



NOV 6 1984

SPINNER

HEAD

LINER

**USO E MANUTENZIONE - EMPLOI ET ENTRETIEN  
USE AND MAINTENANCE - BETRIEBSANLEITUNG**

**PEZZI DI RICAMBIO - PIECES DE RECHANGE  
SPARE PARTS - ERSATZTEILLISTE**

Collo Pac

707-258-3940



37040 ZIMELLA (VR) - ITALIA  
Tel. (0442) 85107 - 85448  
TELEX 480398 BERZIM I



**bertolaso**

ZETA-116

342.230

1984

(Verona)

s.p.a.

Zimella

NEW - 1-3-85

## USE AND MAINTENANCE

## SPARE PARTS LIST

**automatic smoothing machines**

**ZETA 108 with 8 heads mod. 346**

**ZETA 112 with 12 heads mod. 340**

**ZETA 116 with 16 heads mod. 342**

**ZETA 120 with 20 heads mod. 344**

**ZETA 124 with 24 heads mod. 360**

Machine number

342.230

Year

1984

edition 1978

	Data	Firma	Note
Compilato			
Controllato			



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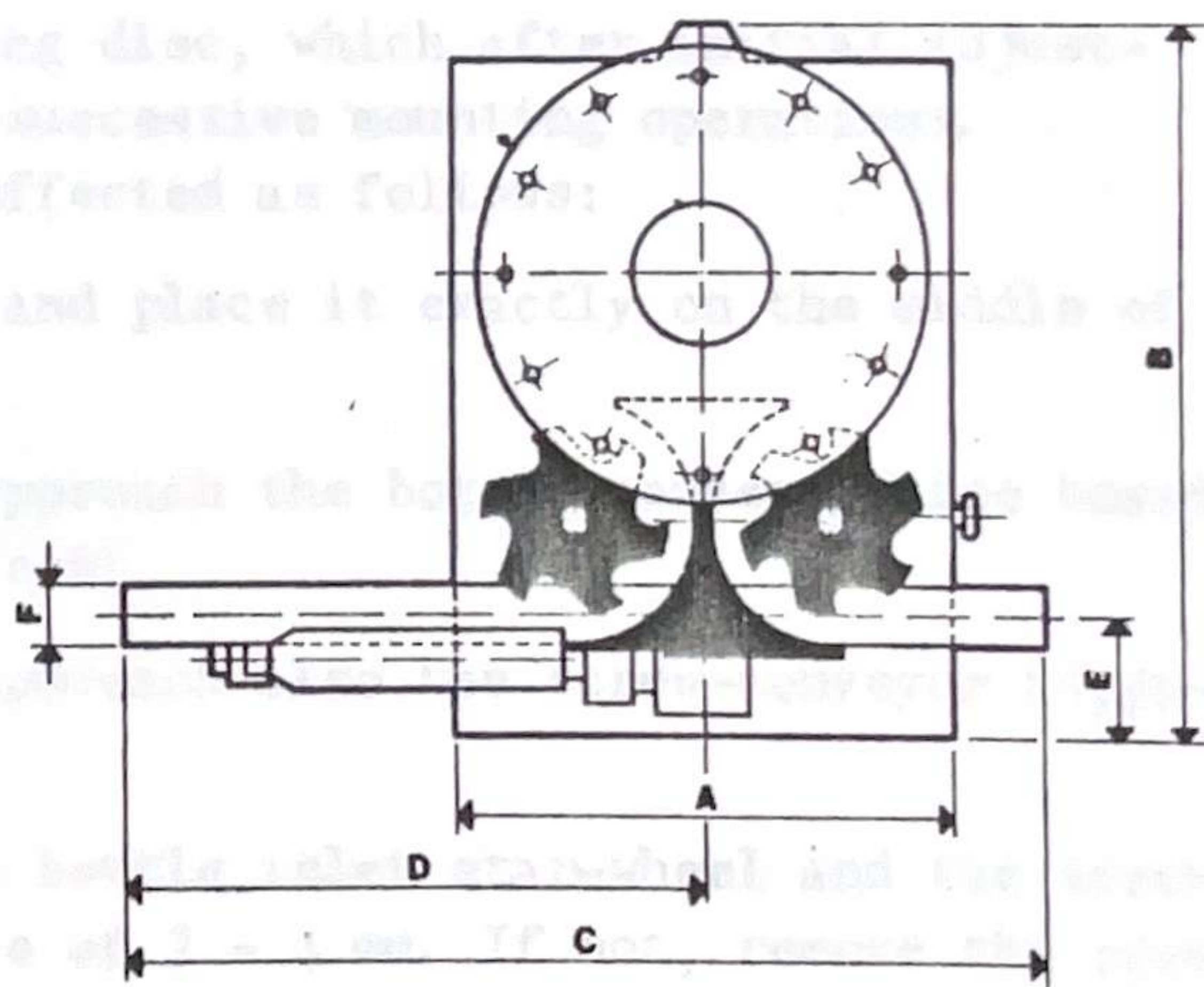
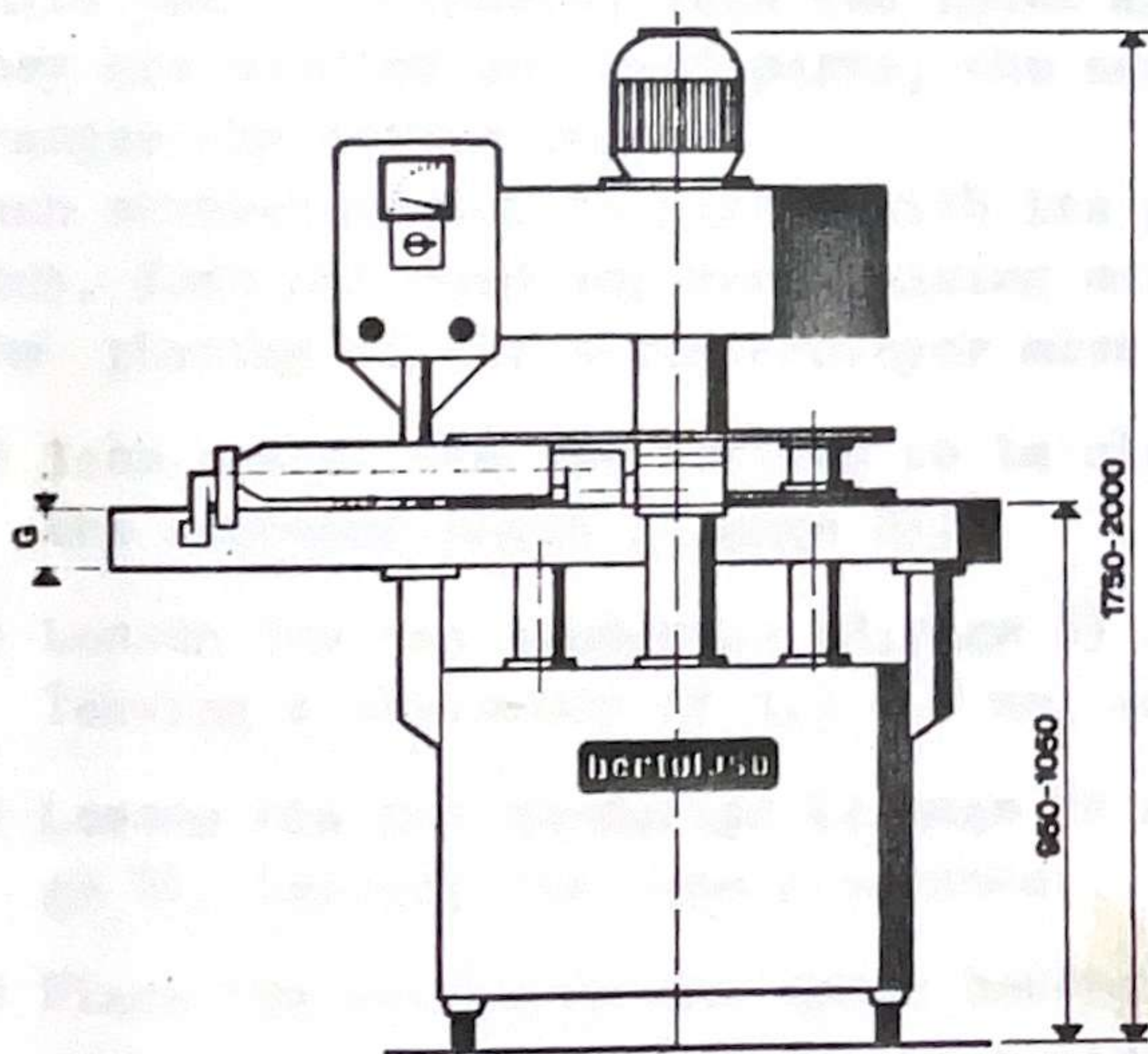
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## DATI TECNICI - DONNEES TECHNIQUES - TECHNICAL DATA - TECHNISCHE DATEN

		ZETA 108	ZETA 112	ZETA 116	ZETA 120	ZETA 124		ZETA 108	ZETA 112	ZETA 116	ZETA 120	ZETA 124	
Teste di capsulatura Têtes de capsulage Rolling heads Anrollköpfe	n. n. n. n.	8	12	16	20	24	Tolleranza in altezza Tolerance en hauteur Allowance in height Höhentoleranz	mm mm mm mm	+ 35 max				
Produzione (*) Production (*) Output (*) Leistung (*)	b/h b/h b/h F/h	2.100 + 6.000	3.200 + 9.000	4.200 + 12.000	3.000 + 15.000	4.000 + 20.000	Peso - Poids Weight - Gewicht	kg kg	950	1.000	1.050	1.430	—
Lunghezza max capsule Max. longueur des capsules Max length of caps Maximallänge der Kapseln	mm mm mm mm	60					Motore elettrico autofrenante Moteur électrique autofreinant Self-braking electric motor Elektrischer Bremsemotor	Cv Cv HP PS	1,5				
Diametri collo bottiglie Diamètres du goulot Neck diameters Halsdurchmesser von Flaschen	mm mm mm mm	26 + 32					Motore elettrico teste Moteur électrique des têtes Electric motor for heads Elektrischer Motor der Köpfe	Cv Cv HP PS	2		3		
Diametri bottiglie Diamètres des bouteilles Diameters of bottles Flaschendurchmesser	mm mm mm mm	50 + 120	50 + 100					Tensione di alimentazione Tension d'alimentation Feeding voltage Versorgungsspannung	V V V V	220 ÷ 380		220 o 380	
Tolleranza sul diametro Tolerance sur le diamètre Allowance on diameter Durchmessertoleranz	mm mm mm mm	+ 2					Bassa tensione Basse tension Low tension Niederspannung	V V V V	24				
Altezza bottiglie Hauteur des bouteilles Height of bottles Flaschenhöhe	mm mm mm mm	200 + 370					(*) Secondo tipo bottiglie (*) Selon les types de bouteilles (*) According to bottle type (*) Der Flaschentype gemäss						



MACCHINA - MACHINE MASCHINE	A	B	C	D	E	F	G
ZETA 108	800	1150	1550	1000	190	100	100
ZETA 112	800	1150	1550	1000	190	100	100
ZETA 116	800	1150	1550	1000	190	100	100
ZETA 120	1000	1400	1550	950	230	100	100
ZETA 124	1100	1600	1550	950	250	100	100

Data	Firma	Note	pag. 1
Compilato		Dati non impegnativi - Sous réserve de modifications techniques - Data are not binding - Die Angaben sind unverbindlich	
Controllato			



### CONTINUOUS SPEED VARIATOR

A speed variator with an expanding pulley is mounted on the machine to allow the maximum exploitation and the perfect synchronism with the whole bottling line machinery.

The speed variation must be done only when the machine is on, by turning the handle (1, page 8).

### CONVEYOR CHAIN SPEED

In order to regulate the speed of the conveyor chain, which must be executed on the driving head in question, this very important rule must be kept in mind: the screw-conveyor must NEVER drag the bottles but only separate them, a slightly braking action is preferable.

In order to obtain an excellent bottle feeding, the conveyor chain must have a speed of 220 mm per bottle for ZETA 108; 160 mm per bottle for ZETA 112; 120 mm per bottle for ZETA 116 and ZETA 124.

### PHASING OF THE MACHINE

One of the basic conditions for an excellent bottle feeding into the machine without breakage or blocking of the machine, and for obtaining the maximum output speed, is a perfect phasing of the bottle transport unit.

While the star-wheels, both the inlet and the outlet, do not need any phasing as they are mounted on fixed parts, the screw-conveyor must be phased each time one changes the bottle type.

Each screw-conveyor is fitted with its phasing disc, which after initial adjustment, does not need any more phasing during successive mounting operations.

The phasing of the screw-conveyor must be effected as follows:

- 1) Take one of the new bottles to be closed and place it exactly on the middle of the conveyor chain (2, page 8);
  - 2) Loosen the two handgrips (3, page 8) and approach the bottle conveyor side board, leaving a clearance of 1,5 - 2 mm, and block;
  - 3) Loosen the two handgrips (4, page 8) and approach also the screw-conveyor (5, page 8), leaving the same clearance;
  - 4) Place the bottle in the space between the bottle inlet star-wheel and the screw-conveyor and check if there is a clearance of 3 - 4 mm. If not, remove the screw-conveyor, loosen the two socket head screws (6, page 9), reassemble and turn the screw-conveyor until one gets the clearance desired.
- Remove the screw-conveyor again, fix the screws and reassemble.

### REPLACING OF THE BOTTLE CONVEYOR UNIT

When the new bottles to be closed have a different form or diameter from the ones previously closed, the bottle conveyor unit must be substituted as follows:

	Data	Firma	Note
Compilato			
Controllato			



- 1) Replace the screw-conveyor (5,page 8);
- 2) Replace the bottle inlet and outlet star-wheels (7 and 8,page 8), the frontal central conveyor (9,page 9), the central star-wheel (10,page 8) and the lateral conveyors (11,page 8);
- 3) Set the side boards and the screw-conveyor as above described.

#### HEIGHT ADJUSTMENT OF THE MACHINE

When new bottles to be closed have a different height from the previous ones or new caps have a different lenght from the previous one, the height adjustment is carried out as follows:

- 1) Unloose the screw (12,page 8) and lift up at the maximum the upper part of the machine by acting on the handgrip (13,page 8);
- 2) Place one of the bottles to be closed, with a cap on, on the bottle lifting cylinder which is fully down (14,page 9);
- 3) Low down the upper part of the machine till the upper smoothing rim of the smoothing rollers axceeds of 3 mm.

#### STRETCH OF THE HEAD BELT

Periodically, check the stretch of the belt giving the motion to the head and, if necessary, adjust it by acting on the proper belt stretcher.

One obtains a good stretch of the belt when, by turning one head by hand, this does not idle but moves also the other heads.

The first adjustment has to be done after few working days. Then, check every 15 days.

#### DISCONNECTION OF THE MACHINE FROM THE WORKING CYCLE

If the machine is connected to other machines in the same bottling line and it becomes necessary to use the conveyor chain not operating the machine, the following operations are to be performed:

- 1) Remove the screw-conveyor (5,page 8) by loosening the two hand-grips (9,page 8), remove the inlet and outlet star-wheels (7 and 8, page 8) and the frontal bottle conveyor (9,page 9);
- 2) Mount the straight bottle slides, which may be supplied on request.-

	Data	Firma	Note	Page 3
Compilato				
Controllato				



L U B R I C A T I O NSCREW-CONVEYOR GEAR BOX

Each week the oil level must be controlled through the control window (15, page 9).  
 Each 4 months the oil must be substituted by removing the draining plug (16, page 8). The oil can be let in by removing the cover.  
 Oil contents: kg 0,5 ca.

SCREW-CONVEYOR BEARING

The screw-conveyor is mounted on a self-lubricating bearing consisting of sintered oil-retaining material. Periodically the oil, consumed during the use, has to be replaced, therefore each week some drops of oil have to be fed into the lubrication hole (17, page 9).-

CAP SMOOTHING ROLLERS

Every day, lubricate the bushes of the smoothing rollers with some drops of oenological oil (vaseline).-

REDUCING GEAR

The reducing gear endless screw mounted on the machine is life-lubrication type; therefore the grease must NEVER be replaced.

If, for any chance, it might be necessary to open the reducing gear box, replace the grease only with:

SHELL TIVELA COMPOUND A

or

IP TELESIA COMPOUND A

GREASING

Every 15 days grease the following parts:





- a.- cylinder gears placed inside the frame, under the upper part of the same.
- b.- electric motor adjusting screw and slides placed inside the machine.
- c.- main rods for smoothing head (18, page 9).
- d.- stepless speed change gear, by injecting grease in the greaser (19, page 8) placed in the center of the speed variator.  
 Be carefull to grease neither the belt nor the rim of the pulley.
- e.- bottle lifting cylinder, by injecting grease into the greasers (20, page 9) and grease the square main slide when the cylinder is up.
- f.- main bearing, by injecting grease into the two greases (21, page 8).

	Data	Firma	Note
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**RECOMMENDED OILS AND GREASES**

For all above-mentioned lubrication, we recommend the following lubricants:

	1	2	3	4	5	6	7
	HYDRAULIC OIL 10	HYDRAULIC OIL 10	SOLARIA OIL 40		ATHESIA GREASE EP2	SINOL GREASE 40	LITOL GREASE 40
	ENERGOL HP 7	ENERGOL HP 7	ENERGOL WM 4		ENERGOL LE-EP-2		
	MUTO H 15	GREASE 200	PRIMOL 207		BEACON EP 2	MULTI-PURPOSE GREASE (MGLV)	
	UNILUBON PLAST-SPRAY CONTRAFOR FLUID H1	BRUCOLAN 200	PARALIQ P 150	PARALIQ OPR 350	CENTOPLEX 2EP	UNIMOLY BL 025	GRAF LUBCON A SPRAY

**ELECTROMAGNETIC BRAKE**

After a long working shift it might occur that the electromagnetic brake mounted on the motor does not brake sufficiently any more. To obtain the initial braking conditions, the instructions attached to this book have to be observed.

**SLIDING CONTACT UNIT FOR HEAD CONTROLLING MOTOR**

Inside the frame, opportunely sheltered, there is a quadrupole sliding contact feeding current to the head motor.

Periodically, check the good conditions of the brushes and, if necessary, substitute them when too worn.

Every time one operates on the electric system, disconnect the machine from the main feeding.

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Piano di lubrificazione

Schéma de lubrification

Lubrication plan

Schmierungsplan

# ZETA 108 - 112 - 116 - 120 - 124

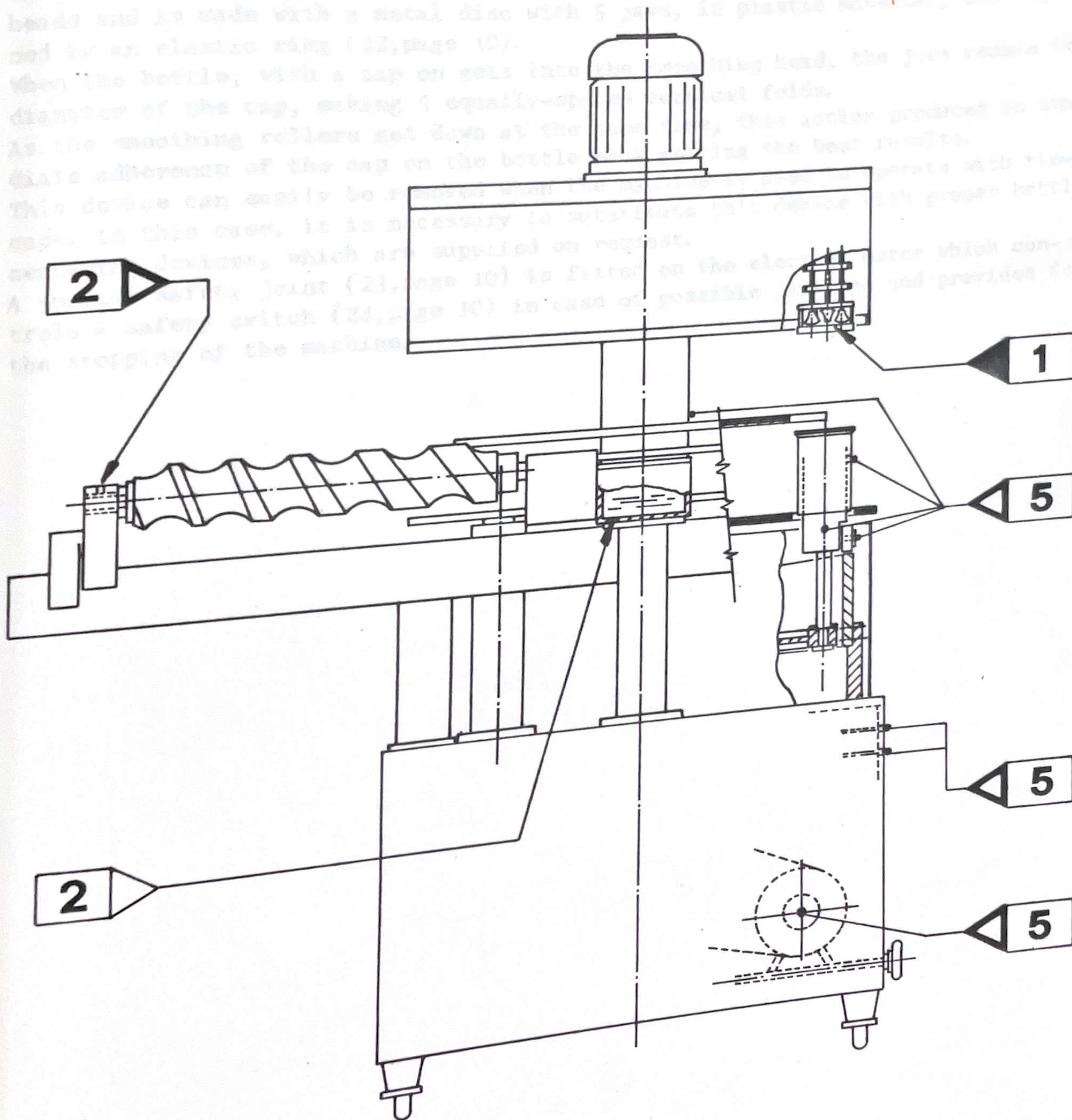
To roll the aluminium caps, a special device for the pre-tensioning of these caps, before their rolling, is supplied with the machine. It is fitted under the rolling heads and is made with a metal disc with 5 jaws, in plastic material, and regulated by an elastic ring (23, page 10).

When the bottle, with a cap on, goes into the working head, the jaws reduce the diameter of the cap, making 5 equally-spaced radial folds.

As the smoothing rollers get down at the end of the cap, this action produces an intimate adherence of the cap on the bottle.

This device can easily be removed when the machine is to be used with glass bottles. In this case, it is necessary to substitute this device with proper bottle caps, which are supplied on request.

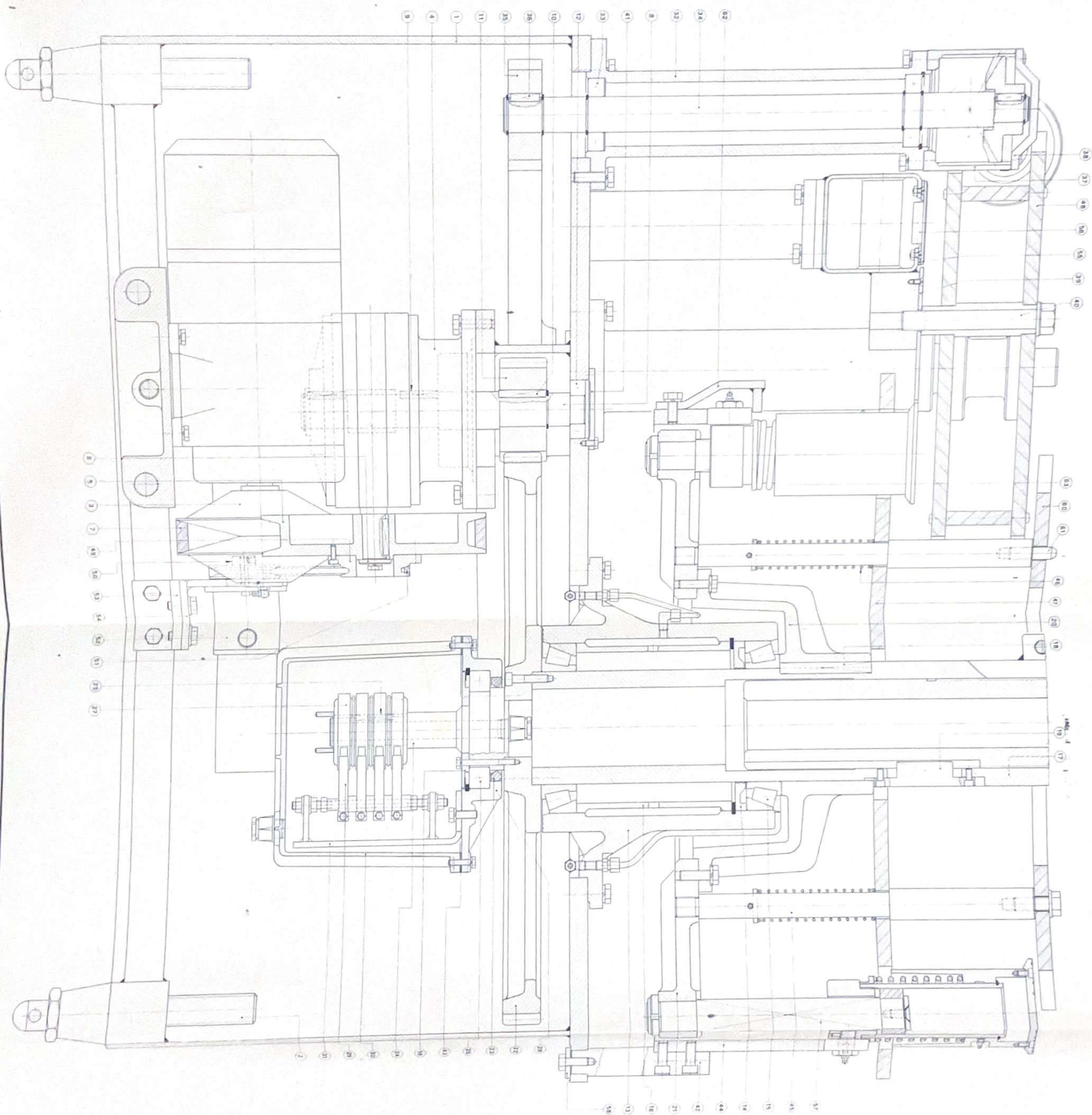
A safety joint (23, page 10) is fitted on the electric motor which controls the stopping of the machine.



Lubrificazione cammes ed ingranaggi scoperti con grasso n° 7  
Lubrification des cammes et engrenages sans protection avec graisse n° 7  
Lubrication of open gears with grease no. 7  
Schmierung der offenen Zahnräder mit Schmierfett Nr. 7



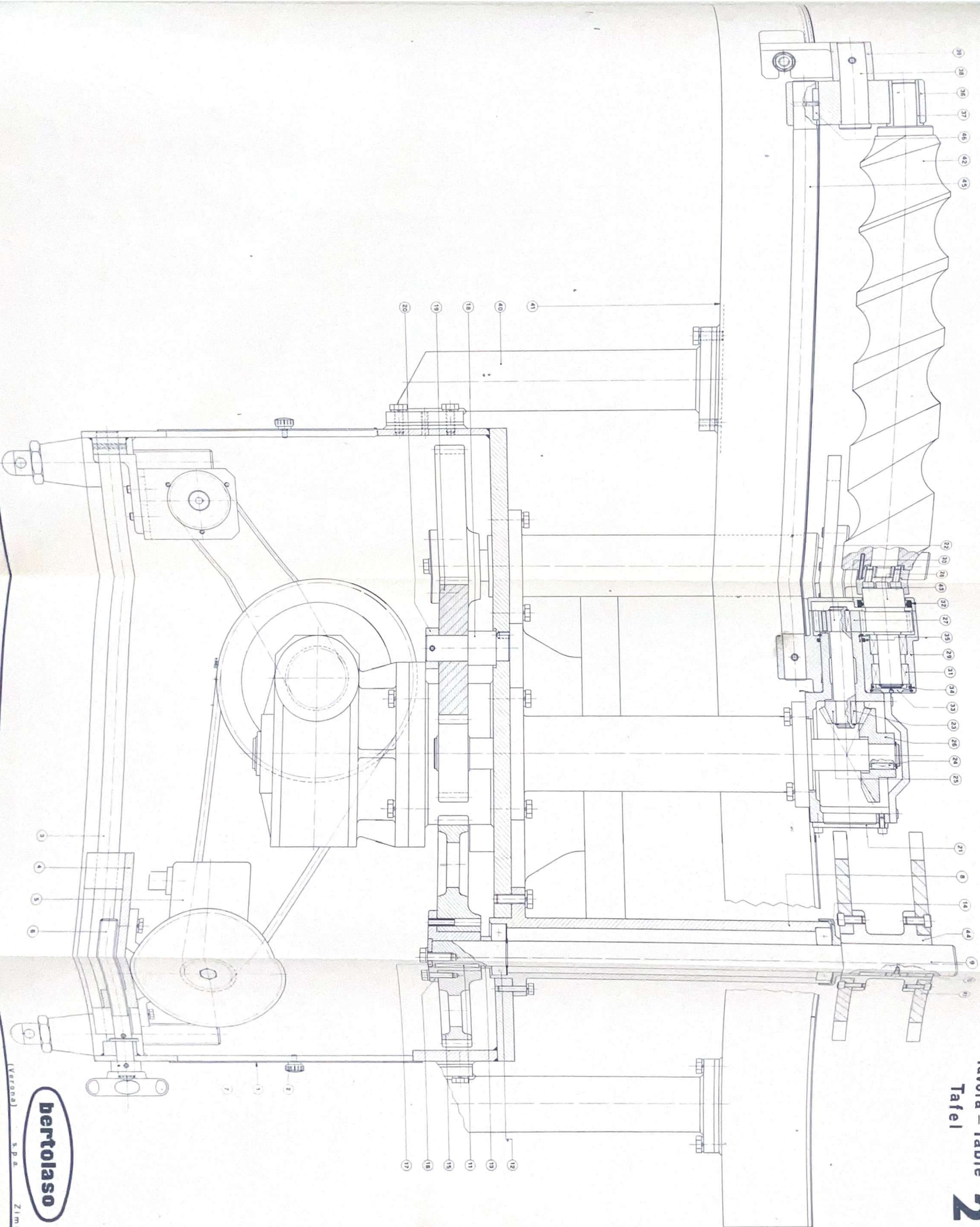
Tavola - Table  
Tafel



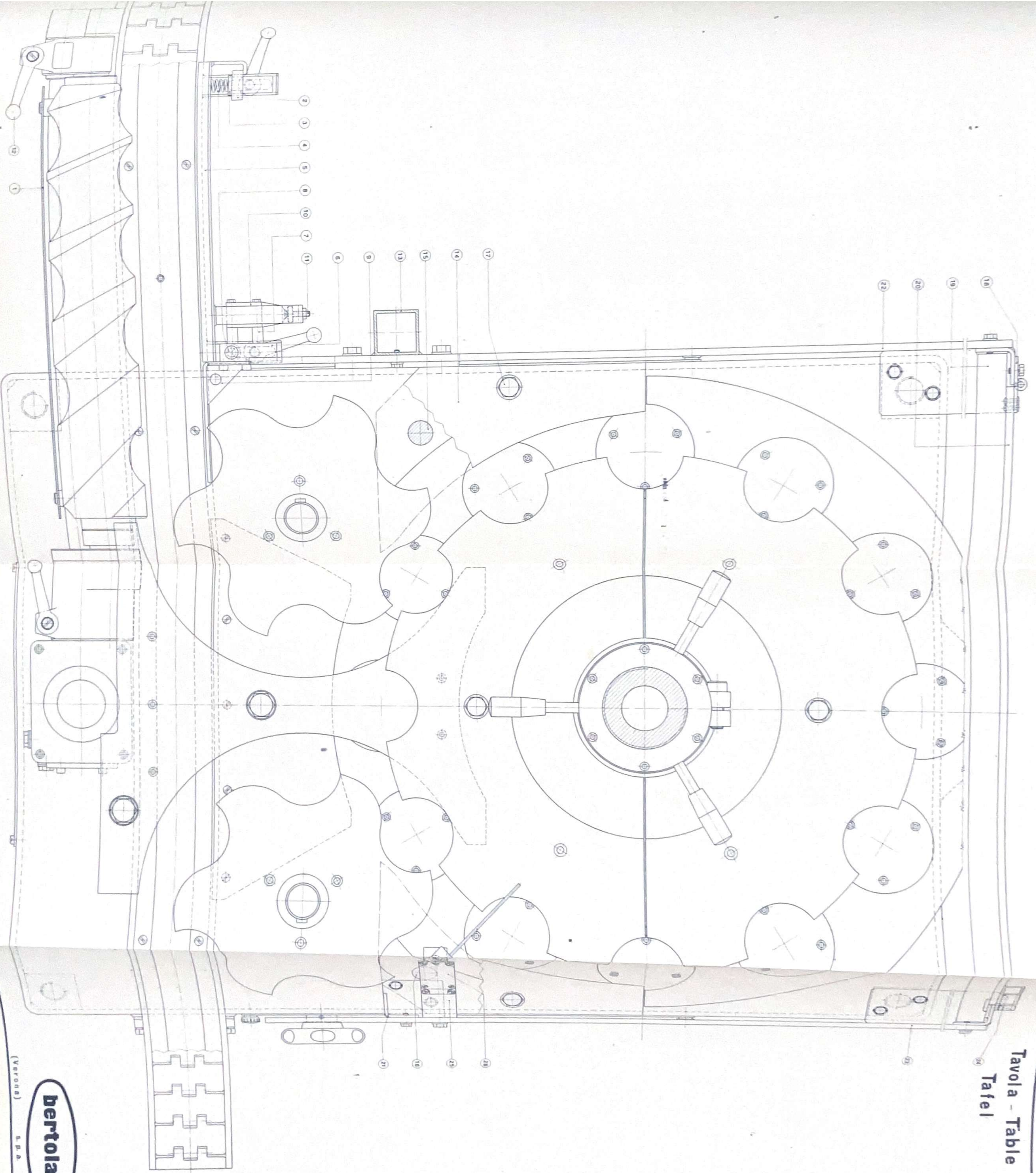
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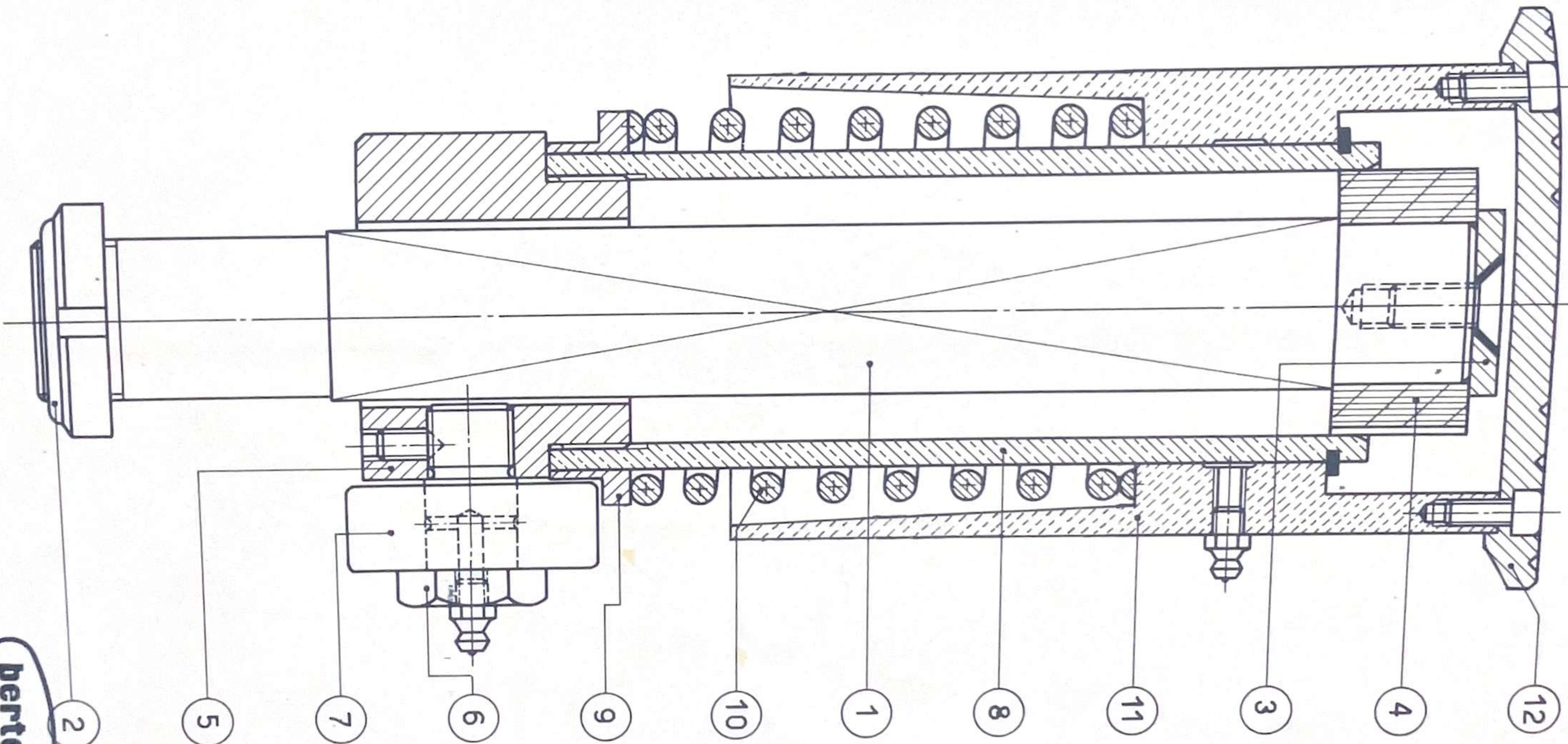












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