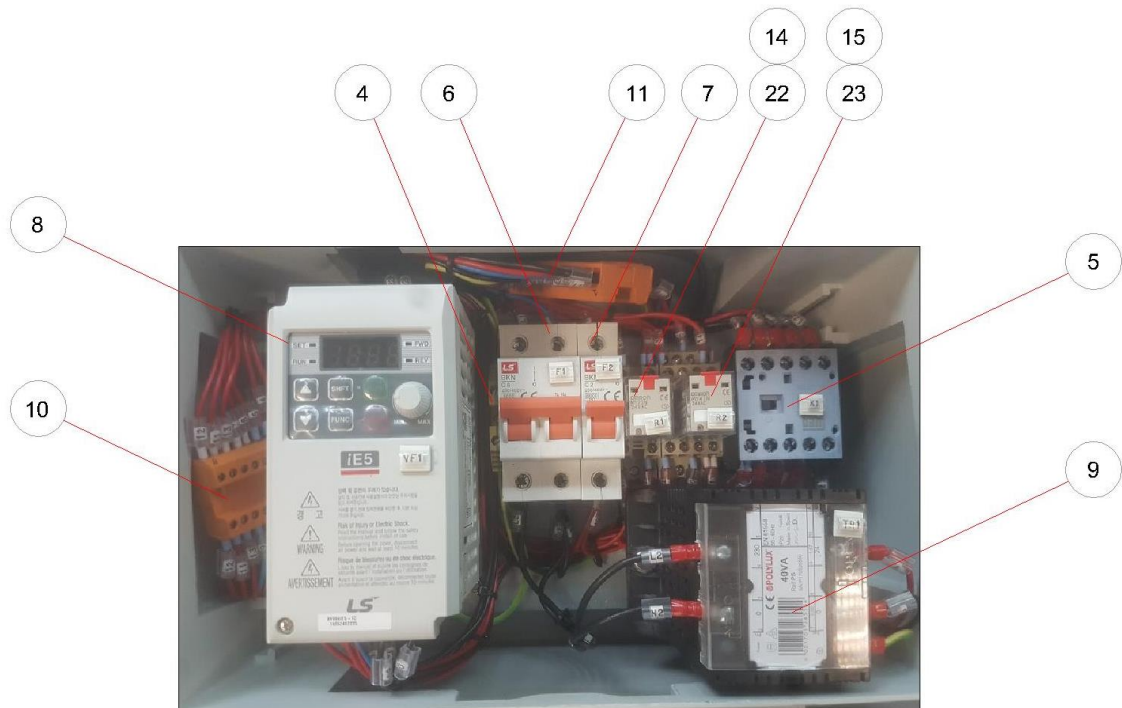
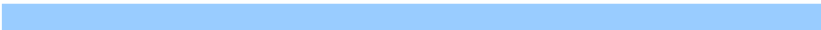
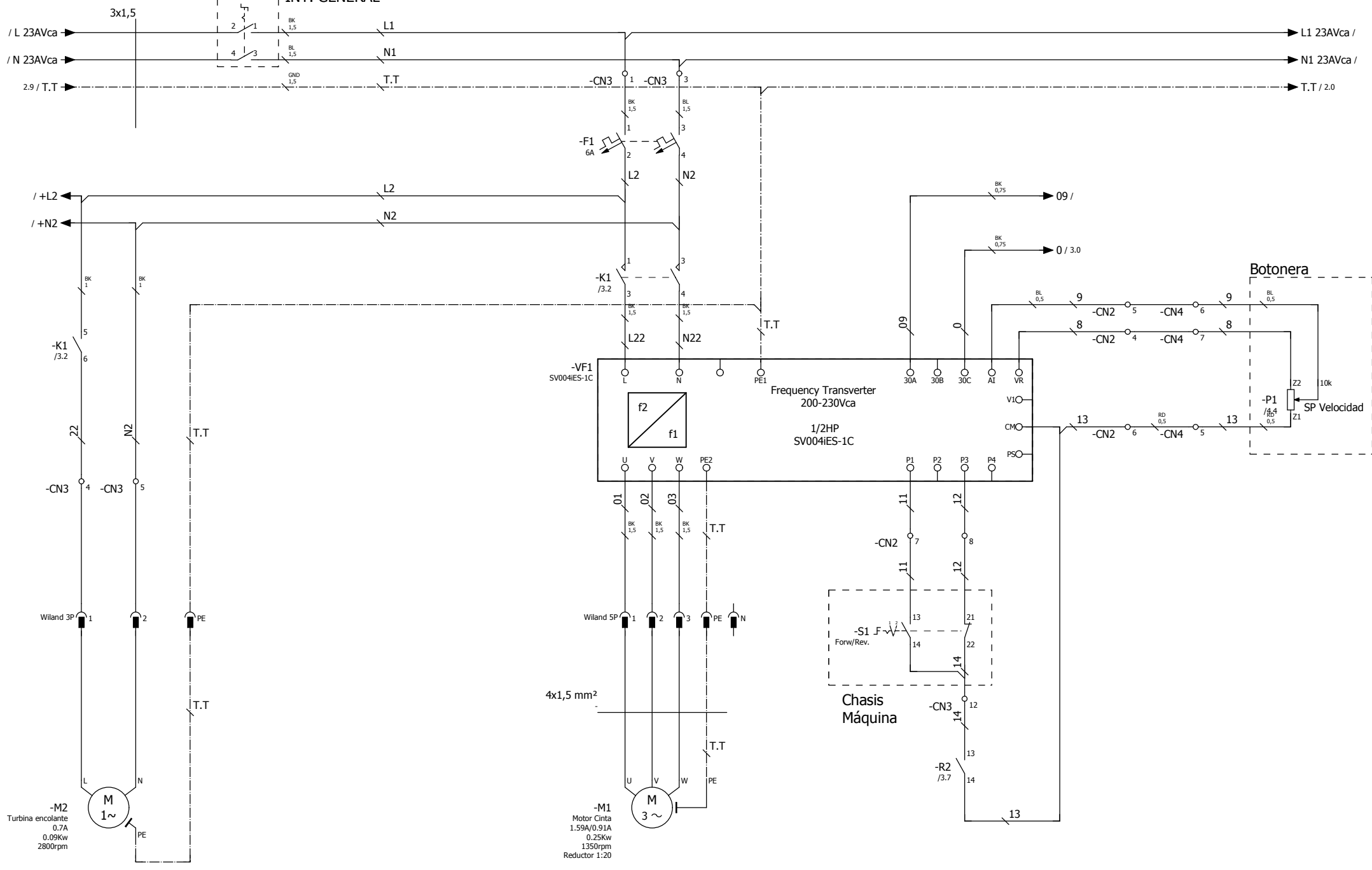
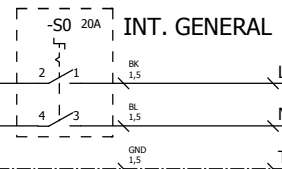


Figure 23. Electrical cabinet overview 2

12. WIRING DIAGRAMS



+DI1/1



Cambio	Fecha	Nombre	Original
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Fecha 05/02/2018

Resp. Dep. Electrico

Probado Original

MINI VER 01

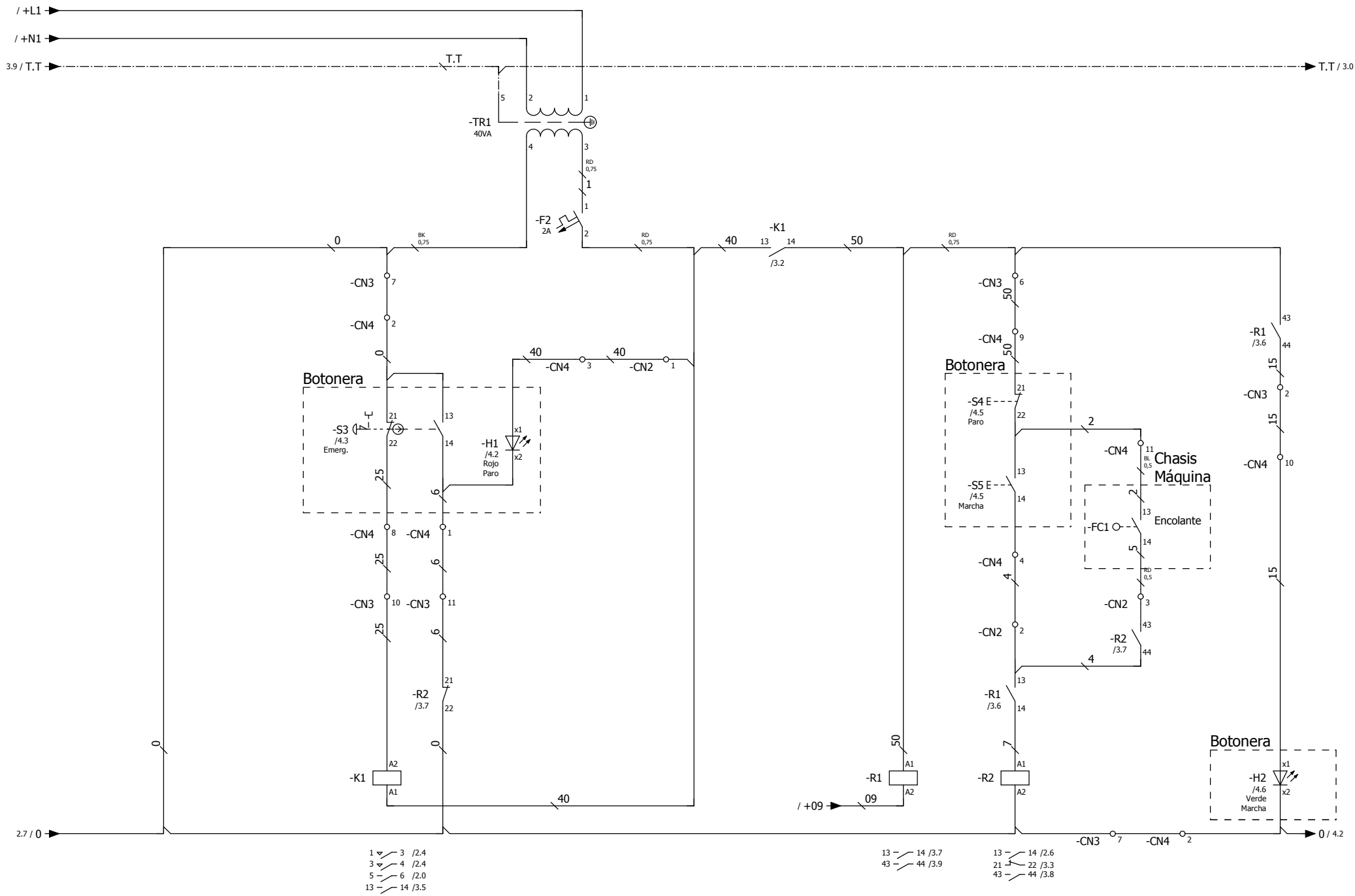
Proyecto nº :

POTENCIA

= 0DCI

+ AR1

Hoja 2



Fecha	05/02/2018
Resp.	Dep. Electrico
Probado	
Original	

MINI VER 01

Proyecto nº :

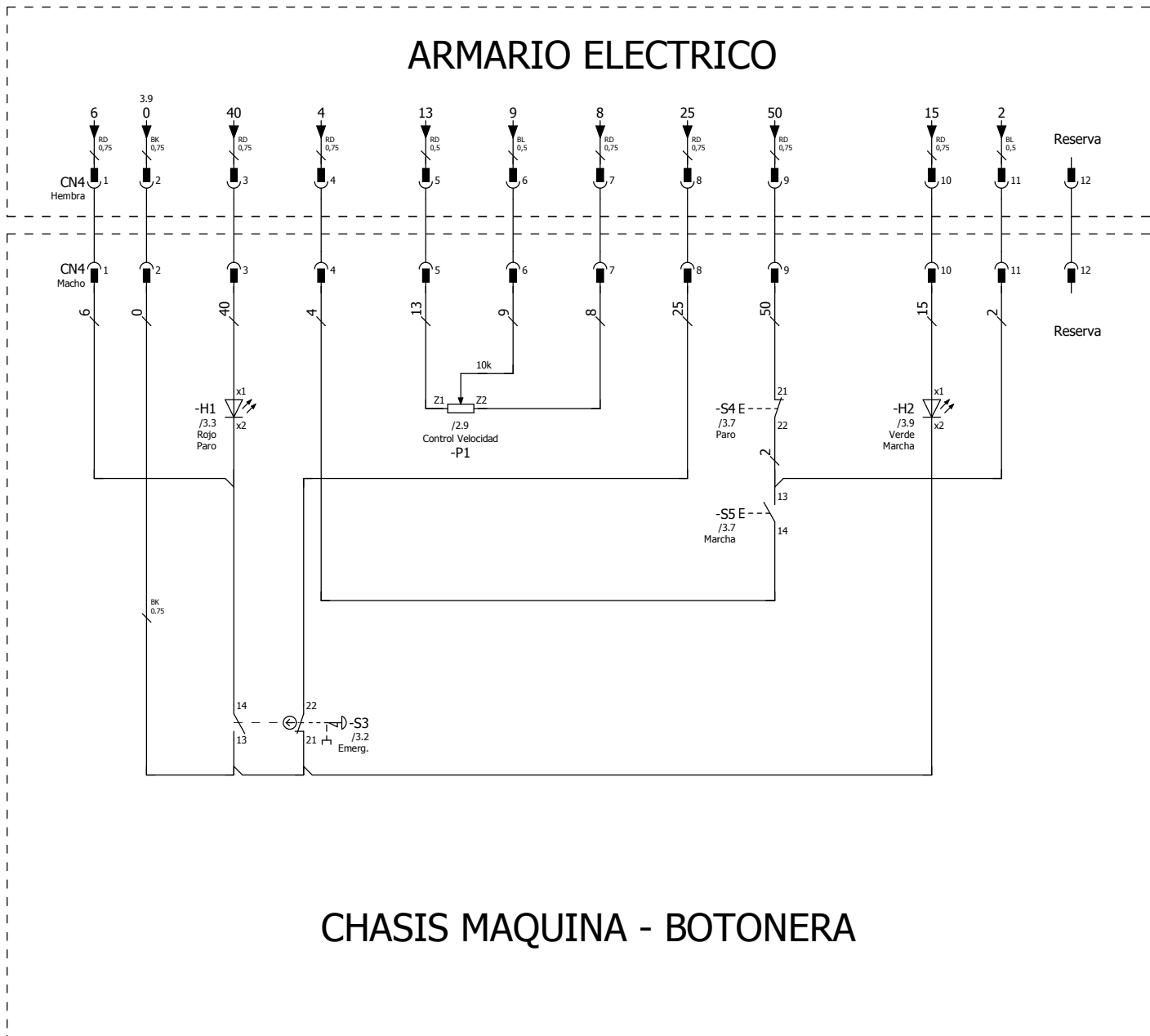
MANIOBRA

= 0DCI

+ AR1

Hoja

3



CN2 -> 8 pins (dins del quadre)
 CN3 -> 12 pins (dins del quadre)



Fecha	22/01/2018
Resp.	Dep. Electrico
Probado	
Original	

MINI VER 01

Proyecto nº :

BOTONERA