

INSTALLATION · OPERATION · MAINTENANCE · PARTS



Dough Divider / Rounder

Semi-Automatic

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200 Lombardo St. San Antonio, Texas 78207 USA



Model Semi-Automatic Dough Divider and Rounder

This manual contains **IMPORTANT SAFETY INSTRUCTIONS** which must be **STRICTLY FOLLOWED** when using this equipment.

Specifications

Serial Number: _____	Weight: _____
Year: _____	Measurement: _____
	Electrical Connections: _____

	380V/400V	3 PH	50 Hz	2,2 A
	200V/220V	3 PH	60 Hz	4,0 A
	220V	3 PH	50 Hz	2,8 A
	415V	3 PH	50 Hz	2,2 A
	200V	3 PH	50/60 Hz	4,0 A

Noise Level: LwA = 69,61 dB sound level and LpAeq = 50 dB(A) emission level
 According to DIN 45635 part 1, sect. 7.2 and part 29, sect. 7.2
 and part 1, sect. 3.17, 7.3 and part 29, sect. 5.4.4

Semi Automatic machine to divide and to round dough pieces of the same size.

	Type	Divisions	Dough Portions	Plates No.
	1	30	20 - 70 g	#1
	2	30	25 - 85 g	#2
	3	30	30 - 100 g	#35
	4/40	30	40 - 120 g	#45
	5/18	50	18 - 42 g	#50
	6	15	150 - 250 g	#415
	7/70	20	70 - 160 g	#420
	8	7	250 - 400 g	#47
	9	36	20 - 70 g	#326
	10	36	25 - 85 g	#336
	11/30	36	30 - 100 g	#46
	LDR9	36	20 - 70 g	#326
	LDR11	36	30 - 100 g	#46
	Q1	30	20 - 85 g	#36Q1
	Q2	30	25 - 120 g	#36Q2
	Q3	36	30 - 100 g	#36Q3



Please read the manual before using the machine to avoid accidents and to guarantee perfect product.

Transportation Tips

Machine is supplied on a wooden pallet, either wrapped in plastic sheet or in a wooden crate. To move pallet, you must place forks of fork lift just inside of wooden runners to keep proper balance.

To life machine off pallet you must first remove 4 bolts from pallet (Remove side covers and then loose/remove 4 bolts). Then take off 2 top plastic covers. Now put 2 heavy cords around arch (see photo) and lift up machine, until you can remove wooden pallet. Then lower machine onto floor.





NOTICE

- **Plates are without clearance in drilling zone and block zone.**
- **If the plates do not fit due to stretching please scrape off slightly in block zone.**



Please read carefully

- **CAUTION:** Do not reach inside machine when machine is running.
- Before attempting any maintenance, repair work or cleaning turn off main switch and disconnect from power supply.
- **IMPORTANT:** Plug has to be always accessible!
- Rounding plates and moulding ring should be washed with luke-warm water. Do not wash them in washing machines!
- Do not use any sharp objects to clean teflon-coated knife and piston!
- When commissioning machine please make sure that polarity is correct. Rounding plate must run counter-clockwise (see arrow)!
- Machine must run with all covers in place for safety reasons.
- Do not use pressure-type hose to clean machine.

Installation Notice

OLD TYPE MACHINES BUILT IN 1999 AND BEFORE:

Add oil to the machine before putting it in operation. The factory has provided the right amount and type of oil with the machine. (see paragraph #4 in the manual).

If the oil container that came with the machine can not be located, or is missing; use 2 Qts. of SAE #40 motor oil. Do not use multigrade oil, it will foam and start to spill from the reservoir.

- Remove the front and rear plastic head covers (S009), then remove the disconnecting pin (S036) and tilt the machine head assembly to one side.
- In the center of the rounding table (S042) is a large slotted flathead screw, remove it by turning counterclockwise with a large screwdriver.
- Pour the oil into the reservoir through the hole (it is advisable to use a small funnel).
- Take the large slotted flathead screw and insert in the hole, fasten it with the screwdriver turning it clockwise, until seated firmly.
- Return the machine head assembly back to the working position, insert disconnecting pin through the pillow block and arch; and install the front and rear plastic covers.

NEW TYPE MACHINES BUILT IN 2000 AND AFTER:

Add oil to the machine before putting it in operation. The factory has provided the right amount and type of oil with the machine. (see paragraph #4 in the manual).

If the oil container that came with the machine can not be located, or is missing; use 2 Qts. of SAE #40 motor oil. Do not use multigrade oil, it will foam and start to spill from the reservoir.

- The filler plug is located on the top rear right hand side of the base of the machine, it is black hexagonal plastic plug.
- Remove it by turning it counterclockwise, pour the oil into the opening (it is advisable to use a small funnel to pour the oil into the reservoir).
- Take the black hexagonal plastic plug and insert it in the hole, fasten it by turning it clockwise only hand tight.

DISCLAIMER: The purchaser is responsible for the proper installation and operation of the machine, if this equipment is operated without oil, it shall be considered abuse or misuse of the equipment. BE&SCO Manufacturing will not honor any warranty for parts and/or labor.



200 Lombrano St.
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Instructions

1. CAUTION

Please read this manual and familiarize yourself with the safety instructions contained in the manual and the labels attached to the machines. This is to be done before you operate, clean or service the machine.

- It is the purchaser's responsibility to make sure that the operators of this machine are fully aware of the contents of this manual and it is also the purchaser's responsibility to translate this manual in any other language for non-English speaking operators.

2. OWNER'S RESPONSIBILITIES

The owner of this machine and its supervisory personnel are to read and follow the instructions contained in this manual.

- After connecting the machine to its proper outlet, make sure that the unit functions properly.
- Make sure to have these instructions readily available for operators.
- All operators are to be properly trained and to be fully aware of all safety features and that they are also properly supervised. Make sure that the installation conforms to all applicable codes, rules and regulations (local, state and federal) including OSHA regulations and electrical codes.

3. INSPECTION

The machine is to be inspected on a regular basis and maintenance performed as required. Any repairs are to be made by authorized service personnel only and only original replacement spare parts should be used. Use of non-approved parts may void manufacturers warranty.

- Warning labels and decals have to be visible at all times and the instructions for the operation of this machine are to be with the machine.

4. INSTALLATION

- After removing the sides of the wooden crate, the machine has to be removed from the wooden pallet, to which it is bolted with four bolts for safe transportation. Cut open the plastic sleeve into which the machine was packaged to avoid moisture problems in transit.
- Remove the base cover that has a label indicating the storage of an oil container in the base. Remove the oil container. Remove four nuts that hold the machine to the wood pallet. Now drive the bolts through the wood with a hammer.
- Get a forklift truck, or 2 or 3 helpers to remove the machine from the pallet. **NEVER** attempt to remove the machine from the pallet on your own.

- **CAUTION:** Make sure to remove the pressure lever (S030), which is attached to the inside of one of the side panels of the crate.
- Gently remove the strings and the wood piece that holds the rounding plates in place.
- Unless stated otherwise; the machine has a 190/230 volt, 3 phase, 60 cycle electric motor. Make sure the machine is connected to the correct voltage, **only** a qualified electrician is to connect the machine to the power source.
- The machine has to be placed on a floor that is level, with sufficient space around, for a safe and efficient operation. The machine has to be bolted to the floor with appropriate anchors, and the gap between the floor and the base, has to be sealed to prevent water, flour, etc. from entering the base. We recommend that use of silicone caulking. Unless the machine has been fitted with a set of wheels provided by the factory.
- **NEVER** install "of the shelf type" casters under the machine. This is dangerous because the machine is top heavy, and the operator could easily have the unit fall while pulling the handle.

5. INITIAL START UP

- The motor is protected by an overload device, part of the manual starter, when running the machine for the first time, make sure rounding table (S042) rotates in the right direction (check arrow on the front of the unit), the rounding table has to turn **counterclockwise**. If this is not the case the machine will not function properly, have an **electrician** reverse the rotation of the electric motor.

6. FILL OIL RESERVOIR

- Add oil to the machine before putting it in operation. The factory has provided the right amount and type of oil with the machine (see paragraph #4). The filler plug is located at the rear right hand side of the machine, it is a black hexagonal plastic plug. Remove by turning counterclockwise, it is advisable to use a small funnel to pour the oil in the reservoir. If the oil is missing, use 2 1/2 quarts of 30 weight motor oil.

7. CLEANING BEFORE INITIAL START UP

- The machine is shipped with protective grease on the product zone, to avoid oxidation during transit. Remove front and rear plastic head covers (S009), and the dough ring, then remove disconnecting pin (S036) and tilt machine head to one side. Clean grease from the machine head and rounding table using paper towels or a soft cloth. Bring machine head back to its original position, install

Instructions

disconnecting pin, dough ring and head covers.

- Even though you now have cleaned the product zone, use the first two or three batches of dough to do the final cleaning (see paragraph #9).

8. CHOOSING THE PROPER SETTINGS FOR DIVIDING AND ROUNDING A GIVEN DOUGH WEIGHT.

- The adjustment screw (S032) sets the height of the rounding chamber of each dough piece. If the adjustment screw is in its “up” position (turn counterclockwise), it will accommodate a large piece of dough, whereas in its down position (low numbers) it will accommodate a small weight.
- Prepare dough on another plate as described in paragraph #9 (Remember - moist side down).
- Dust with flour only the **TOP** side of the dough.
- Place the plate with the dough, on top of the rounding plate inserted face down in the machine.
- Without turning on the motor, press and divide the dough as indicated in paragraph #9.

9. REMOVING DOUGH ENTRAPMENT RING (S007)

- Pull down pressing lever (S030), while holding the pressing lever in the “down” position, grab the dough entrapment ring with both hands, one in the front and one in the back. Turn the ring **clockwise** until the slots on the top of the ring line up with the holding brackets (S081), now release the pressing lever to the “up” position, the ring can now be removed from the machine.
- **Important:** The dough entrapment ring must be cleaned daily after use. Apply margarine or butter as a sanitary lubricant.
- Place the clean ring back on the rounding plate, with the slots on the top of the ring lined up with the holding bracket on the right side of the machine.
- Slowly pull down the pressing lever until the holding brackets drop through the slots in the ring. Turn the ring **counterclockwise**, until the end stop seats against the holding bracket on the right side of the machine.
- **Caution: NEVER** use metal scrappers or sharp objects to clean the ring; the ring is **Teflon** coated, and should only be cleaned with a cloth or paper towels.

10. CLEANING OF THE MACHINE

- The rounding table (S042), which is attached to the machine, is made of steel, and should be cleaned with a dry cloth **only**. Do **not** use water.
- The rounding plates (S066), which are made of **plastic**; should be cleaned with a soft nylon brush and **warm water only!** Never try to clean them in a pan washer, or dry them in a oven, this will cause the plates to warp, and later damage the knives in the rounding head.
- The cutting knives, installed in the piston/knife assembly (S025), should be cleaned daily with a soft dry cloth or soft plastic brush. To do this, first remove the dough entrapment ring (see paragraph #13).
- The whole head assembly is **Teflon** coated, **never** use metal scrappers, steel wool, or sharp objects of any kind to clean or remove dough or flour that may accumulate. The use of compressed air is acceptable.
- The base of the machine, and the plastic covers (S009) of the piston/knife assembly, should be **cleaned daily** with a dry cloth or soft plastic brush; heavy stains or caked on dough should be softened with any household window cleaner (plastic spray bottle), and wiped clean with a dry cloth or paper towels.
- **Never spray** water on the machine with a hose or pressure washer, because the frame and various moving parts are made of cast iron, and even that they are painted, they will start to rust; also water will accumulate in the inside of the machine, since it is not sealed.
- **Important:** The knives should be cleaned daily, (see paragraph #8). Dough accumulation, and/or insufficient cleaning will result in broken springs due to excessive friction between the parts.

11. ORDERING REPLACEMENT PARTS

- Make sure to have the serial number and machine model available when ordering parts. Compare damaged part with the diagram and parts list supplied in this manual to determine the item number. This will expedite the processing of the order and avoid the shipping of wrong parts.
- Call your local service agent/dealer, or BE&SCO Manufacturing (210) 734-5124 x18.

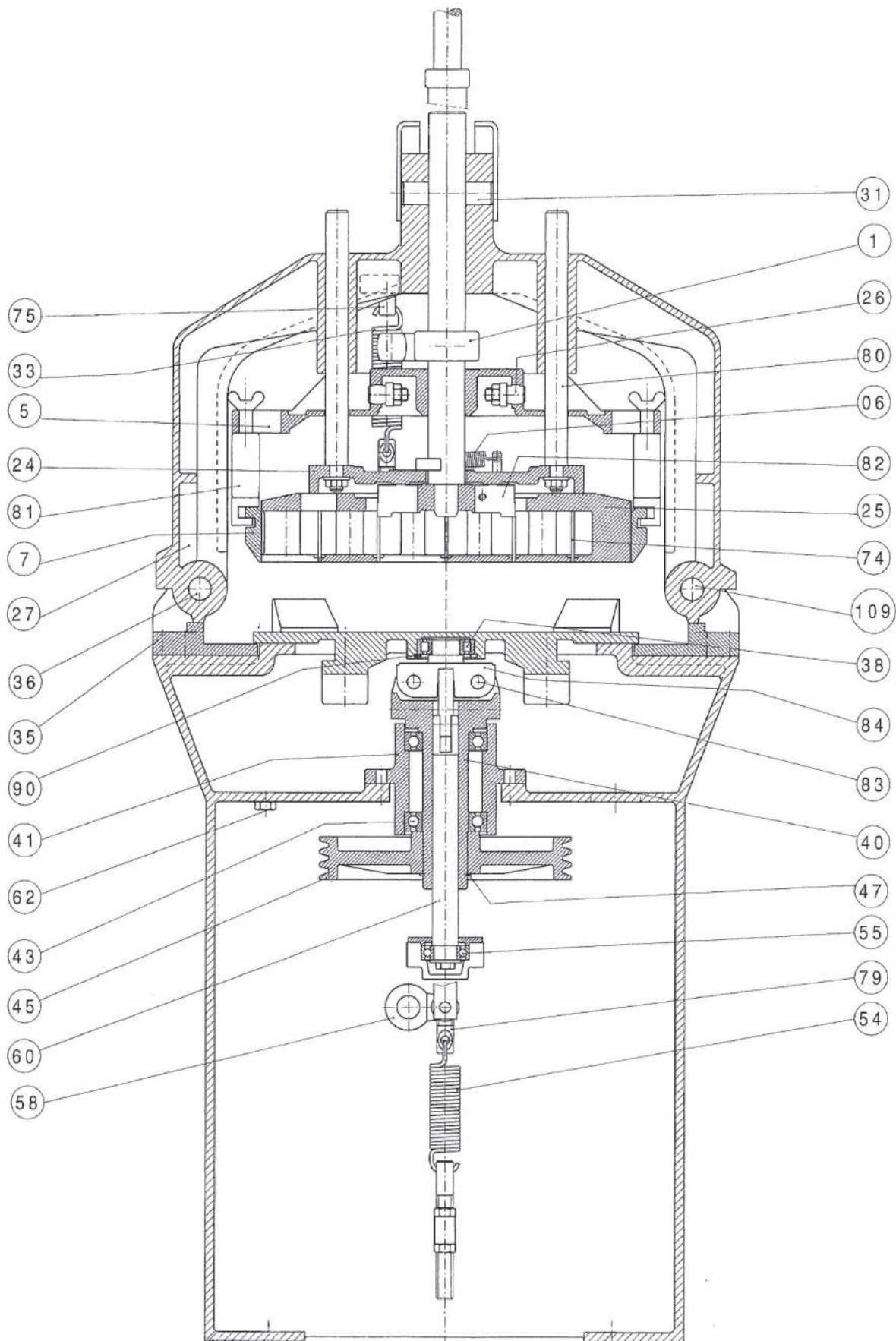
Spare Parts List

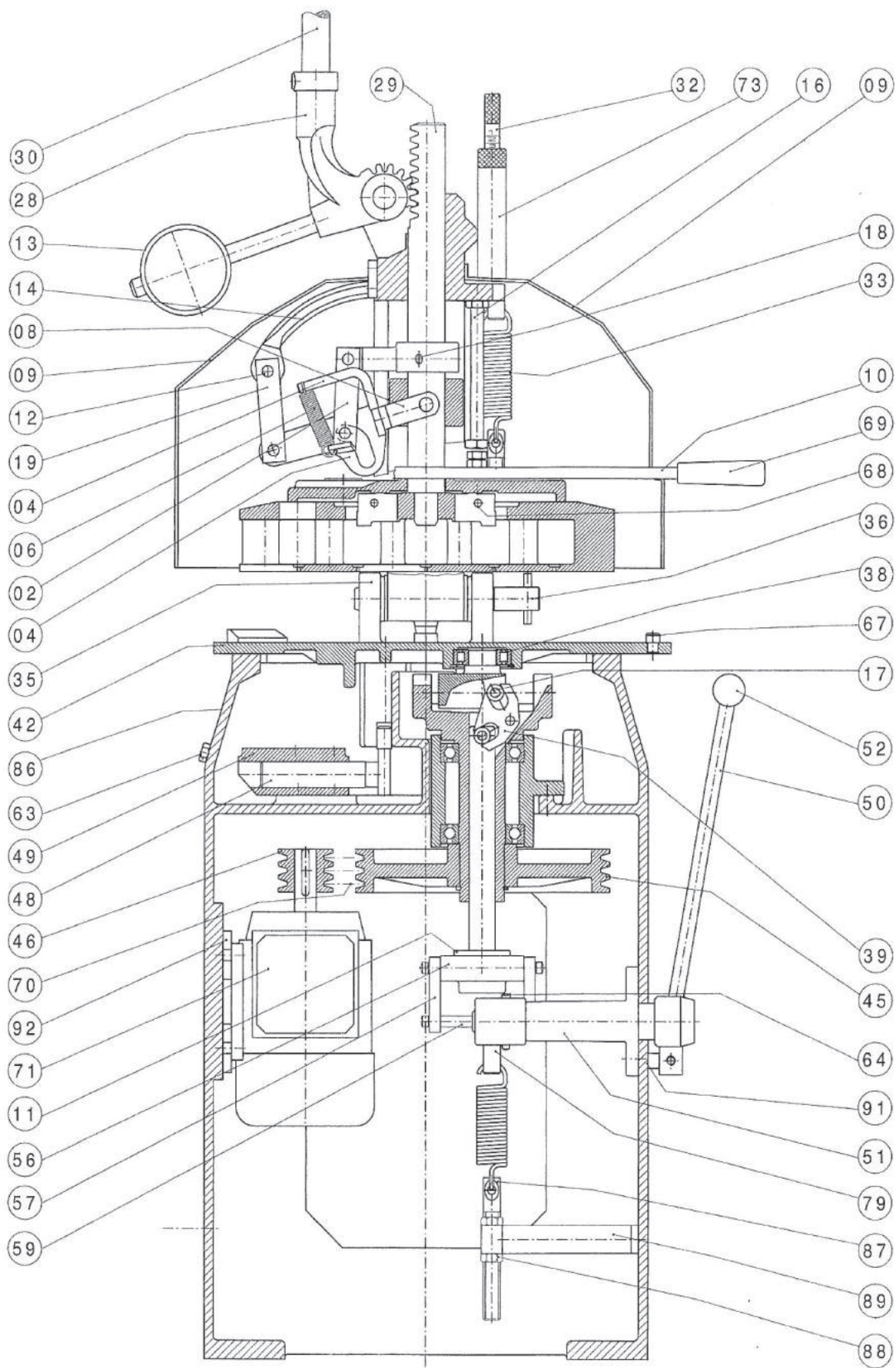
Part No.	Description	Part No.	Description	Part No.	Description
S - 001	stop	S - 047	snap ring	S - 104	registration-lamp
S - 002L	latch left	S - 048	gate	S - 105	roller (transport)
S - 002R	latch right	S - 049	gate bearing	S - 107	covering plate
S - 003	latch pivot	S - 050	moulding lever cpl.	S - 108	screen (only Germ.)
S - 004	fork casting with curve	S - 051	flange bearing	S - 109	king bolt yoke
S - 005	ring guide	S - 052	knob		
S - 006	pull spring	S - 054	pull spring		
S - 007	dough ring	S - 055	self aligning bearing		
S - 008	yoke for S - 004	S - 056	bearing housing		
S - 009V	cover front	S - 057	connecting arm		
S - 009H	cover rear	S - 058	lever		
S - 010	cutting arm	S - 059	push bolt		
S - 011	bearing cover	S - 060	connecting rod		
S - 012	bolt	S - 062	drain plug		
S - 013	weight	S - 063	oil filler		
S - 014	latch bow	S - 064	taper pin		
S - 015	straight pin	S - 066	moulding plate		
S - 016	adjusting screw	S - 067	fixing pin		
S - 017	angle arm bolt	S - 068	cotter pin		
S - 018	pin	S - 069	knob		
S - 019	connection bar	S - 070	V - belt		
S - 020	bolt	S - 071	motor		
S - 021	snap ring	S - 072	spring bolt		
S - 023	flange screw	S - 073	sleeve		
S - 024	flange	S - 075	spring bolt short		
S - 025/074/082	piston w. knife-head ass.	S - 076	end stop		
S - 026	clevis pin	S - 077	counter nut		
S - 027	cast iron yoke	S - 079	spring bolt		
S - 028	gear segment	S - 080	pin rod		
S - 029	gear bar	S - 081	hook bolt		
S - 030	pressure arm	S - 082	cross piece		
S - 031	segment bolt	S - 083	gate pin		
S - 032	adjusting screw	S - 084	gate piece		
S - 033	pull spring	S - 085	roller gate piece		
S - 034	support screw	S - 086	housing		
S - 035	pillow block	S - 087	spring bolt		
S - 036	disconnecting bolt	S - 088	counter nut		
S - 037	adjusting screw	S - 089	support		
S - 038	roller bearing	S - 090	snap ring		
S - 039	angle lift	S - 091	stop		
S - 040	bushing	S - 092	motor support		
S - 041	bearing housing	S - 096	pivotblock		
S - 042	pressure plate	S - 099	fastening for cover		
S - 043	ball bearing	S - 100	roller connecting rod		
S - 045	V - belt pulley	S - 101	circuit breaker		
S - 046	V - belt pulley f. motor	S - 102	box f. circuit breaker		

Specification for different types of semi auto. machines

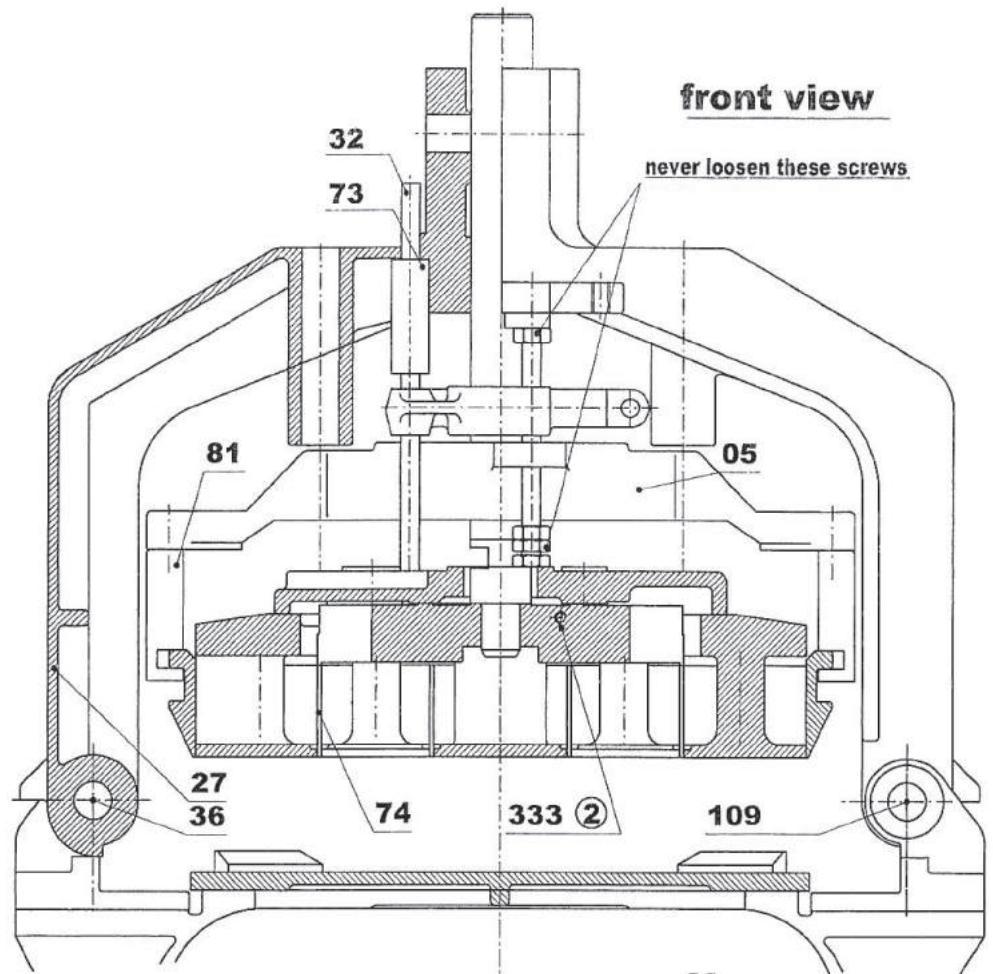
Type	Description
S - 05A	ring guide type 10/25 + 11/30
S - 05B	ring guide type 2/36 + 9/20
S - 07A	dough ring type 11/30
S - 07B	dough ring type 5/18
S - 07C	dough ring type 2/36 + 9/20
S - 07D	dough ring type 10/25
S - 09A	cover front, round type 9/20 + 10/25 + 11/30
S - 09B	cover front, square type 9/20 + 10/25 + 11/30
S - 09C	cover front type 2/36
S - 09D	cover rear, round type 9/20 + 10/25 + 11/30
S - 09E	cover rear type 2/36
S - 09F	cover rear, square type 9/20 + 10/25 + 11/30
S - 16A	adjusting screw type 9/20 + 2/36
S - 16B	adjusting screw type 10/25 + 11/30
S - 24A	flange type 10/25 + 11/30
S - 24B	flange type 2/36 + 9/20
S - 25A	piston w. knifehead assy type 11/30
S - 25B	piston w. knifehead assy type 10/25
S - 25C	piston w. knifehead assy type 9/20 + 2/36
S - 25D	piston w. knifehead assy type 7/70
S - 25E	piston w. knifehead assy type 6/150
S - 25F	piston w. knifehead assy type 5/18
S - 25G	piston w. knifehead assy type 4/40
S - 25I	piston w. knifehead assy type 8/250

Type	Description
S - 27A	yoke round, type 10/25 + 11/30
S - 27B	yoke round, type 9/20
S - 27C	yoke, type 2/36
S - 27D	yoke, type 10/25 + 11/30
S - 27E	yoke, type 9/20
S - 29A	gear bar type 4/40 + 6/150
S - 29B	gear bar type 10/25 + 11/30
S - 29C	gear bar type 2/36 + 9/20
S - 32A	adjusting screw type 10/25 + 11/30
S - 32B	adjusting screw type 2/36 + 9/20
S - 35A	pillow block type 9/20 + 10/25 + 11/30 + 2/36
S - 42A	pressue plate type 9/20 + 10/25 + 11/30 + 2/36
S - 66/1	moulding plate type 10/25 - 36 parts #336
S - 66/2	moulding plate type 11/30 - 36 parts #46
S - 66/3	moulding plate type 2/36 - 36 parts #26
S - 66/4	moulding plate type 4/40 - 30 parts #45
S - 66/5	moulding plate type 5/18 - 50 parts #50
S - 66/6	moulding plate type 6/150 - 15 parts #415
S - 66/7	moulding plate type 7/70 - 20 parts #420
S - 66/8	moulding plate type 9/20 - 36 parts #326
S - 66/9	moulding plate type 3/30 - 30 parts #35
S - 66/10	moulding plate type 2/25 - 30 parts #25
S - 66/11	moulding plate type 8/250 - 7 parts #47
S - 71A	single phase motor 0,55 kw
S - 81A	hook-screw type 11/30
S - 81B	hook-screw type 9/20 + 10/25 + 2/36
S - 82A	cross-piece type 11/30
S - 82B	cross-piece type 10/25
S - 82C	cross-piece type 9/20 + 2/36





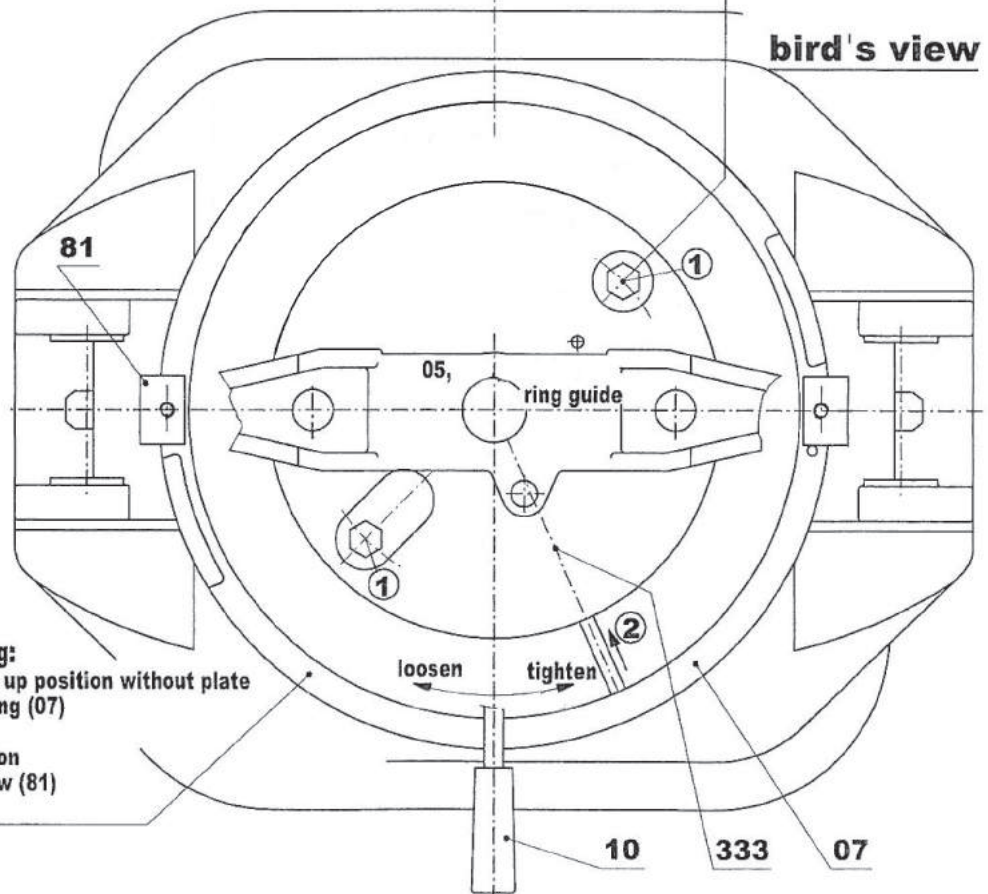
front view



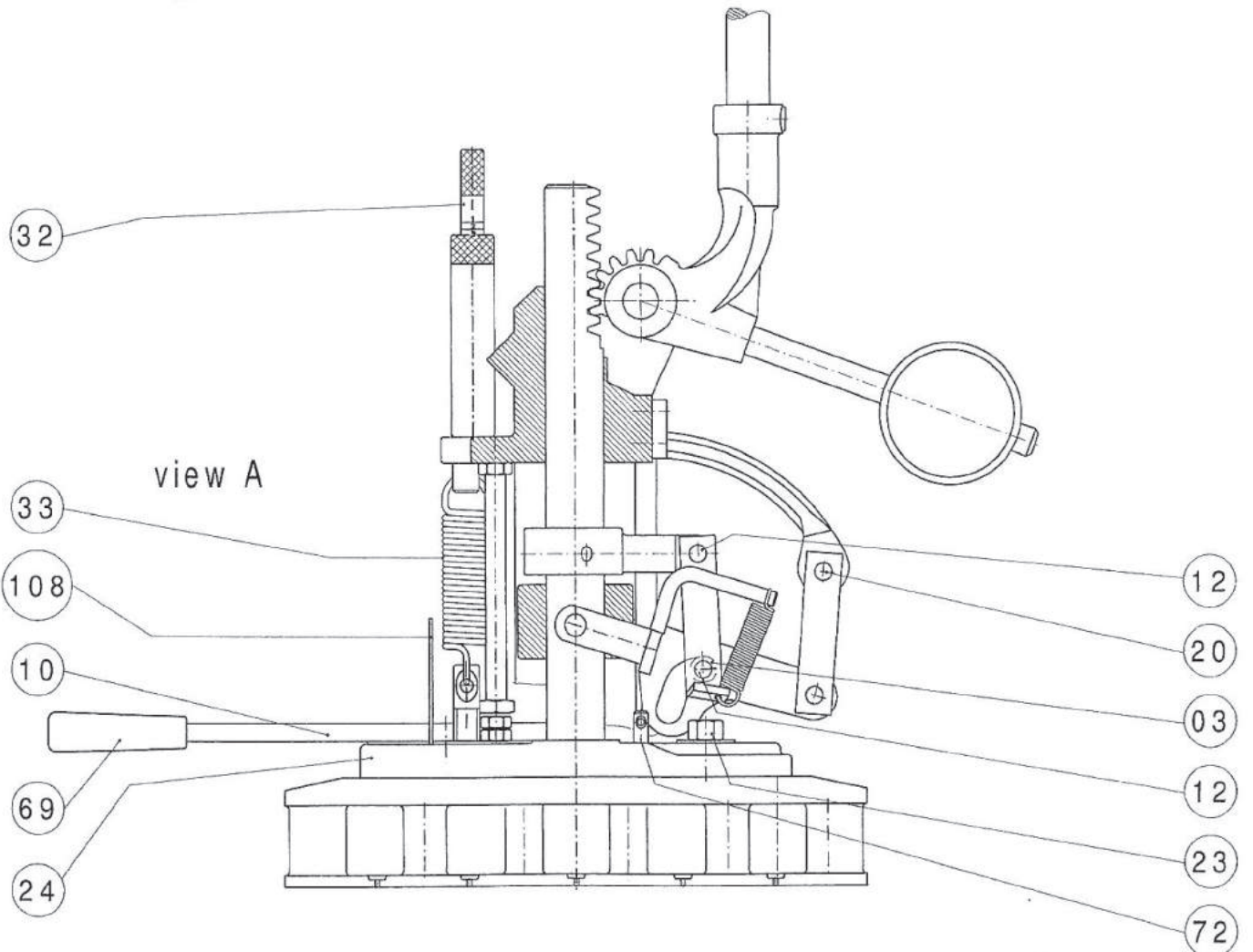
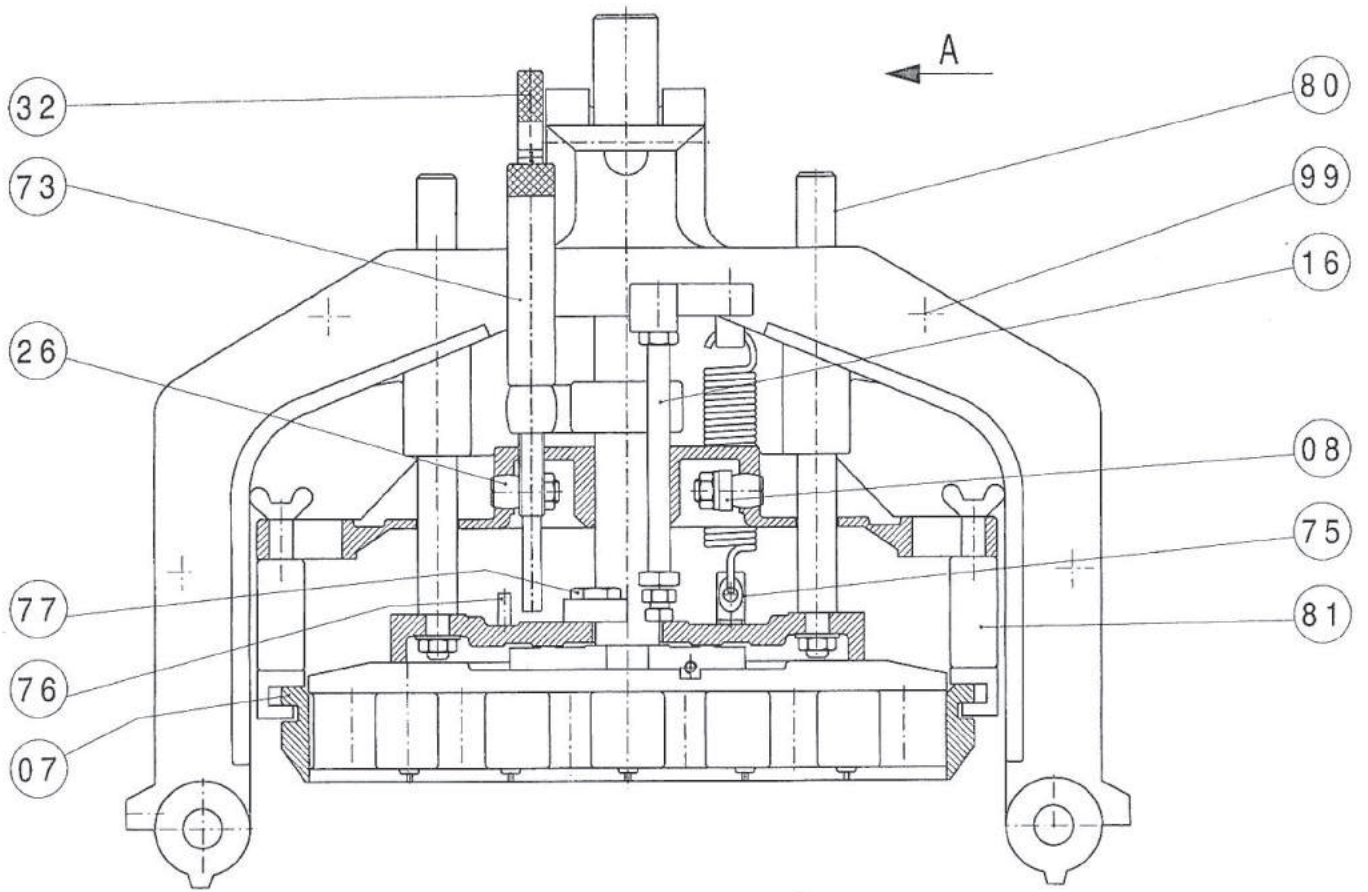
- cleaning:**
- remove ring (07, see below)
 - pull out bolt (36)
 - turn over yoke (27)
 - with pressure arm move down to the end
 - unlock cutting arm
 - cleaning
 - with pressure arm move up
 - turn back yoke
 - insert bolt and ring

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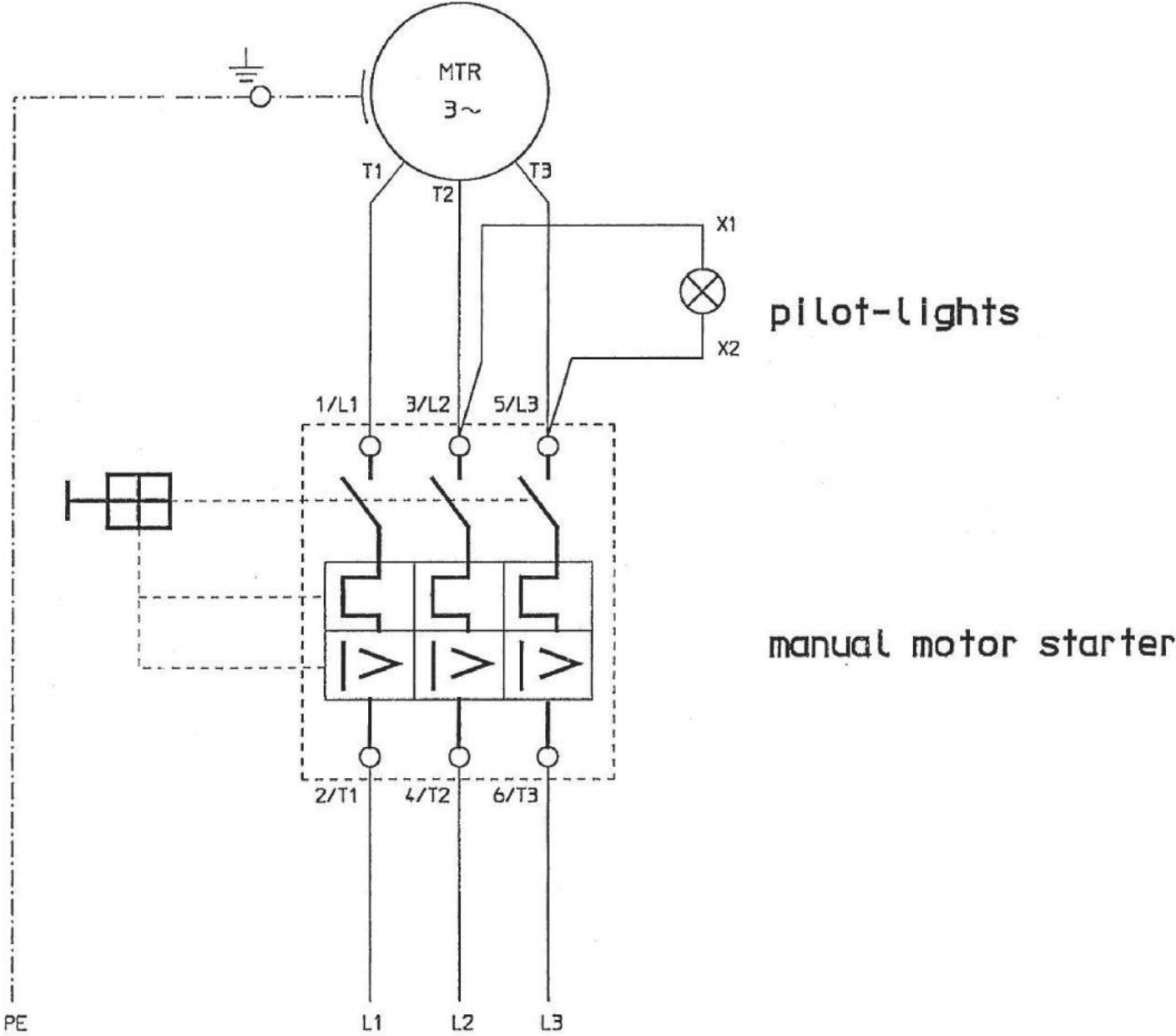
bird's view



- change of moulding ring:**
- loosen: machine is in the up position without plate
- turn left the moulding ring (07)
 - take it out
- fix: ring is above the piston
- push it up into hook-screw (81)
 - turn right to the end



motor 0.75 KW



electrical supply

Original Equipment Warranty

BAKERY EQUIPMENT & SERVICE CO., INC. warrants that its products, as supplied to the original user, is free from defects in material and workmanship, and is suitable for the use for which it is sold. The Company's obligation under this warranty shall be limited to replacing, or at the option of BAKERY EQUIPMENT & SERVICE CO., INC. repairing, without charge any part found to be defective and expense incurred (labor and material) for its installation for a period of ninety (90) days or 750 hours of operation, whichever occurs first, from date of shipment from the factory, or upon special written request to the factory and acknowledged by the factory from the date of installation when there is a long installation delay. After said ninety (90) days or 750 hours of operation and for (1) year or 3,000 hours of operation, whichever comes first from warranty initiation date, this warranty shall apply to defective parts replacement at no charge to original user.

This warranty does not cover any defect due to or resulting from handling, abuse, misuse, improper maintenance and cleaning, or harsh chemical action, nor shall it extend to any unit from which the serial number has been removed or altered, or acts of God. BE&SCO equipment is solely intended for use in a commercial facility. The warranty will not be supported and may be voided if BE&SCO equipment is used in a non-commercial or household setting. Adjustments such as calibrations, leveling, tightening of fasteners or plumbing connections normally associated with original installation are the responsibility of the dealer or installer and not of BAKERY EQUIPMENT & SERVICE CO., INC.

BAKERY EQUIPMENT & SERVICE CO., INC. shall not be liable, directly or indirectly, under any circumstances for consequential or incidental damages, including, but not limited to: (i) any loss of business or profits; and (ii) labor, material or other charges, claims, losses or damages incurred or suffered from, in connection with or in consequences of the working upon, alteration, or repair of any such defective products or parts by persons or firms other than BAKERY EQUIPMENT & SERVICE CO., INC.

This warranty applies only to products shipped to and used with the Continental United States and Canada. All other customers will be provided a spare parts kit in lieu of the above warranty. These kits will be provided with delivery of your purchased equipment. The kit shall consist of parts identified, at the sole discretion of Bakery Equipment & Service Co., INC.

At Bakery Equipment & Service Co., INC., we continuously strive to provide the highest quality products and services. This warranty serves to exhibit our commitment to this endeavor.



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