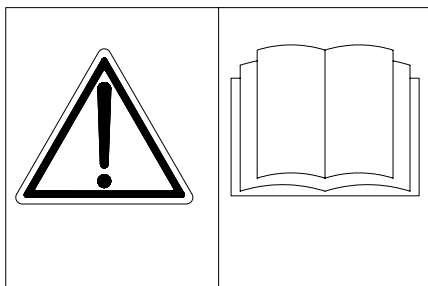




Via Artigianato, 85 – 25030 Torbole Casaglia (BRESCIA) – ITALY
Tel +39 030 2650479-88 – Fax +39 030 2650143
www.sigmasrl.info

INSTRUCTION MANUAL SHEETER MODEL SFG



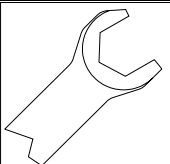
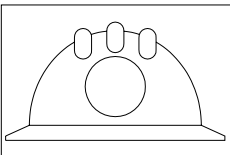
INSTRUCTION MANUAL: this instruction, user's and servicing manual gives the directions necessary for transport, setting at work, use and servicing of this machine and must be read before any of these operations. This manual must be read not only by the technicians assigned for servicing, but also by the machine operators; it is important for them to know how to carry out their functions properly. This manual is an integral part of the machine and must be kept in a suitable place so as to safeguard its integrity and make it possible to consult it during all machine life.

Compliance with the rules guarantees proper operation, safety and operating saving of this machine as well as operators and users' safety.

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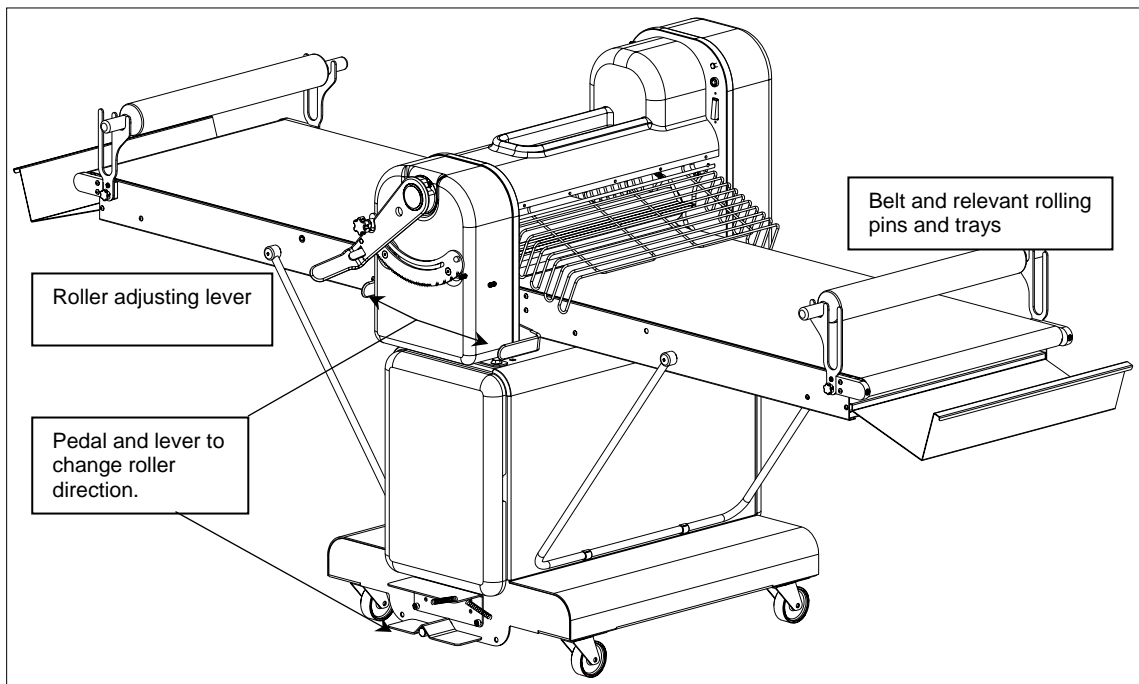
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1) **SYMBOLS:** They are used to define the qualification of the person who has to carry out a particular operation.


Symbol	Description	Features
	OPERATOR	A healthy person who has been taught how the machine operates and who has read and understood this user's and servicing manual.
	ELECTRICIAN SERVICER	A healthy person qualified as an electrician and who has read and understood this user's and servicing manual
	MECHANICAL SERVICER	A healthy person qualified as a mechanical servicer and who has read and understood this user's and servicing manual.
	SIGMA SERVICING Tel. +39 030 2650479 Fax +39 030 2655143	<ul style="list-style-type: none"> • Requests for the manual updating. • Telephone help concerning operation. • Telephone help concerning startup or machine failures • Requests for spare parts. • Product repairs. • Machine overhaul. • Actions at the place.

2.0) DESCRIPTION OF THE MACHINE

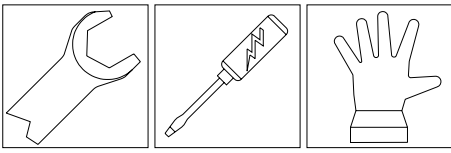
2.1) GENERALITIES: The SFG puff pastry processors are **rolling machines** to be used in catering, bakery and gastronomy laboratories to prepare foodstuffs. They must fine down food pasta layers with butter, margarine or eggs (special version) in order to obtain pastry in the thickness desired. The gradual mixture thinning is executed by a couple of rollers gradually adjustable in height until the finished product is obtained. The belts located on the sides of the rollers drag the mixture, one feeds the rollers, the other removes the material thinned out by the same. Since the thinned out material is longer than the one to be fined down, the roller dragging speed of removal must be higher than the feeding one. Since the thinned out mixture is once on the right belt and once on the left one, the operator must reverse motion at every single passage and, of course, the relevant speeds of the belts reverse automatically. The operator chooses dragging direction by a lever or a pedal, according to the machine type; the gradual thinning of pasta is executed by means of a lever used by a toothed crack that keeps the position desired. When the mixture gets so long and cannot stay on the belt it is possible to drop it on the special trays or to roll it up on the rolling pins placed at the end of the rollers.



3.0) IDENTIFICATION. A plate similar to the one below identifies the machine; it shows the features concerning machine types, serial numbers, operating frequency, power, electric features and the year of construction.

Mod.	<input type="text"/>	N.	<input type="text"/>
Hz	<input type="text"/>	Kw	<input type="text"/>
Volt	<input type="text"/>		
CE	<input type="text"/>	Manufactured in ITALY	
			
<small>Via Artigianato 85 - 25030 Torbole Casaglia (BRESCIA) ITALY - Tel. +39 030 265 04 79 Fax +39 030 265 01 43</small>			

4.0) OPERATIVE CONDITIONS:



Local conditions: the machine requires to be installed in a lighted, airy building, on a compact and flatten support. Temperature ranging from 5 to 40°C; humidity not over 50% at 20°, or not over 90% at 40°C. Lighting: lights available for the operator must comply with the type of work being carried out, according to the

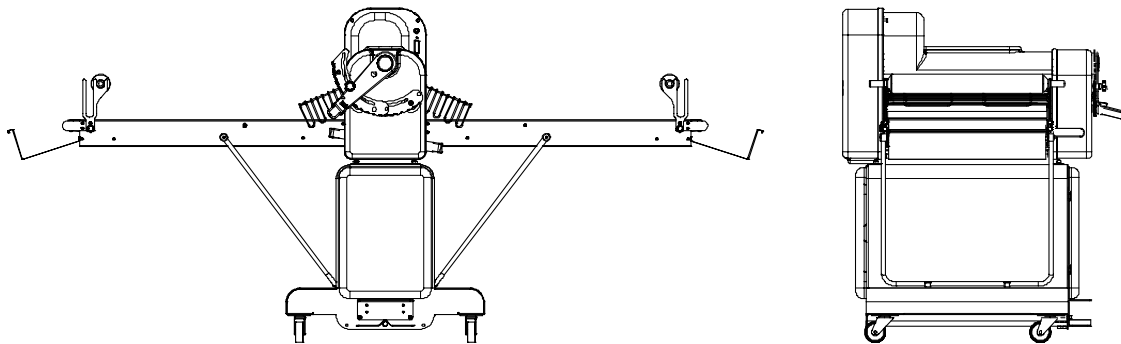
general lighting, in compliance with the regulations in force.

Vibrations: when operations are properly executed, vibrations cannot provoke dangerous situations.

Acoustic emissions: <75 dbA – normal use.

Electromagnetic environment: this machine has been conceived to operate in an electromagnetic industrial environment.

5.0) DIMENSIONS AND WEIGHTS



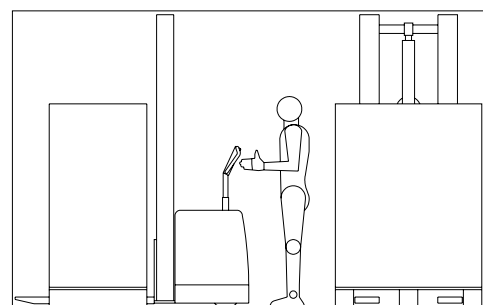
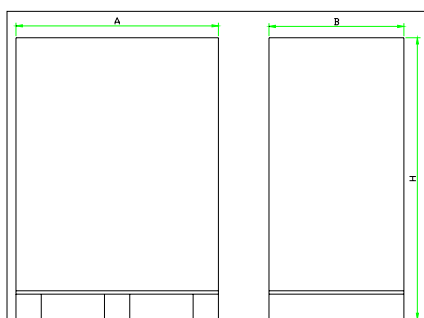
Model	kW	Belt dim.	Opening dim. in mm	Closure dim. in mm	weight kg	Packaging
SFG500B	0,55	500x700	2035x612x955	750x825x955	142	1340x820x1200
SFG500T	0,55	500x700	2035x1270x955	750x1482x955	170	1340x820x1500
SFG500TM	0,55	500x1180	2990x1270x955	1100x1920x955	185	1340x820x1500
SFG600B	0,75	600x700	2035x612x1055	750x825x1055	200	1340x820x1200
SFG600BM	0,75	600x1180	2990x612x1055	1100x1260x1055	210	1340x820x1500
SFG600TM	0,75	600x1180	2990x1270x1055	1100x1920x1055	232	1340x820x1500
SFG600TMM	0,75	600x1600	3840x1270x1055	1440x2330x1055	260	1340x820x2000
SFG600TL	0,75	600x1180x1600	3415x1270x1055		300	1340x820x2000

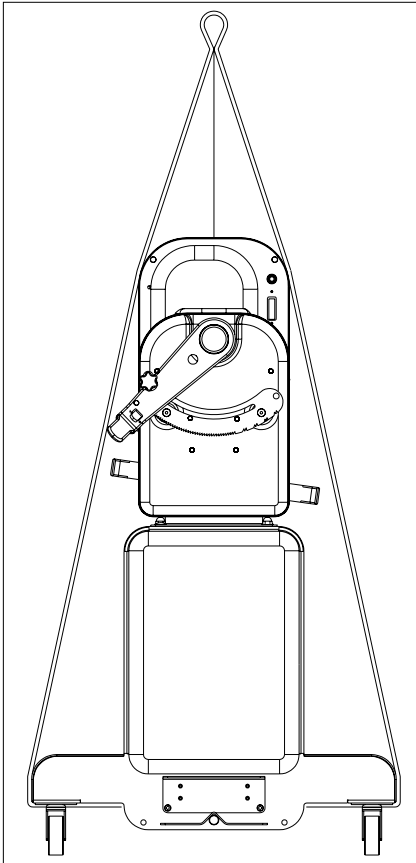
6.0) TRANSPORT PACKAGING - MOVEMENTS

6.1) PACKAGING DIMENSIONS: the box on pallet measures A=1340 - B=820 - H= refers to the table

6.2) LIFTING REGULATIONS BY MEANS OF LIFT CARRIAGE:

- Make sure the means of lifting is suitable for the charge.
- Enlarge the lifting forks at the maximum.
- Make sure that the lifting forks are out of the pallet when operating.
- During operations, keep the load as nearer as the floor as possible.





6.3) PLANE MOVEMENTS : The machine is equipped with two wheels; after unpacking it and removing the pallet fastenings, it can be carefully set on the floor and moved to a plane and smooth surface. The belts are in the box, but not assembled; their transport can be done by hand.

6.4) LIFTING BY MEANS OF BELTS

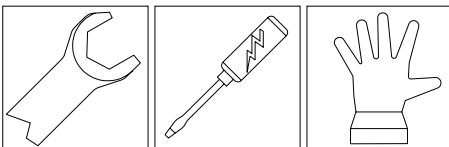
The machine can be lifted by means of a couple of strong belts located at a distance of 80 cm and positioned as shown in the drawing.

Lifting regulations by means of belts:

- Make sure the means of lifting is suitable for the charge.
- Make sure the charge is properly hooked.
- Operate when the area is empty.
- Be properly dressed.

6.5) PACKAGING: The machine must be kept in a closed and covered place, safe from dust and atmospheric agents, temperatures ranging from -20 and $+40^{\circ}\text{C}$, humidity not over 90%. The place must be in safe and hygienic conditions being used for alimentary purposes.

7.0) ASSEMBLY



The machine with socle must rest on the floor. Two wheels are fitted with a special locking pedal to keep it positioned. The machine without socle must rest on a table or on a strong and stable trestle.

An electric input line must be installed next to the machine, this line must feature the wire section of at least 1.5 mm^2 , fitted with lockpin and circuit breaker. Make sure that voltage V and frequency Hz are the ones shown on the identification plate of the machine.

Note: A differential unit featuring a 0.03A (Ampere) sneak current must be connected upstream the line.

8.0) OPERATING INSTRUCTIONS

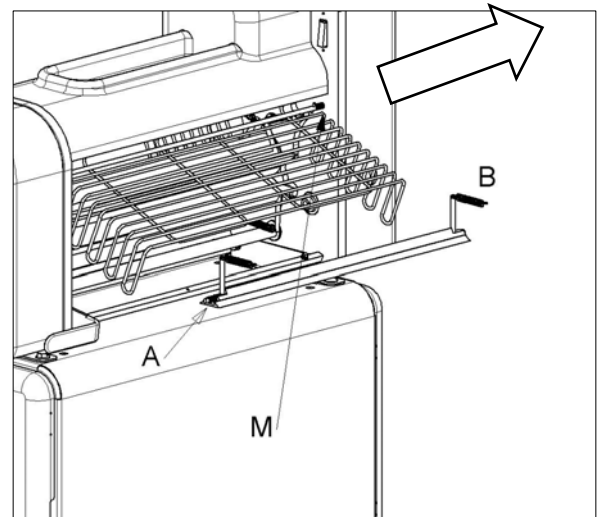
The belts must be assembled and the protection grid and the rollers lowered otherwise the safety systems prevent the machine from working.

DO NOT REMOVE OR RIG THE ELECTRIC AND MECHANICAL PROTECTIONS AND SAFETIES OF THE MACHINE.

8.1) INSTRUCTIONS TO ASSEMBLE THE SCRAPERS:

The scrapers are already housed on delivery. All scrapers can be installed in any position; to remove them for their cleaning, perform the following operations:

- Release the scraper from contrast spring B
- Press spring A and release the scraper from the opposite housing

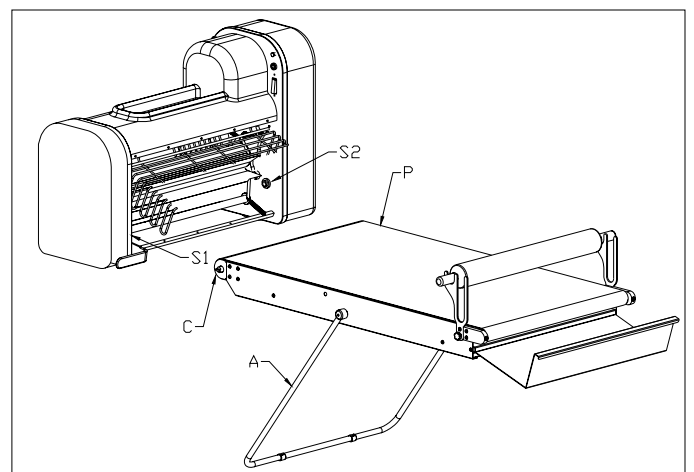


8.2) INSTRUCTIONS FOR THE PROTECTION GRID.

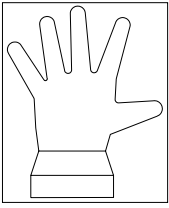
The protection grid must be lowered in order to operate. By lifting it up, it will position in a fixed high place. To reset it in its working position, press spring M in cross direction (refer to the arrow) and while keeping it pressed, lower the grid. **DO NOT FORCE** since it would endanger normal working operation of the machine.

8.3) BELT ENGAGEMENT:

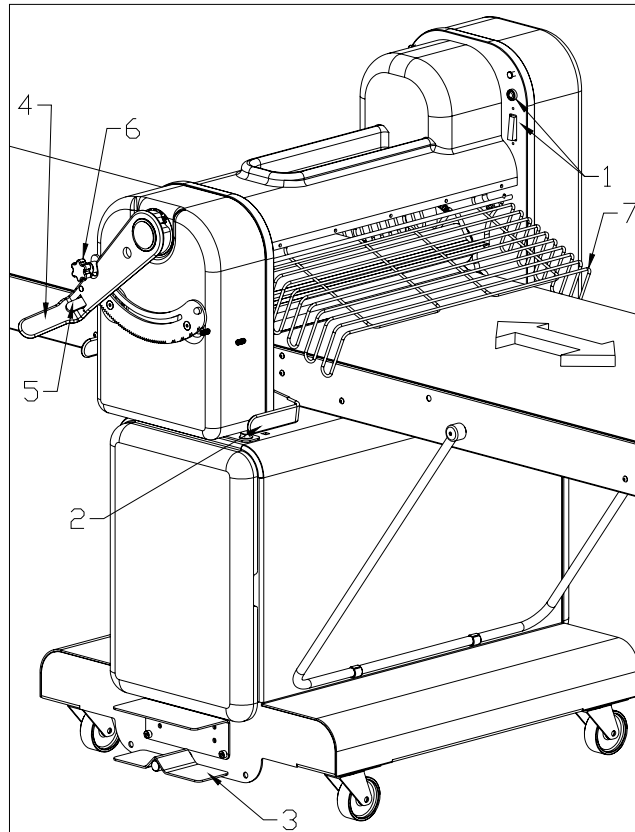
Take the belt in both hands and insert diagonally pivot P of the belt in its special housing S2 and press it on the spring. Insert the milled pivot C of the belt into housing S1 on the machine. If the millings do not match, rotate pivot C until the two housings fit into place. By releasing pressure on the spring of pivot S2, the belt will lock in its housing. The belt can rotate around the axis C-P; in order to set it in its operating position, just move the special diagonal rod A close to the socle.



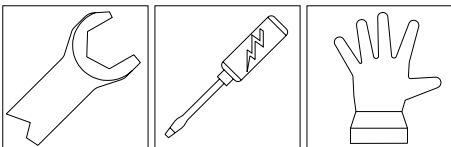
8.4) MACHINE OPERATION: CONTROLS



- 1) Master circuit breaker with mains signal lamp.
- 2) Control lever and motion reverse.
- 3) Control pedal and motion reverse (upon request).
- 4) Adjusting lever for fining down.
- 5) Trigger for lever 4
- 6) Ratchet of lever 4



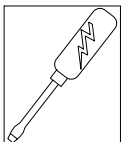
8.5) SAFETY WARNINGS:



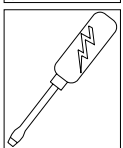
Space around the machine must be properly lighted, clear and clean.

Stuff must wear appropriate clothes for operating the machines, antislip shoes (if necessary protected on toe), sleeves properly buttoned up on wrists, no dangling

clothes such as ties, napkins, ripped clothes, open jackets, etc, to avoid any risk of getting tangled.



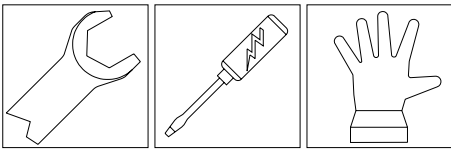
8.6) EARTHING: it is compulsory to check proper working of the machine earthing. A faulty connection can cause dangerous accident, even death.



8.7) ELECTRIC CABINET, GENERAL REQUIREMENTS :

Unauthorised personnel cannot open the electric cabinet. Always watch over the machine when the electric parts are exposed. Machine operation when the electric parts are exposed is allowed only when specialised personnel is present, only for the short period necessary for possible repairs and under the responsibility of the user.

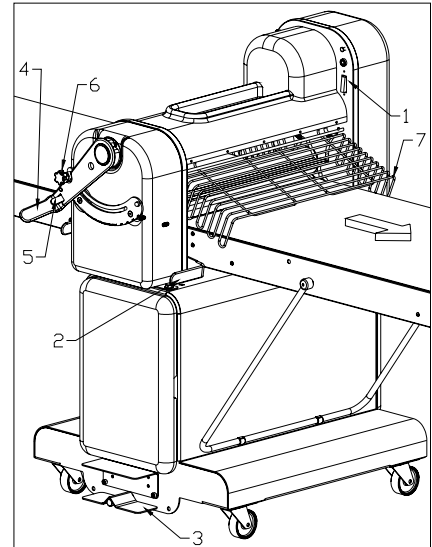
8.8) **FIRST STARTUP:** Make sure the protection grids are lowered before any operation when the current is on. Just press button 1 to start the machine, the closure of the circuit is signalled by the lighted lamps. Lower lever 2 as shown in the figure to test



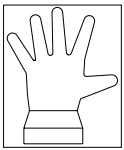
correct connection, the belt must move to the direction of the arrow. Conversely, reverse the couple of wire in the current plug. Carry out the same test if the machine is fitted with pedals. Eventually test the adjusting lever of the roller, to approach them, just move lever 4 from the right to the left, even using your palm smoothly. A special crack consents movement in a single direction, to reset it in its open position, press trigger 5 that releases the crack and consents free movements of the lever.

When the thickness of pasta has been defined, it can be stored in the memory by means of ratchet 6; this one prevents the adjusting lever from moving forward the point established. Make sure the machine is stable and the belts and scrapers are properly inserted. Make also sure

that the safety microswitches controlling the protection grids work correctly, when you lift them the machine must stop. The machine is operational.



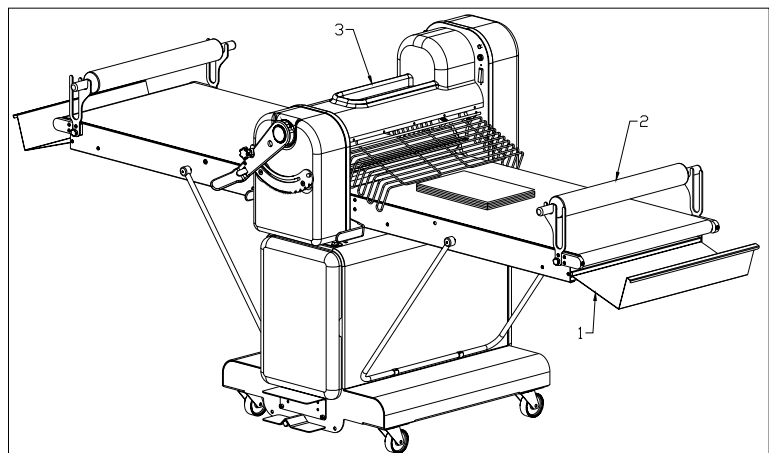
9.0) OPERATION

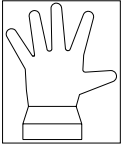


9.1) **OPERATION.** This machine is normally used for the production of puff pastry. Refer to our trade department for different employments: a set of special belts is available for grease pastry or others.

To fine down pastry, you must put on the belt a block of pasta composed of alternate layers of butter or margarine and outside the flour dough. If necessary, it is also important to dust some flour on the areas in contact with the blocks and the belts and rollers; in the central area of the crown there's a special housing for this purpose. Adjust the rollers so as to reduce thickness by 10-15 % and start the machine. The block will be dragged towards the rollers and reduced by them; the thickness is reduced and consequently it will be enlarged and lengthened.

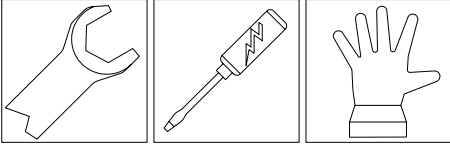
When all the pastry is out of the rollers, the motion must be reversed by means of lever 2 or pedal 3 and, at the same time, the rollers must be tighten to carry out another fining. The puff pastry becomes wider and wider as the process goes on; for this reason, at the end of any belt there are two trays to carry pasta. When they are full, the rolling pins must be used to roll up pasta.





9.2) END OF THE JOB: clean the machine by removing the deposits on rollers and belts. Disassemble the scrapers and clean them with the greatest care: the machine works better if these parts are in good conditions.

9.3) SAFETY DEVICES: The machine is fitted with a set of safety devices that safeguard the operator.



These must not be rigged or cut out.

Check their proper operation before starting the machine.

- Master circuit breaker: it cuts off electric supply; it is essential to pull out the plug from the electric cabinet to carry out mechanical servicing.
- Thermal switch: it cuts off electric supply if the electric motor overheats
- Fixed protections: all guards fastened with screws must not be removed; authorised personnel only can perform it for servicing.
- Mobile protections: the protection grid movement activates microswitches that prevent the machine from operating if the mechanical elements are not properly positioned.

10.0) SERVICING

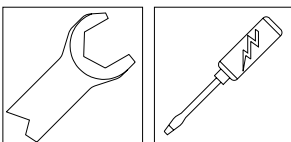
10.1) USE DIRECTIONS AND SERVICING

Experience teaches that the first and most efficient way of servicing is the machine cleanliness. It is advisable to use a plastic spatula and a wet cloth to clean the machine and to remove any deposits of pasta. External surfaces can be easily cleaned with spray neutral degreasers (Marseilles soap).

The machine is vertically protected against small water spills, but cannot be washed by means of jets of water.

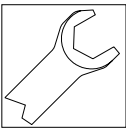
10.2) ROUTINE SERVICING

NEVER SERVICE OR CLEAN THE MACHINE WHEN THE CURRENT IS CONNECTED.

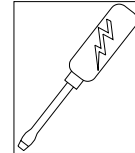
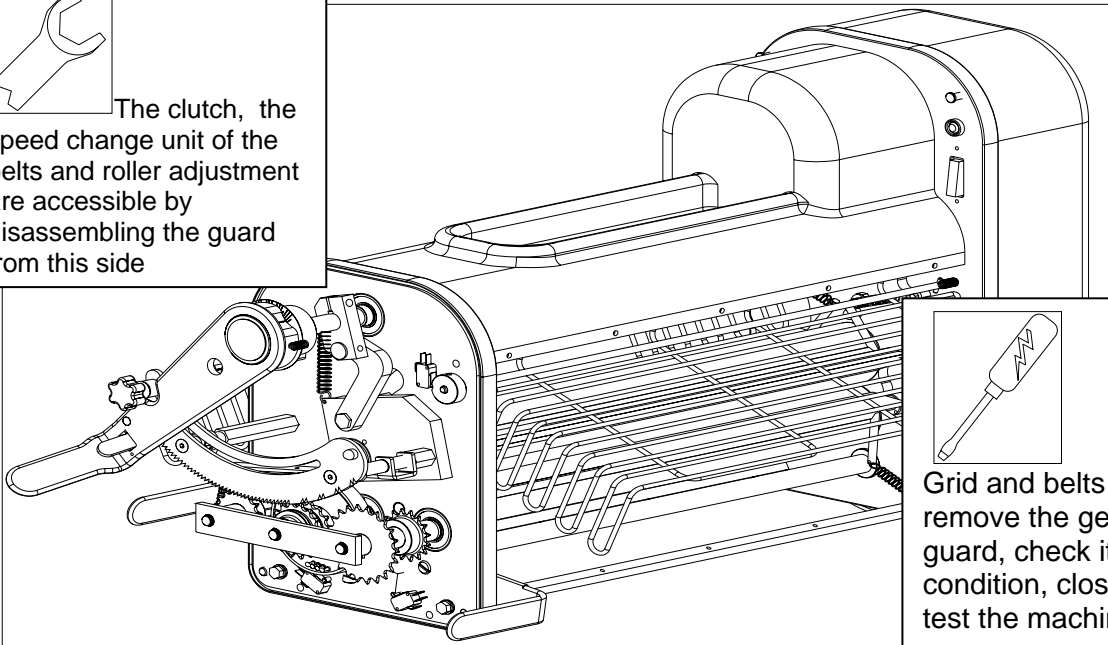


The machine does not need any particular servicing. Check belt wear after the first three months of working.

10.3) CLUTCH SIDE

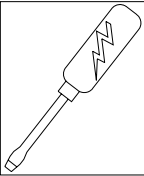


The clutch, the speed change unit of the belts and roller adjustment are accessible by disassembling the guard from this side

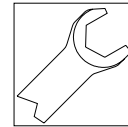
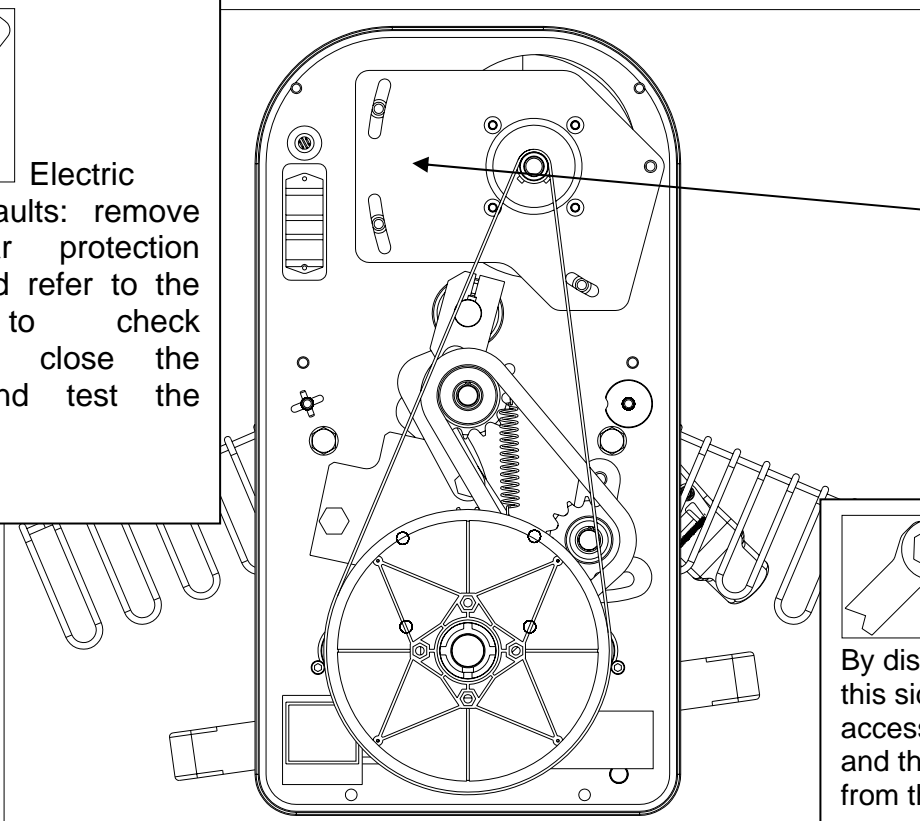


Grid and belts micro faults: remove the gear protection guard, check its working condition, close the guard and test the machine.

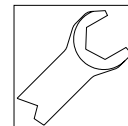
10.4) MOTOR SIDE



Electric system faults: remove the gear protection guard and refer to the chart to check operation; close the guard and test the machine.

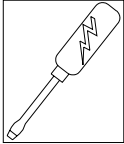
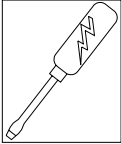
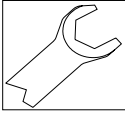
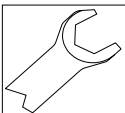


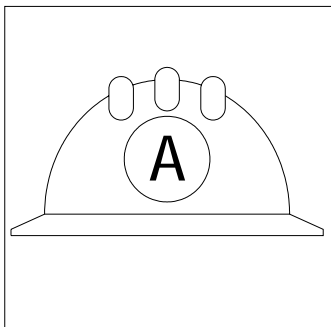
To adjust tension of the belt, unscrew the motor bolts and lever them by means of a screwdriver. Screw on the motor bolts, assemble the guard and test the machine.



By disassembling the guard from this side the electric motor is accessible, the main driving belt and the driving chain to the clutch from the other side.

10.5) POSSIBLE FAILURES AND REPAIRS

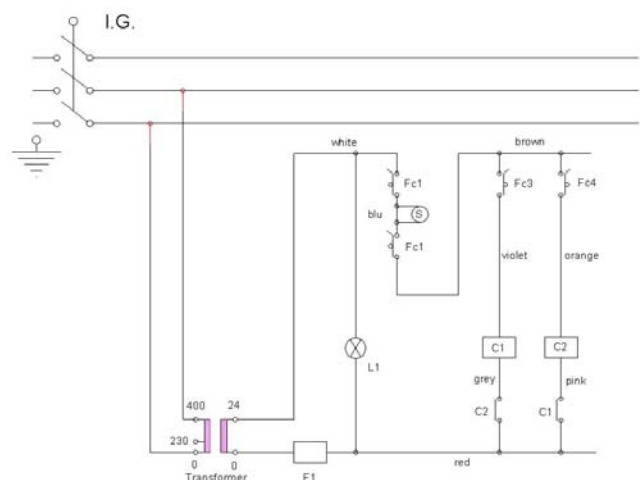
OPERATING FAULTS	POSSIBLE CAUSES	REPAIRS
The signal lamp does not light up when you press the master circuit breaker	<ol style="list-style-type: none"> 1) The plug is not properly inserted or its wires are disconnected. 2) The signal lamp on the on/off button is fused 	<ol style="list-style-type: none"> 1) Check the connection. 2) Replace the lamp. 
The machine does not start when you press the control lever or the pedal.	<ol style="list-style-type: none"> 1) The protection grid is open 2) Belts are not in their proper position. 3) Irregularity on safety microswitches. 	<ol style="list-style-type: none"> 1) Rotate it and close it. 2) Check if the position is correct. 3) Replace or control the microswitches. 
Light intermittent noise.	<ol style="list-style-type: none"> 1) Lack of transmission chain lubrication. 	<ol style="list-style-type: none"> 1) Grease chains. 
Continuous noise.	<ol style="list-style-type: none"> 1) Check efficient working of the bearings. 	<ol style="list-style-type: none"> 1) Replace the bearings. 



10.6 EXTRAORDINARY SERVICING:

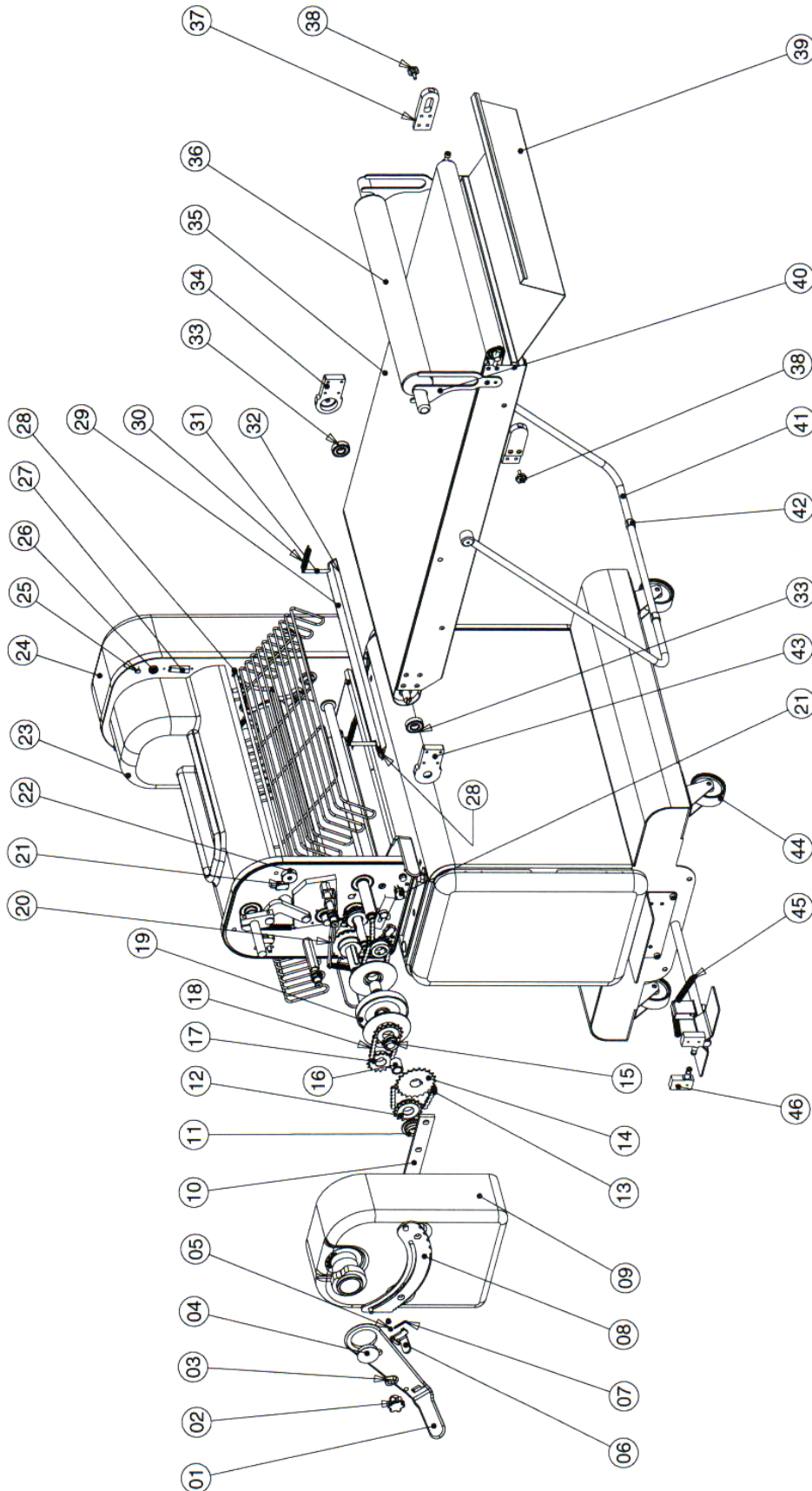
Please refer to SIGMA Srl authorised personnel to carry out actions that are not specifically mentioned in this manual. Refer to our servicing department to work at the place or to service it at our premises to replace the motor, the drive, electronic cards and important mechanical parts or following machine falls.

10.7 WIRING DIAGRAM

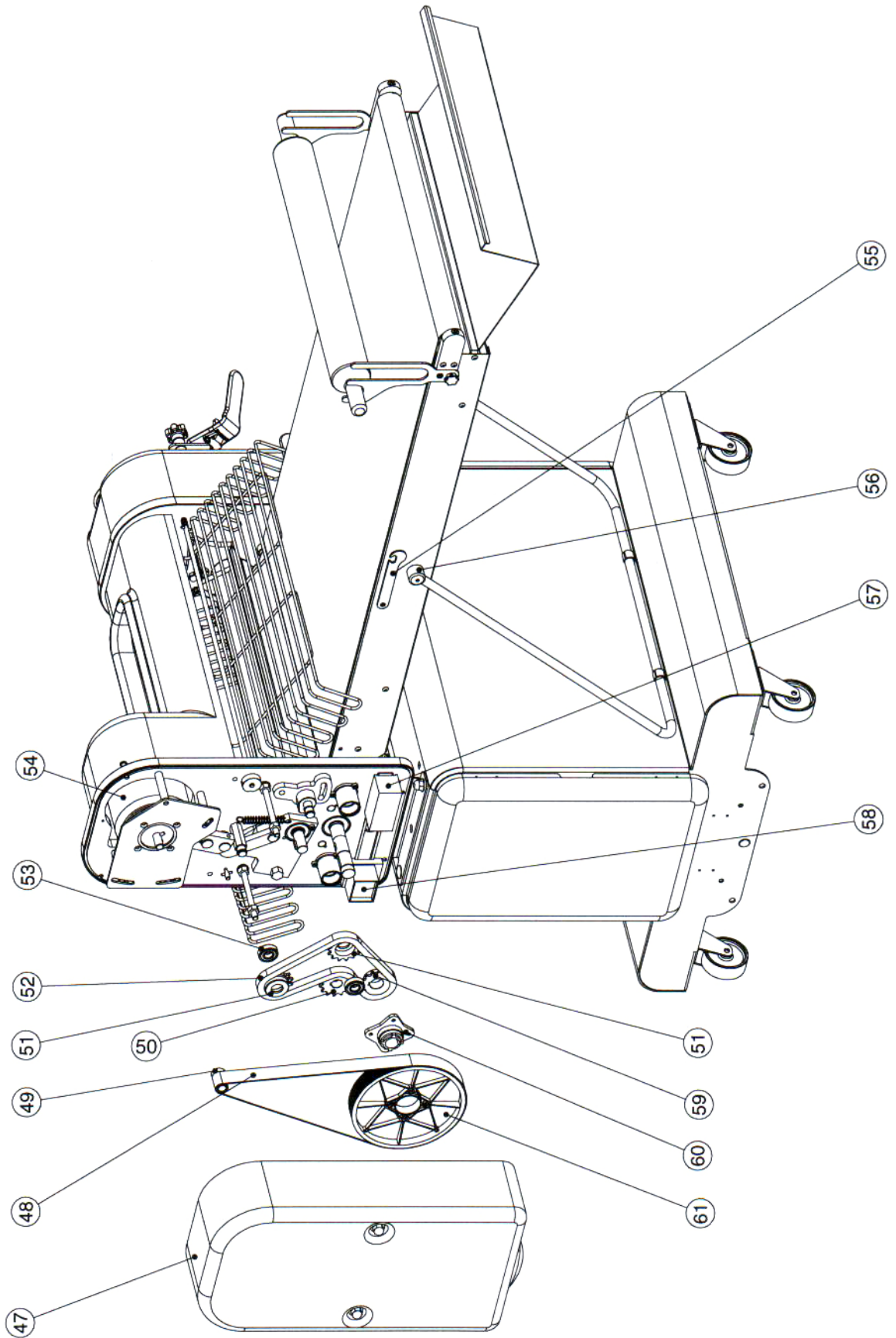


11. 0) REQUEST OF SPARE PARTS: Ask SIGMA S.R.L. servicing department for spare parts: tel. +39 030 2650479/488 – fax +39 030 2650143

11.1) SFG EXPLODED DIAGRAM – TABLE 1



11.2) SFG EXPLODED DIAGRAM – TABLE 2



11.3) LIST OF THE MAIN COMPONENTS

REF. #	CODE #	DESCRIPTION	QUANTITY
01	01174037	Handle	1
02	14002302	GB 48 FP M8 wing nut	1
03	01174041	Handle spacer	1
04	14002609	ABS chromium-plated crown cover	1
05	15001503	Bronze bush 5 – 9 – L9	1
06	01174038	Lever for hooking the graduated sector	1
07	08174040	Handle spring	1
08	01174036	Graduated handle sector	1
09	03174003	Guard on clutch side	1
10	01072047	Plate	1
11	01072045	Clutch flange	2
12	01072044	Clutch pinion	2
13	12000002	1 / 2" x 1 / 8" simple chain, 33 pitches	2
14	01072049	Belt gearwheel	2
15	01072039	Nut	1
16	15000507	18x25x28 self-lubricating bush	2
17	01072048	Clutch pinion	2
18	12000001	1 / 2" x 1 / 8" simple chain, 33 pitches	2
19	01072040	Clutch disk	1
20	01174066	Brake plate with lining	1
21	25001301	83.161.1 + 161E microswitch	4
22	01174061	Screened micro cam	2
23	03174005	Motor guard and basin	1
24	03174004	Motor side guard	1
25	01000000	8x30 flat head pivot	2
26	25009027	TBF 010 SC5 slim signal lamp	1
27	25003045	A 432 N3 circuit breaker	1
28	08072075	Lower scraper screw	6
29	01174043	SFG 600 scraper core	4
	01174086	SFG 500 scraper core	4
30	08091045	Scraper screw	8
31	01174045	Scraper screw pivot	8
32	01174044	SFG 600 scraper	4
	01174087	SFG 500 scraper	4
33	13000014	Radial bearing, mod. 6203 2RS	4
34	01174029	Hub for left motor roller	2
35	06001009	SFG 600 NR11 2360x600 belt	2
	06001008	SFG 500 NR11 1400x500 belt	2
36	01072093	SFG 600 rolling-pin	2
	01072092	SFG 500 rolling-pin	2
37	01174025	Belt support	4
38	14002008	VP 30 M6x30 lobe handwheel	4
39	01174021	SFG 600 pasta plate	2
	01174078	SFG 500 pasta plate	2
40	01174022	Rolling-pin support	4
41	01174033	SFG 600 belt tube	2
	01174095	SFG 500 belt tube	2

42	14002671	11-20-182-02 pincer rest	4
43	01174028	Hub for right motor roller	4
44	17000042	Wheel in polyamide 6 SRP/NL 684501	2
	17000044	Wheel in polyamide 6 SRP/FR 686801	2
45	08072079	Spring for pedal micro	2
46	25001320	Microswitch MV 15	2
47	03174004	Guard on motor side	1
48	12003949	Multigrip 430 J 12 belt	1
49	01174070	Motor pulley	1
50	01091011	Pinion Z=14 for mobile cylinder	1
51	01091009	Idle pinion Z=14	2
52	12000101	1 / 2" x 3 /16" simple chain, pitches 52	1
53	13000013	Radial bearing, mod. 6202 2RS	2
54	11000501	Three-phase motor gr.71 4P kW 0.55	1
55	01174023	Belt-hooking lever	2
56	01174032	Belt support pivot	4
57	25005060	ABB VB6 30.01 24 Vac remote control reverser	1
58	25008001	10 Va transformer	1
59	01091010	Pinion Z=14 for fixed cylinder	1
60	01087035	Hub for reduction crown	1
61	01174072	Driven pulley	1

12.0) MAIN MATERIALS:

- The raw materials used are steel, NBR (nitrile rubber), Nylon, Bronze.
- Surface treatment: Metallic surface varnishing with products compatible with food.

Forming process: lamination and wiredrawing of the steel structural shapes, welding.

13.0) ANALYSIS OF RISKS, PROHIBITIONS AND OBLIGATIONS.



No use of water for fire-fighting



No startup before checking protections



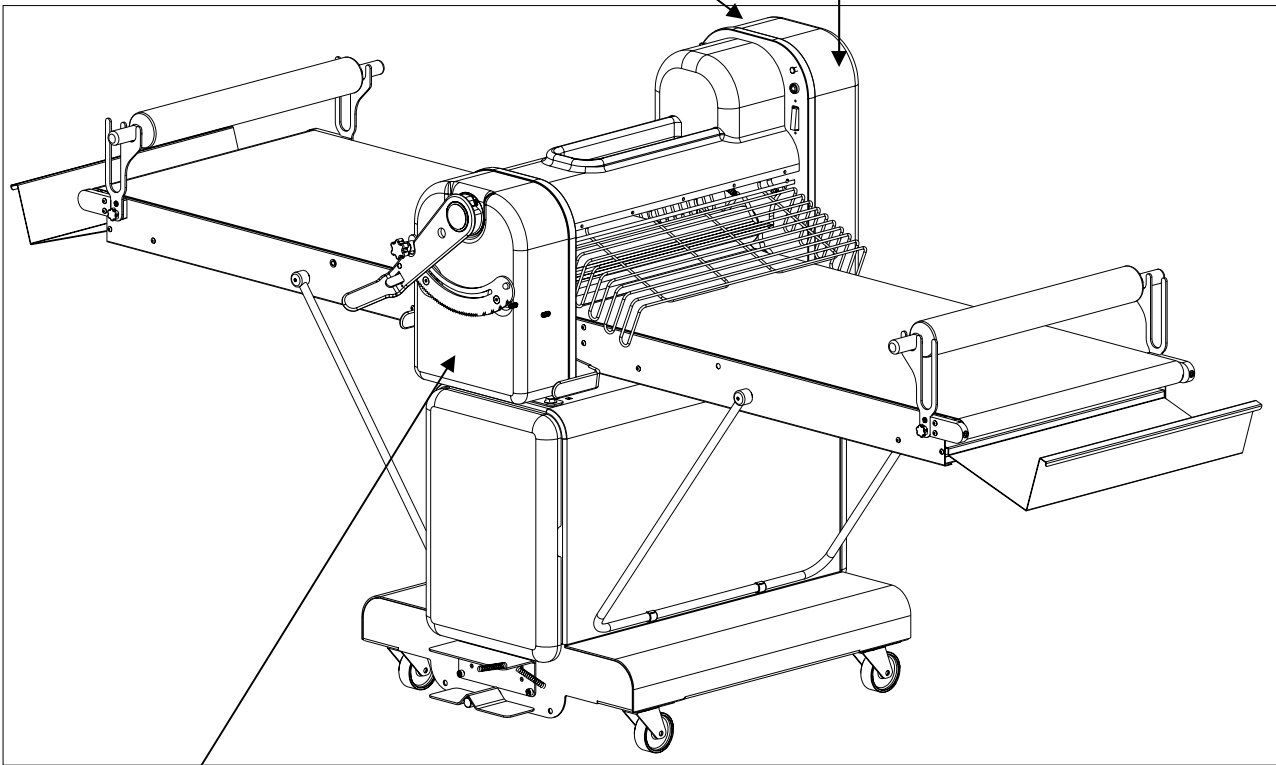
No cleaning when the machine is operating



380 V



Strong shocks can unhook the protection grid. The machine stop immediately, lower the grid.



14.0) WASTE DISPOSAL: The buyer is completely responsible for the machine deactivation. Expert personnel must perform the eventual disassembling of mechanical and electrical parts. The machine must be disposed of in compliance with the local regulations.