INSTRUCTIONS FOR INSTALLATION, USE AND MAINTENANCE

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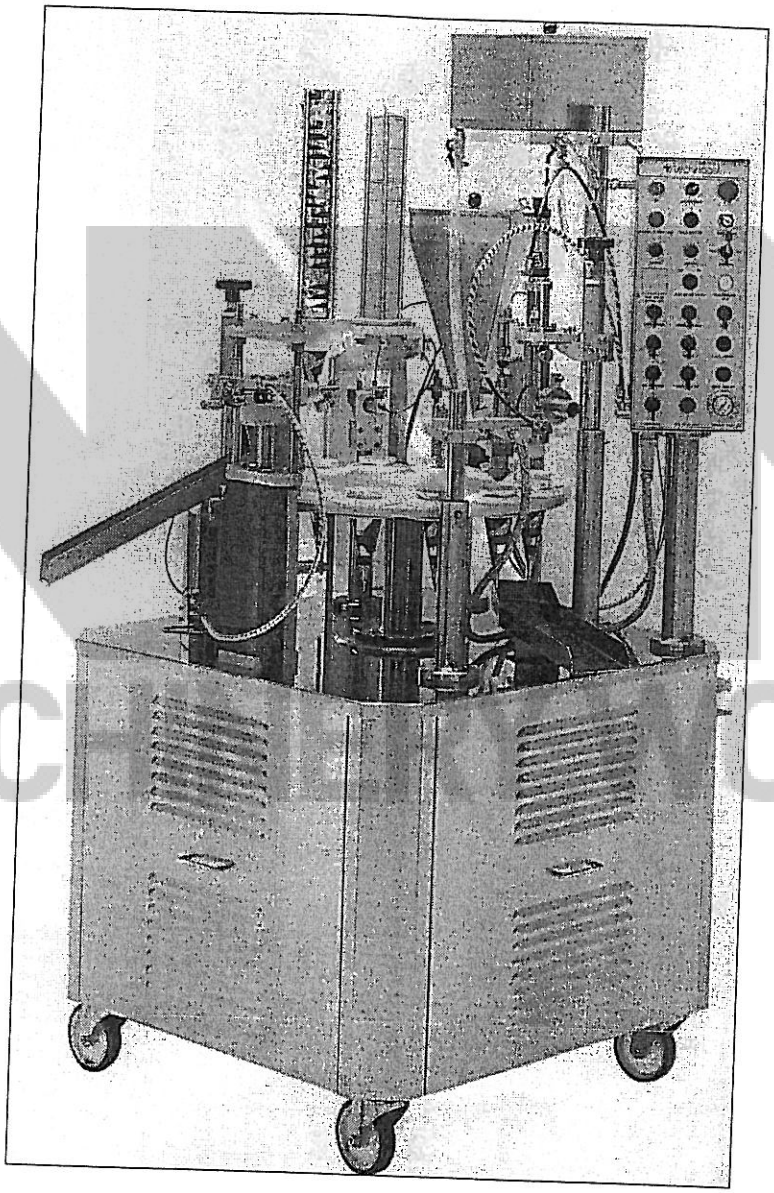

ROTARY

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MACCHINE E IMPIANTI PER GELATO

ICE CREAM EQUIPMENTS AND MACHINES

Sede (factory): Via Boschetti, 51 - 24050 Grassobbio (BG) ITALY

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GUARANTEE

The certificate of guarantee enclosed with the instruction manual is essential to prove the goods have been received satisfactorily by the customer and to ensure that the customer has read the general guarantee regulations and essential safety requirements.
In particular it is designed to guarantee the following:

- The customer has read and understood the general regulations governing the guarantee
- The machine is newly manufactured and is covered by the general guarantee regulations
- The manual has been received and all sections have been understood with particular reference to the safety devices
- The person in charge, at the time of installation, has taken note of the risks the machine involves and is well-informed on action that should be taken with regard to these points
- The person in charge has understood the usage of the manual
- The person in charge must ensure that this manual is available whenever necessary during operation of the machine

Once the customer has read the above points he/she is kindly requested to have the appropriate box signed and stamped by the person in charge and to return this certificate within 30 days of receipt of the goods to the following address:
TECHNOGEL S.p.A Via Boschetti, 51 - Grassobbio (Bergamo) Italy

Mod. Rotary 4000 Serial no. 3102

Customer

Date

.....

Person in charge

.....

Supplier

Date

.....

.....

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INTRODUCTION

INTRODUCTION

This manual is designed for the user. After careful reading of the manual, he/she will be able to use the machine and carry out ordinary maintenance.
The manual covers all instructions and indications for the following:
- Correct installation of the machine
- Functional descriptions of all parts of the machine
- Adjustments carried out during set-up and starting of the machine
- Details regarding elementary rules for safety and accident prevention

With regard to user safety and any risks which may arise from usage of the machine, we should like to point out that the following terms are used with the meanings given below:

OPERATOR: person appointed to adjust the machine and carry out cleaning and ordinary maintenance.

QUALIFIED TECHNICIAN: qualified person specifically trained to carry out special maintenance and repairs which require specialized knowledge of the machine, its operation, the relative safety devices and how they work.

DANGER ZONE: area inside or close to the machine in which a person's presence constitutes a risk for that person's safety.

CAUTION: indicates the possibility of an accident occurring to the operator if instructions are not followed meticulously.

WARNING: indicates the possibility of damage occurring to the machine or to equipment if instructions are not followed meticulously.

NOTE: gives useful information.

Before starting work on the machine and before any operation of lubrication or maintenance is carried out, it is essential for the OPERATOR to have read and understood all the WARNINGS and all CAUTION notifications in the manual. Appropriate indications have also been applied to the machine with specific instructions on how to proceed and identification of specific risks which, if under-estimated, could prove dangerous for both the OPERATOR and the machine. This manual should always be at the operator's disposal and should be carefully looked after.

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WARNINGS

GENERAL WARNINGS

Conserve this manual carefully for use when further information is required.

• Protection devices have been created by the manufacturer to ensure operator safety during operation of the machine. During operation of the machine the protection devices must not be removed for any resason whatsoever; all mobile shields must be used and protective clothing must be worn.

• In order to ensure his own and other people's safety, the operator must not start the machine if there is anybody close to the area of operation.

• In case of any doubt or irregularity regarding operation of the machine, stop the machine. Do not attempt any repairs or tamper with the machine but ask qualified personnel for assistance.

• The operator must not use the machine with wet or damp hands or feet. Do not turn the machine off by pulling out the electricity supply cable or turning off the mains switch. Do not use lead extensions, adapters or multiple sockets. Do not leave the machine exposed to atmospheric agents. Do not allow the machine to be used by anyone under age or incapable of using it correctly.

• The machine may be considered safe electrically-speaking when it is correctly connected to an appropriately earthed electrical system as foreseen by EN safety standards.

• Before connecting the machine, make sure that the data on the plate comply with the electricity supply characteristics.

• Check that the electricity supply is adequate for the maximum capacity of the machine as indicated on the plate.

• When the machine is being installed, an omnipolar switch must be incorporated, as foreseen by safety standards in effect, where the distance of the contacts is 3 mm or more.

• Operators must avoid working close to the sliding station columns unless the machine has been turned off and the electricity and compressed air supplies have been disconnected.

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1 DESCRIPTION OF THE MACHINE

1 DESCRIPTION OF THE MACHINE

The Rotary Machines are automatic packing machines for ice-cream cones and cups and/or similar products - see fig. 1.1.

Operations are carried out as programmed between the rotating pass table equipped with twelve moulds containing the containers, and the production distributor stations located along the rotation line of the table itself.

Movement is generated by an asynchronous 3-phase motor which transmits the movement by means of a trapezoidal belt variator with expansion pulley, to the worm reduction unit. A bevel pinion mounted on the slow shaft of the reduction unit gives movement to the satellite pinions which, by means of a system with connecting rod and crank, activate the machine's stations.

The rotary movement of the mould support table is carried out by means of a jogger. The sequence of the work stages is controlled by an appropriately programmed cam system which activates the filling operations pneumatically.

The structure is made of anticorrosive anodized AISI 304 steel; the bottom part is covered with AISI 304 stainless steel panels while the top part is covered with transparent polycarbonate panels.

The machine is fitted with a control board and only one appropriately trained operator is required to operate it. The machine stands on four wheels, two of which have a pedal operated brake to ensure rapid movement of the machine to different areas of the production division.

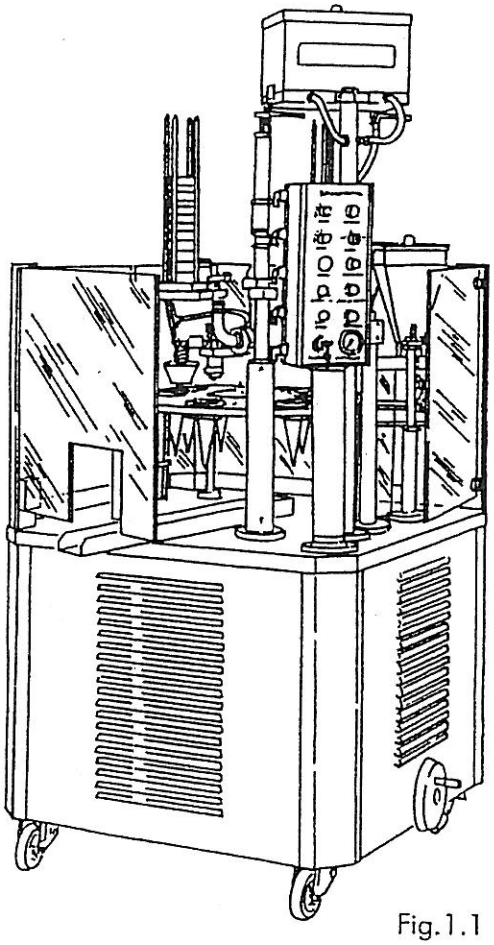

Fig. 1.1

The machine is designed to operate in two different modes:

- manual phase/phase mode
- automatic continuous mode

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2 SAFETY PROTECTIONS

2 SAFETY PROTECTIONS

The machine is designed to ensure total operator protection.
The protection devices indicated in fig. 2.1. are as follows:

1 Protection panels in transparent polycarbonate which can be opened. From close-up, the operator can check how the work is being carried without any danger whatsoever. The panels are fitted with microswitches to stop the machine if the panels are opened during operation.

2 AISI 304 stainless steel closure panels firmly fixed with screws to the structure. These are fitted to the bottom part of the machine so that all moving mechanisms are completely enclosed.

3 External speed adjustment handwheel fitted with a retractable shock-resistant handle.

4 A control panel positioned at operator eye level and incorporated into the machine structure to avoid any accidental impact or involuntary activation.

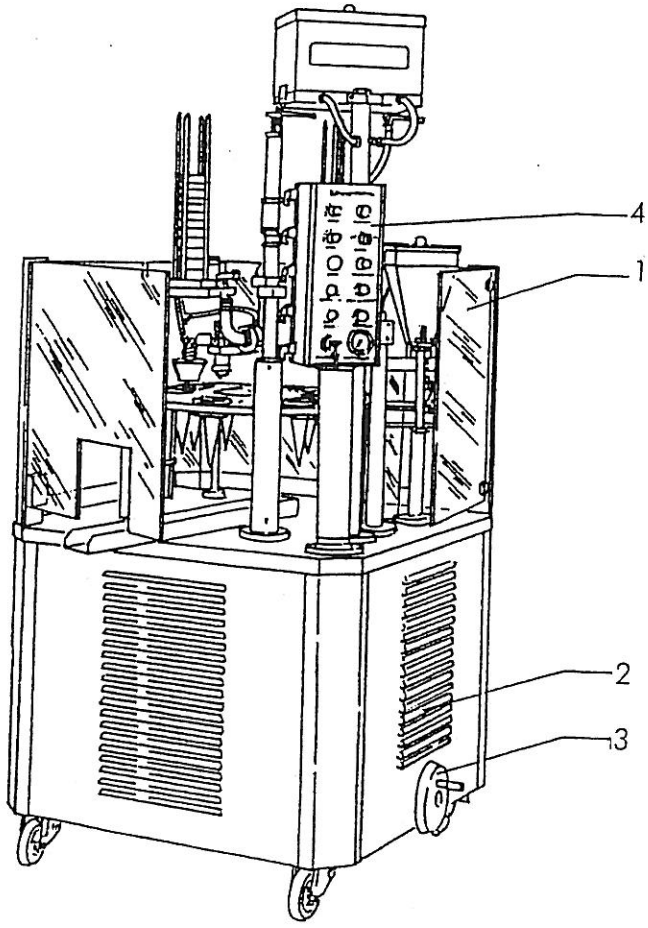

Fig.2.1

STOP Warnings
The upper protection shield must only be opened to carry out adjustment or set up further production when the machine is stopped.
The bottom panels must only be removed when maintenance work has to be carried out. The machine must operate only when all panels and protections are in position and operating efficiently and when the rear wheels have been blocked.

5 Amperometric overload control box complete with digital instrument for adjustment of absorption - 1 fig. 2.2.

6 Emergency stop button 1 fig. 2.3 for machine stoppage. It operates by disconnecting the power supply line.

7 Electric power and motor circuit fitted with automatic protective heat and magneto-heat relays. 1 fig. 2.4

8 Low voltage 24V control panel fig. fig. 2.3.

9 All components (pipes, connections, containers, etc.) coming into contact with the food product are constructed with materials selected in compliance with hygiene and food regulations currently in effect.

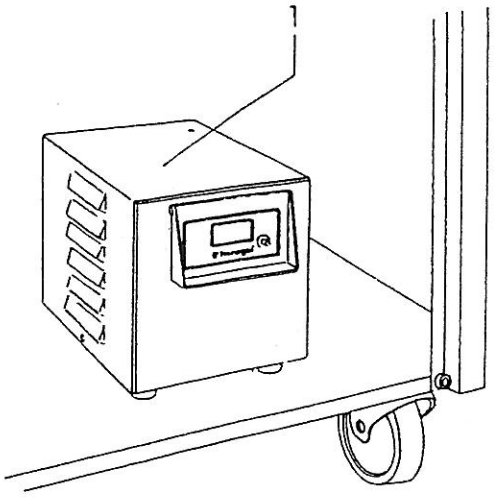

Fig.2.2

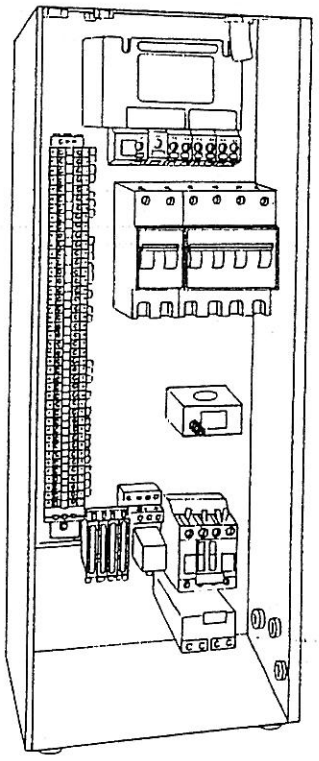

Fig.2.4

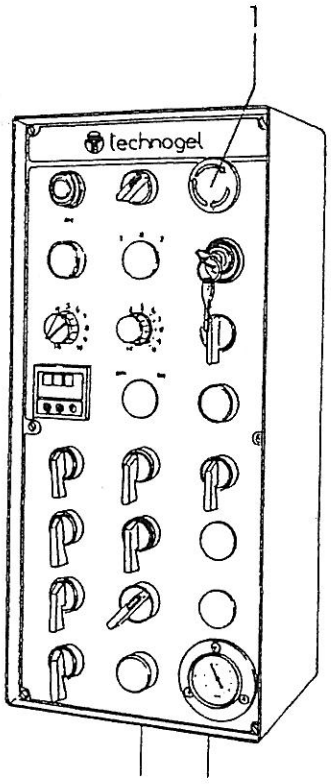

Fig.2.3

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3 TECHNICAL DATA

Hourly production capacity

Production capacity	3000 pcs	4000 pcs
Max. min. stroke	50	66
Max mould diam.	85 mm	100 mm
Moulds on rot. table	12	12
Air consumption	500 l/min	700 l/min

Electricity supply for production

Motor	1.1. kW	1.1 kW
220 V 3 NT 50 Hz	5.5 A - 6.5 A	5.5 A - 6.5 A
380 V 3 NT 50 Hz	3.4 A - 3.9 A	3.4 A - 3.6 A
415 V 3 NT 50 Hz	3.0 A - 3.6 A	3.0 A - 3.6 A

Compressed air supply

Minimum	4 bar	4 bar
Maximum	8 bar	8 bar
Recommended air pressure	6 bar	6 bar

Note
All characteristics are subject to modification without any prior notice.

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4 MACHINE IDENTIFICATION

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5 INTENDED USE AND INAPPROPRIATE USE

5 INTENDED USE AND INAPPROPRIATE USE

The machine has been designed and created to be used as an automatic packing machine for ice-cream cones and cups and/or similar products.
Any use differing from that for which the machine is designed is highly irregular and could cause damage to the equipment and constitute a serious danger for the operator.

Warning
It could prove dangerous to put materials other than those specified into the machine.

5.1 Contra-indications and dangers of inappropriate use

The machine has been set and commissioned several times by the manufacturer in compliance with the customer's specific requests.

- Do not tamper with the cam mechanisms in an attempt to change the operational cycle which has been set.
- Do not use any food products other than those foreseen, e.g. non-edible products which would seriously contaminate the machine parts.
- Do not use packing of a different size to the standard or packing which is made of materials not suitable for food products.

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6 HANDLING AND TRANSPORTATION

6 HANDLING AND TRANSPORTATION

The machine is packed as a single piece in a wood crate and fixed to the base which is of the type that can be raised with a fork lift truck.

6.1 Lifting:

- Insert the straps 1 fig. 6.1 under the crate and insert them in the hook of crane 2 fig. 6.1.
- Lift slowly until the straps are taut so as to check balance of the crate.
- Lower and move the straps to obtain good balance.
- Lift slowly and avoid any brusque or fast movements.

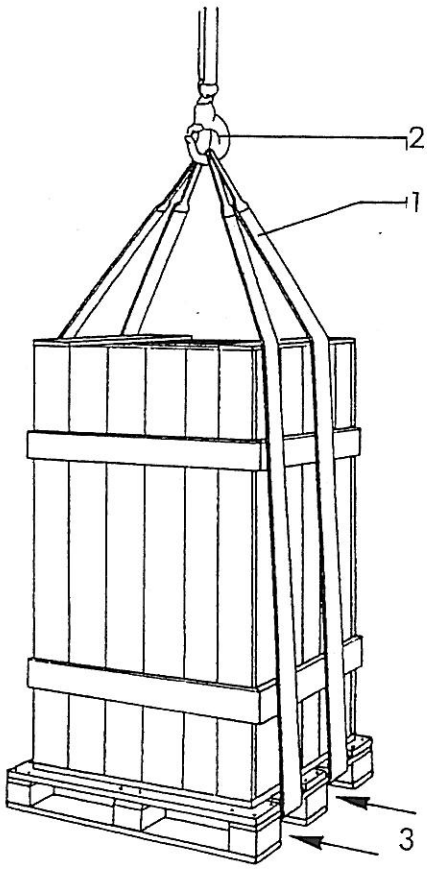

Fig. 6.1

6.2 Handling on the ground

With fork lift truck:

- Insert the forks of the fork lift truck in the appropriate spaces 3 fig. 6.1 and lift slowly just a few millimetres to check load balance.
- Lift a few centimetres and move with great caution.

Caution

During handling, take particular care with roughness and obstacles caused by an uneven floor.

Without fork lift truck:

The machine is fitted with four wheels, two of which have a brake 1 fig. 6.2. These are specially designed to facilitate movement on the floor.

- Push the machine towards the most suitable work position
- Once positioned, press the brake for the two wheels 1 fig. 6.2.

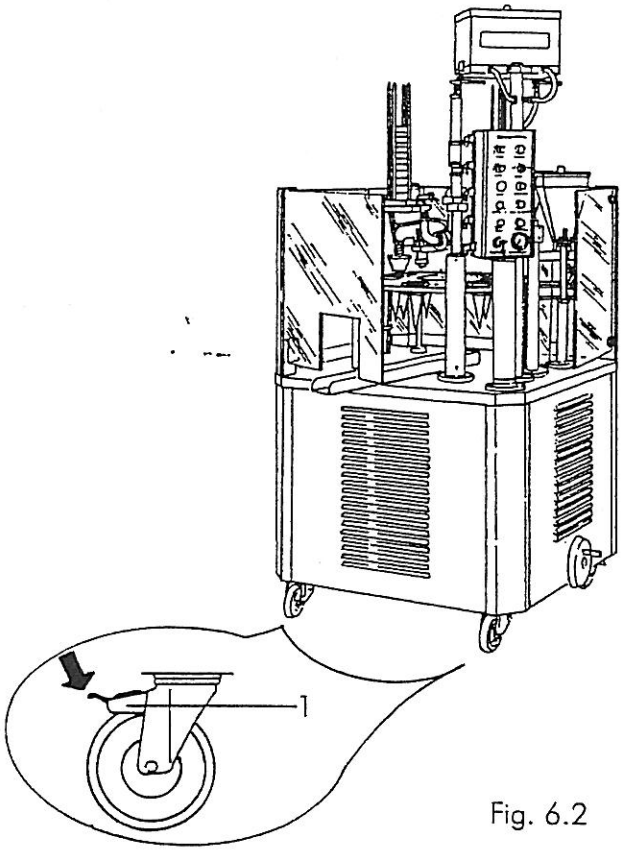

Fig. 6.2

Note

It is important to entrust the handling and lifting operations to qualified skilled personnel such as crane operators, fork lift truck drivers, etc.
Equipment used must be of an adequate size to ensure ample safety margins. It must operate efficiently and must be used only when all precautions foreseen by the law have been taken.

6.3 Unpacking and checking

On receipt of the goods, remove the packing and check that the description in the accompanying documents tallies with the goods ordered and contained in the crate.

Contents of the crate:

- Machine with the stations requested
- Complementary stations; (change of format)

Check that there has been no damage during transportation (crate is intact), paying particular care to check the following:

- any dents on panels and protection devices;
- pipes and flexible piping;
- control panel;
- power and compressed air connector;
- mechanical, electrical and compressed air components;
- wheels turn smoothly and lock perfectly

Warnings

Should damage have occurred or should any components be missing, please inform our customer service division and the shipper immediately.

Carry out a general cleaning operation to remove dust and residues of transportation and packing. Use a clean cloth which does not leave bits (canvas or coarse cotton). A new brush may be used for parts that are difficult to reach.

Packaging components should be grouped according to type of material and sent for disposal to authorized companies who are specialized in this type of service and perform it in compliance with current regulations.

Caution

Do not use solvents or detergent products. Do not use jets of air or water.

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7 INSTALLATION

7 INSTALLATION

7.1 Positioning

The machine is mobile and is fitted with wheels so it can be moved rapidly to the most suitable work position as required.

Caution

Never move the machine with the electricity supply cable and the compressed air tube connected.

Warnings

No floor anchorage is required for correct operation of the machine, nor is it necessary to carry out any special technical measures to restrict vibrations.

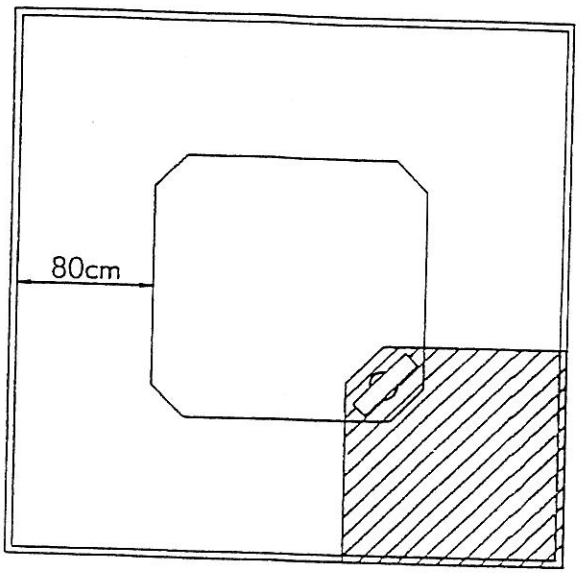

Fig. 7.1

For correct positioning, however, certain important procedures must be followed carefully:

- Make sure that there is a space of at least 80 cm around the machine fig. 7.1. This is essential to enable work operations and maintenance to be performed comfortably.
- Lay the electricity and compressed air supply cables away from places where people pass so as to avoid any risk of squashing or damage.
- Avoid areas close to sinks or other water sources (taps or tanks, etc.);
- Make sure the machine is stable when the wheels are blocked;
- Connections must be made safely with the machine's electricity supply switched off;
- If the floor the machine stands on is uneven and the machine does not rest firmly on it, it is necessary to fit the machine with levelling feet. Please contact the manufacturer for supply of these.

7.2 Preparation for electrical connection (to customer's charge; to be carried out by qualified personnel)

The machine is fitted with an electrical connector.

The connecting cable must be in compliance with EN standards and must have 5 conductors (3 phase + neutral + earth).

The cross-section of the cables must be of sufficient size to guarantee correction operation of the machine and its safety devices (see information on the plate regarding type of power supply for the machine Fig. 4.1 page 4-2).

The earthing and protection system against lightning must be in compliance with the appropriate standards.

Check that the drop in voltage and the motor start-up is not more than 5% of rated voltage.

Warnings

It is advisable to protect the machine's main power supply from any overcurrents by using safety switches (differential magneto-heat circuit-breakers). Do not connect the machine together with other electrical or compressed air equipment.

Checking and preparation of the electricity supply and earthing system must be carried out by qualified and authorized personnel.

Note: The manufacturer declines any responsibility for any damage to objects or people caused by failure to observe the regulations given above.

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8 PUTTING INTO SERVICE

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8.1 Assembly of loose components and connections

The machine is fully assembled and checked by the manufacturer. However, it is necessary to carry out asssembly of a number of parts which have been dismantled to facilitate transportation.

1 Mount tank 1 Fig. 8.1.1 onto the support plate 2 Fig. 8.1.1. The reference pegs 3 Fig. 8.1.1 must slot into the respective holes in the support;

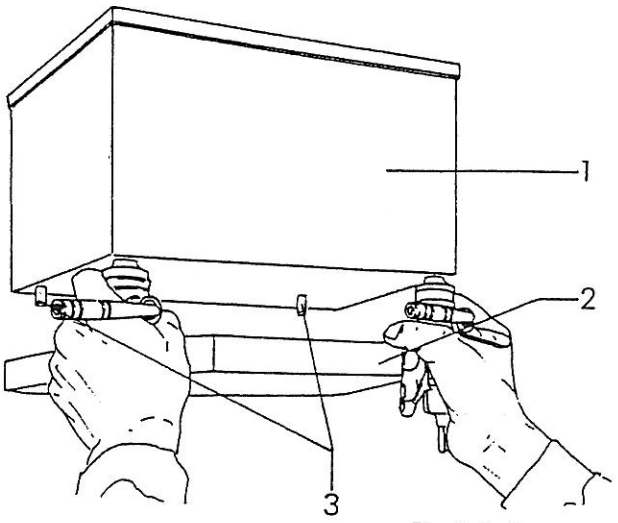

Fig.8.1.1

2 Connect the pipes supplied to the taps of the tank 1 Fig. 8.1.2;

3 Connect the other end of the pipe to the stations to which the finished product is destined;

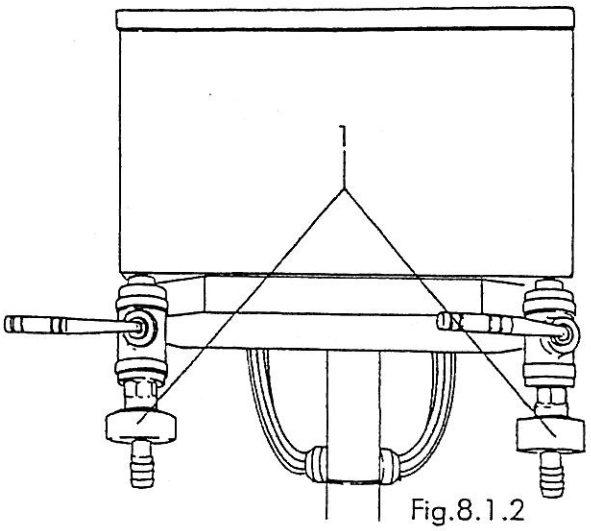

Fig.8.1.2

Caution

Tank 1 fig. 8.1.1 can contain two separate types of product. The pipe must be connected to the appropriate supply station depending on the use of the compartment (type of product to be put in).

4 Mount the discharge chute;

8.2 Connection to external energy supplies

Connection of electricity supply.

Warnings

Before carrying out the connection, check that the power supply voltage and frequency indicated on the machine plate Fig. 4.1 page 4-2 correspond to the power supply available in the work place.

- Make the connection using connector 1 Fig. 8.2.1.
- Connection of compressed air.
- Connect up the filter -reduction unit - lubricator located on the machine with the compressed air distribution line using the appropriate rapid connector 2 Fig. 8.2.1.

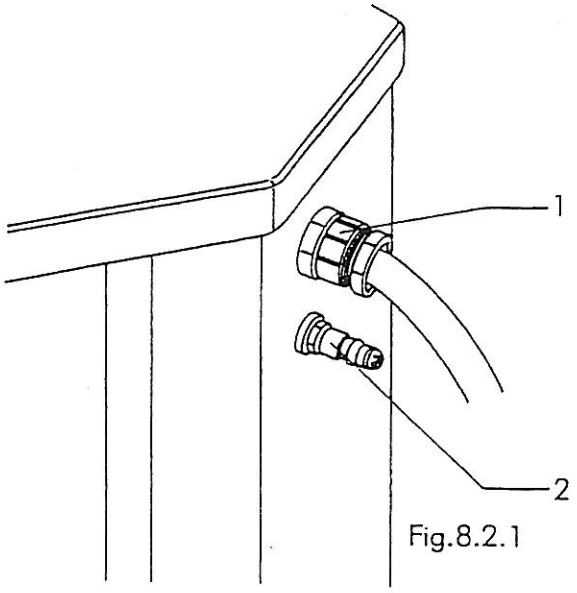

Fig.8.2.1

8.3 Checking of operation

Direction of rotation of the motor:

- To carry out this check, proceed as follows:
- Advance the machine by one phase (see operation on phase/phase mode) checking that the mould carrying table advances in an anti-clockwise direction;
- If advance occurs in a clockwise direction it is necessary to invert the two phase wires in the plug of the mains power supply cable.

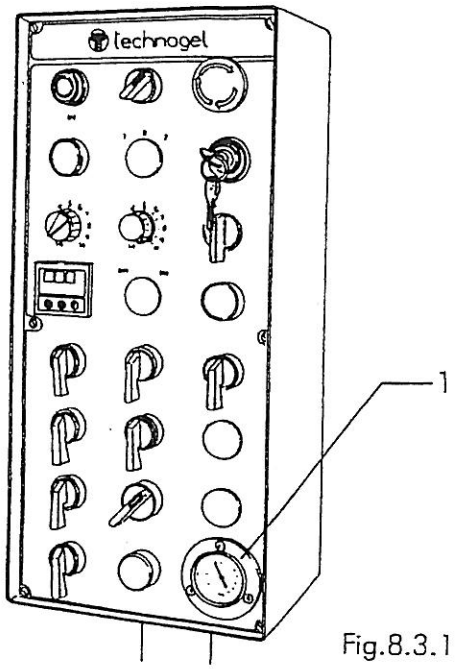

Fig.8.3.1

Checking of air pressure:

- the pressure indicated on the pressure gauge located on the control panel 1 Fig. 8.3.1 must be between 6 and 7 bar. If the pressure gauge does not indicate this, regulate pressure using handwheel 1 Fig. 8.3.2 until pressure falls within the required values.

Caution

If after attempts to make the adjustment it is not possible to achieve operating pressure, this means that the air pressure supply is insufficient. Check the supply and increase power.

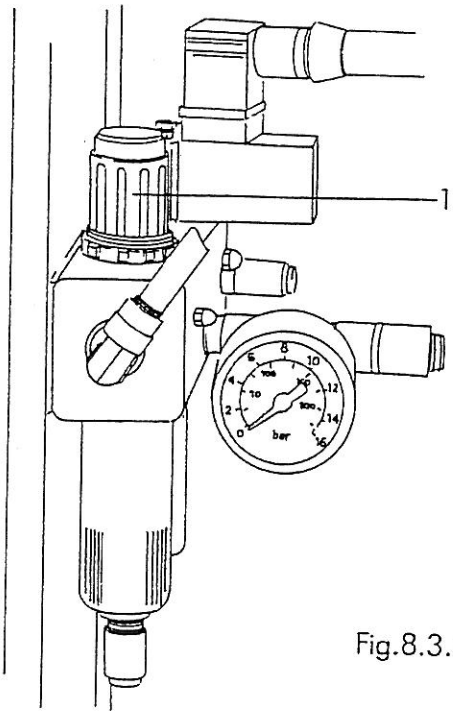

Fig.8.3.2

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9 OPERATING CONTROLS

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The machine is supplied with the operating stations and type of electricity supply in compliance with the customer's specifications.
This manual describes the operating cycles for "cone", "cup" and "push-up".

Operation of the "cone" cycle Fig. 9.1.1:

1 Cone loading - release of cone from piler and positioning in the mould of the rotating table;

2 Free:

3 Cone gauge - acts as a gauge on the mouth of the cone which could have been squashed during loading or transportation;

4 Chocolate spray - sprays a dose of chocolate inside the cone;

5 Ice-cream dispenser - the station will dispense one flavour of ice-cream or two;

6 Free

7 Topping - Puts chocolate on top of the ice-cream;

8 Nut bit vibrator - Scatters the nut bits on top of the chocolate

9 Insertion of lid - the lid is placed on the cone ready for closure;

10 Free

11 Closure of lid - The station trims the paper of the cone onto the lid;

12 Discharge - the sealed cone is expelled from the mould onto a conveyor chute.

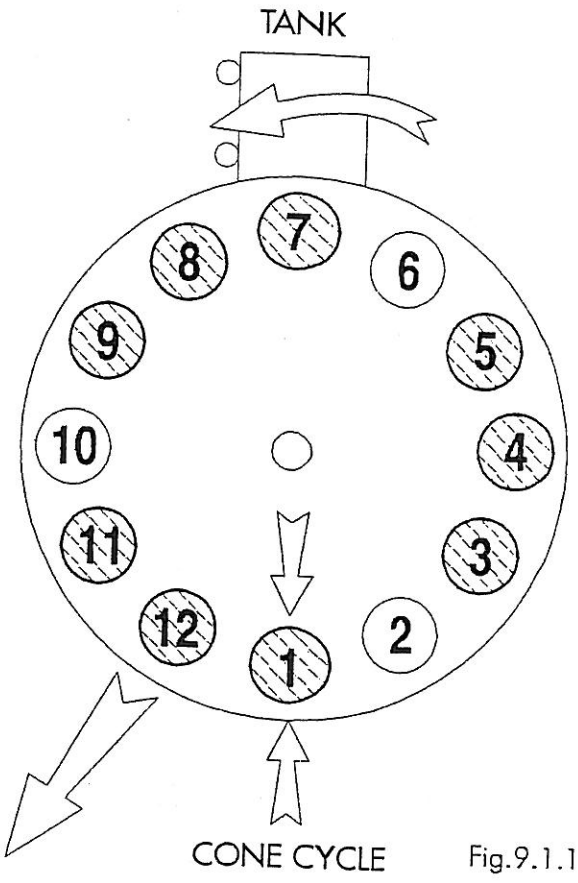

Fig.9.1.1

Operation of the "cup" cycle Fig. 9.1.2:

1 Cup loading - release of cup from piler and positioning in the mould of the rotating table;

2 Free:

3 Free

4 Free

5 Ice-cream dispenser - the station will dispense one flavour of ice-cream or two;

6 Free

7 Topping - Puts chocolate on top of the ice-cream;

8 Nut bit vibrator - Scatters the nut bits on top of the chocolate

9 Insertion of lid - the lid is placed on the cup ready for closure;

10 Free

11 Closure press - Presses the lid onto the cup to close it;

12 Discharge - the sealed cup is expelled from the mould onto a conveyor chute.

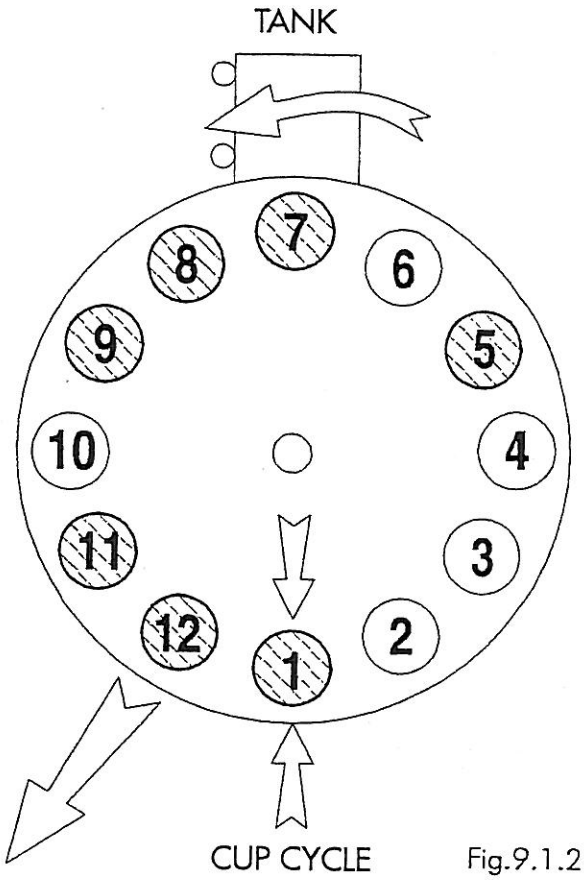

Fig.9.1.2

Operation of the "push-up" cycle Fig. 9.1.3:

1 Push-up loading - release of push-up from piler and positioning in the mould of the rotating table;

2 Free:

3 Free

4 Free

5 Dispenses ice-cream from the appropriate tank;

6 Free

7 Free

8 Free

9 Insertion of lid - the lid is placed on the push-up;

10 Free

11 Sealing - The lid is heat - welded to the push-up;

12 Discharge - the sealed push-up is expelled from the mould onto a conveyor chute.

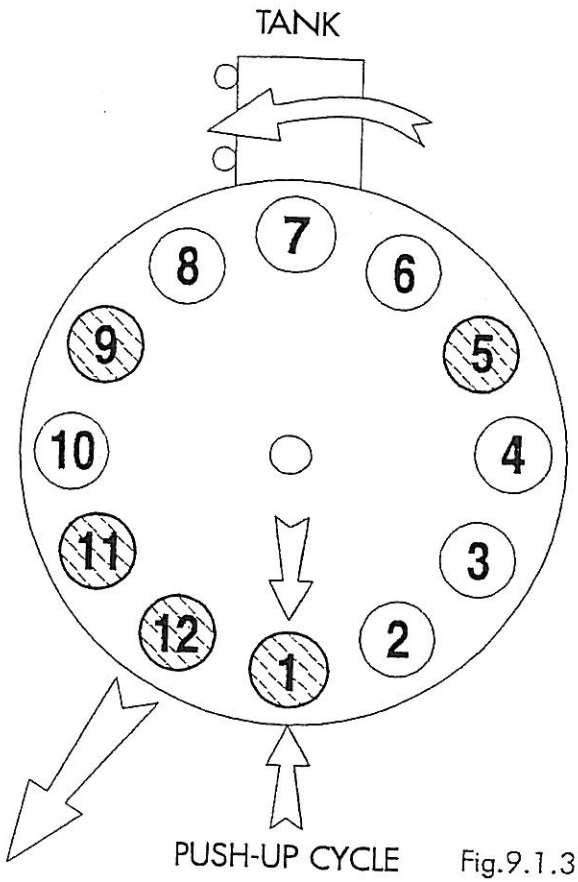

Fig.9.1.3

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10 STATIONS

10 STATIONS

This section covers the individual stations taking as the basic cycle the procedure for "cones" and the relative transformation for "cups" and "push-ups.

Station 1 - Cone loading

Height adjustment of the cone magazine:

- loosen nuts 1 fig. 10.1.1;
- raise or lower the magazine using nuts 2 fig. 10.1.1;
- when adjustment has been carried out, lock nuts 1 fig. 10.1.1.

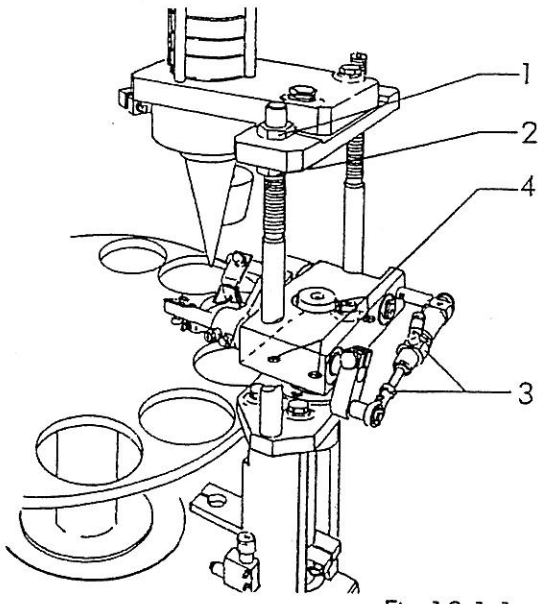

Fig.10.1.1

Dismantling of cone loading station:

- Disconnect the air supply;
- Mount the caps supplied onto the air nozzles 1 fig. 10.1.2.
- From the shaft remove the unit, position 4, by loosening the clamp located under 4;
- Remove the screws 3 fig. 10.1.1. and remove the station.

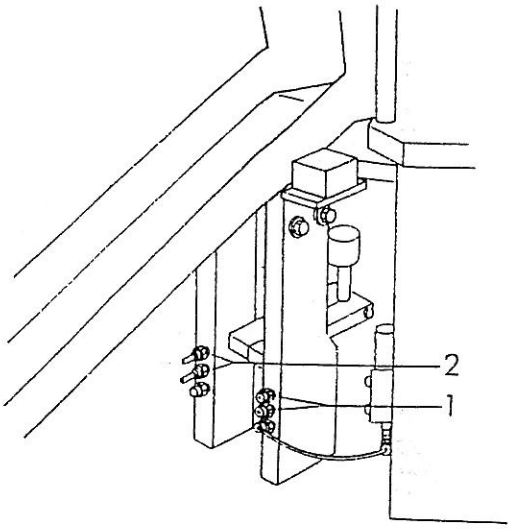

Fig.10.1.2

Transformation for "cup" cycle.

Assembly of cup loading station:

- Position the station on the same support as the cone station;
- Insert the screws with relative washer 1 fig. 10.1.3 and tighten firmly;
- Connect the compressed air pipes 1 fig. 10.1.2 for the extraction cylinder;
- Mount the suction device 2 fig. 10.1.3 and lock with screw 3 fig. 10.1.3.

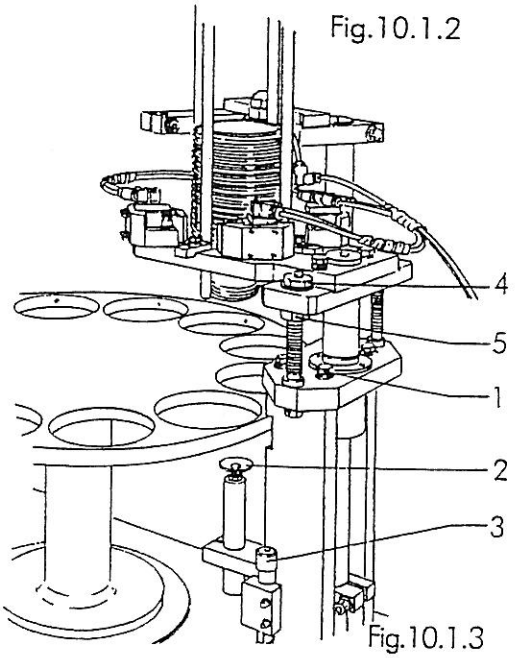

Fig.10.1.3

Adjustment of cone loading station:

The station has been adjusted by the manufacturer. For any fine adjustment which may be required, intervene on the suction support 2 fig. 10.1.3.

- Loosen screw 3 fig. 10.1.3.
- Adjust the suction support along the vertical axis and lock the screw.

Warnings

Adjustment of the loading height must be carried out by a qualified technician.

Transformation for "push-up" cycle.
To mount the push-up loading station, dismantle the previous station including the columns as follows:
- Position the station on the same support 1 fig. 10.1.4 as the cone station;
- Insert screws 2 fig. 10.1.4 with relative washer and tighten firmly;
- Connect compressed air pipes 2 fig. 10.1.2.
- Mount steel devices for loading 3 fig. 10.1.4.

Adjustment of height of push-up magazine:
- loosen nuts 2 fig. 10.1.4;
- raise or lower the magazine using nuts 4 fig. 10.1.4.
- once adjustment has been carried out, lock nuts 2 fig. 10.1.4.

Warnings
Height adjustment of the push-up magazine must only be carried out by a qualified technician.

Station 3 - Cone gauge

Station 4 - Chocolate spray dispenser
The two stations comprise a single unit which acts simultaneously on the relative moulds.
Adjustment:
- loosen nut 1 fig. 10.1.5 and adjust the height of the unit ensuring that the concentricitiy of the gauge in relation to the cone placed in the mould is maintained. Lock nut 1 fig. 10.1.5;
- loosen screws 1 fig. 10.1.6 and adjust concentricity of the dispenser with the relative cone positioned in the mould. Lock screws fig. 10.1.6;
- loosen nut 2 fig. 10.1.6 and rotate knob 3 fig. 10.1.6 to adjust the quantity of chocolate dispensed. Rotation in a clockwise direction reduces the quantity of chocolate, while rotation in an anti-clockwise direction increases the quantity.
- tighten nut 2 fig. 10.1.6.
- knob 4 regulates the quantity of air carrying out spraying of the chocolate. An increase in the air produces an increase in spray intensity.

Note
Stations 3 and 4 are not used for the "cup" and "push-up" cycles so that it is possible during these cycles to move the station so that it does not interfere during the cycle. Loosen nut 1 fig. 10.1.5, rotate the station to out of service position and tighten the nut.

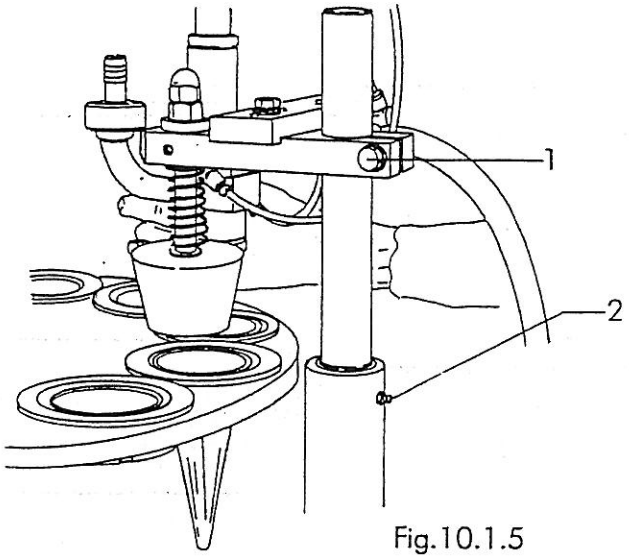

Fig.10.1.5

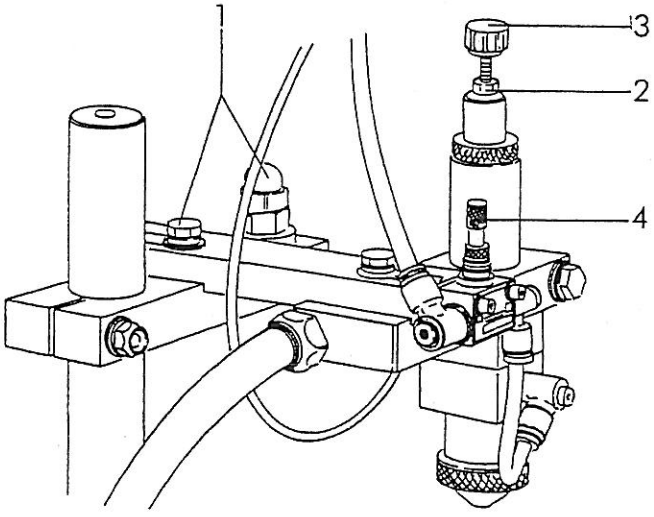

Fig.10.1.6

Station 5 - Ice-cream cone dispenser

The station is designed to dispense one or two flavours of ice-cream (ripple).

To dispense one flavour only, connect the supply pipe to connection 1 fig. 10.1.7 and close connection 2 fig. 10.1.7 with the special cap supplied.

If two flavour ice-cream is to be dispensed, remove cap 2 fig. 10.1.7 and connect the second feed pipe.

Height adjustment:

Loosen nuts 3 and 4 fig. 10.1.7;

- Position the station with screw 5 fig. 10.1.7 resting on column 6 fig. 10.1.7;
- Turn knob 7 fig. 10.1.7 to define the height precisely;
- Tighten the nuts of screw 4;
- Check concentricity of the nozzle and the cone below it, and then tighten nuts 3.

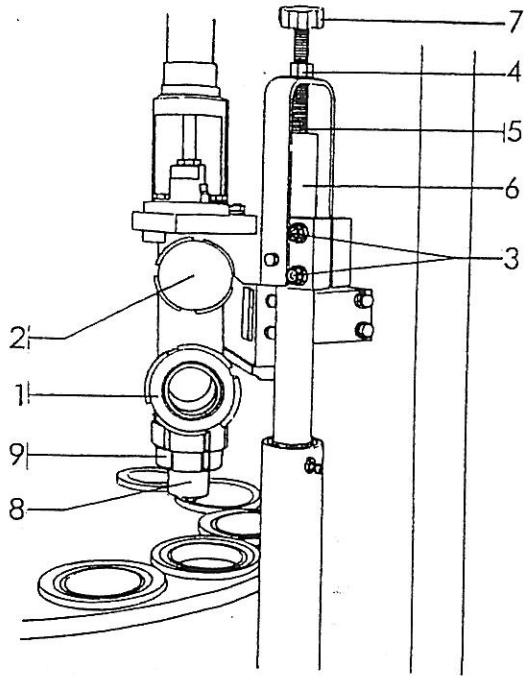

Fig.10.1.7

Transformation for "cup" cycle:

To use the station as a cup cycle it is necessary to replace nozzle 8 fig. 10.1.7 with the one supplied;

- loosen and remove ring nut 9 fig. 10.1.7 and nozzle 8 fig. 10.1.7;
- mount the nozzle for "cup" operation and lock ring nut 9.

Transformation for "push-up" cycle.

From the "cone" cycle it is necessary to replace the dispensing nozzle and the product containing tank fitted with a tap pos. 2 floating valve fig. 10.1.8 pos. 3.

Changing the nozzle:

Mount the "push-up" nozzle following the same procedure used for the "cup" cycle nozzle and the appropriate ferrule on the dosage shaft;

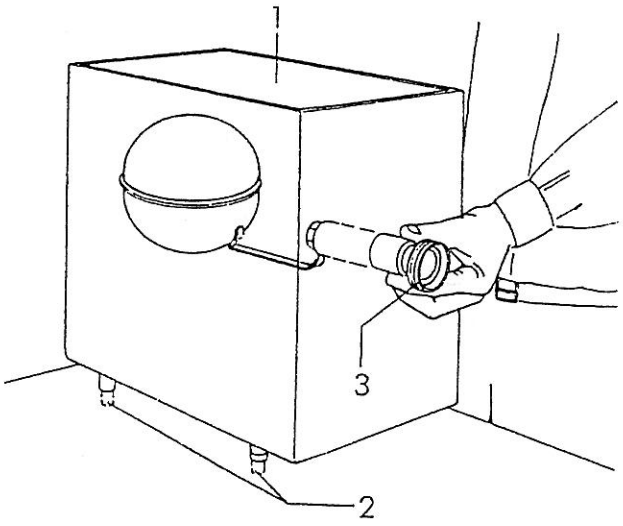

Fig.10.1.8

Changing the tank:

- Dismantle the tank fig. 8.1.1/8.1.2.
- Mount tank 1 fig. 10.1.8 on the support plate. Pins 2 fig. 10.1.8 must be correctly positioned in the holes on the support plate.
- Connect the tank supply pipe to pipe fitting 3 fig. 10.1.8 of the tap;
- Connect the tank to the station with the pipe to the fittings 1 fig. 10.1.7;
- Using the cap supplied, close connection 2 fig. 10.1.7.

Station 7
Dispensing of chocolate topping
This station is used both for the "cone" and "cup" cycles.

Adjustment:
- Loosen screws 1 fig. 10.1.9;
- Adjust the height and then lock screws 1;
- Loosen the four screws 2 fig. 10.1.9;
- Adjust the concentricity in relation to the mould beneath and lock screws 2;
- Adjust the quantity of chocolate dispensed by regulating the flow of the topping with tap 1 fig. 8.1.2.

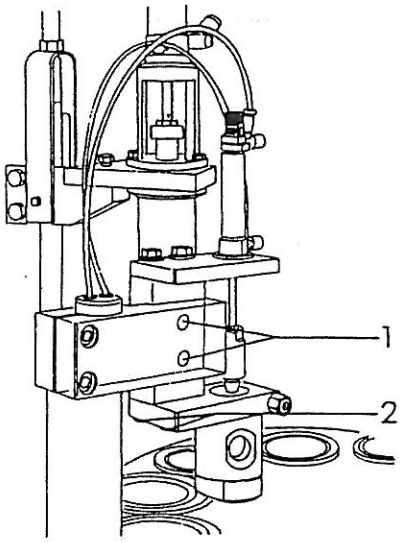

Fig.10.1.9

Station 8 - Vibrator for chocolate grains
This station is used both for the "cone" cycle and the "cup" cycle.
The frequency of the vibrations and therefore the quantity of product dispensed can be adjusted on the control panel with the appropriate control (1 fig. 10.1.10).
Adjustment:
- Loosen the two nuts 1 fig. 10.1.11.
- Raise or lower the hopper by rotating nuts 2;
- Once adjustment has been carried out, tighten nuts 1 fig. 10.1.11 firmly;
- Loosen the two screws 3 fig. 10.1.11;
- Move the unit so that the discharge mouth corresponds to the mould and then lock screws 3.

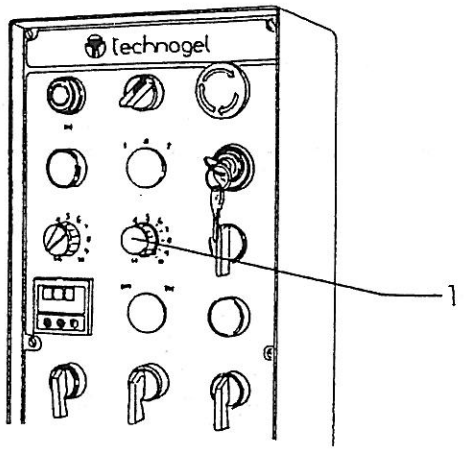

Fig.10.1.10

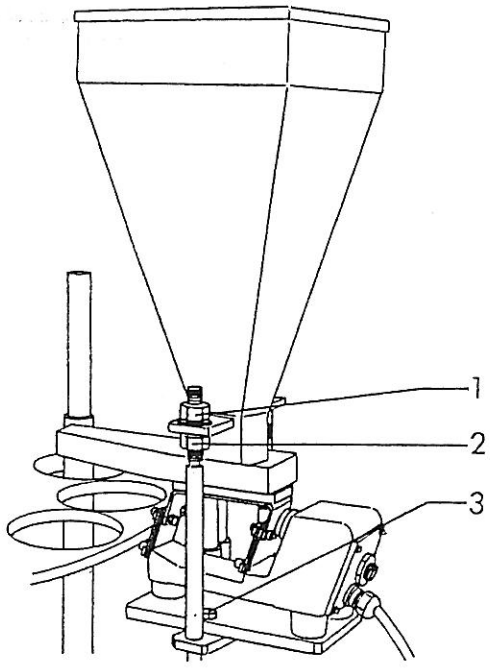

Fig.10.1.11

Station 9 - Cone lid loading

Height adjustment:

Transformation for "cup" cycle:

- Replace the magazine 2 fig. 10.1.12. After loosening screw 2, position it at the top together with the "cup" magazine.

Transformation for "push-up" cycle:

- Replace magazine 1 fig. 10.1.12 with the "push-up" magazine.

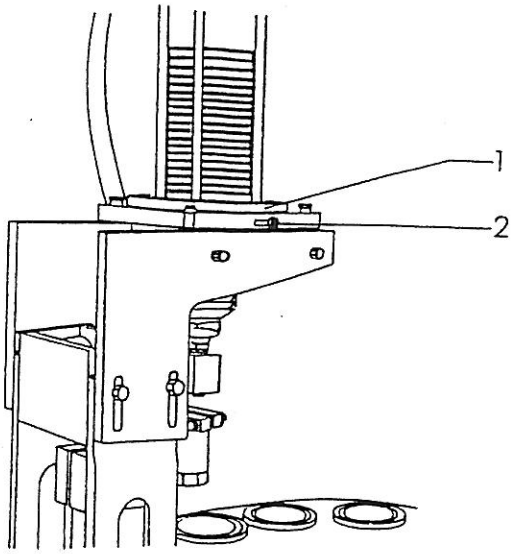

Fig. 10.1.12

Station 11 - Closing cone lids

Height adjustment:

- Loosen screws 1 and 2 fig. 10.1.13;
- Position the unit with scew 3 resting on column 4;
- Turn knob 5 for precise definition of the height;
- Lock the nuts of screw 1;
- Check concentricity of the closing device with the cone beneath and then lock nut 2.
- Maximum acceptable stroke between the two elements 8mm/9mm (7 and 8).

Transformation for "cup" cycle:

- Unscrew screw 2 fig. 10.1.13 and remove all the unit with handwheel;
- Mount the press in place of the closing device and lock it using the same screw 2 fig. 10.1.13.

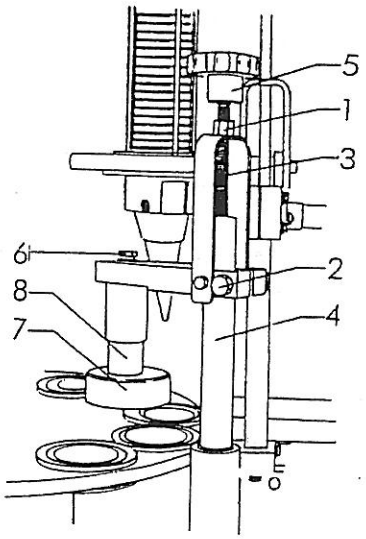

Fig.10.1.13

Transformation for "push-up" cycle:
- Unscrew screw 2 fig. 10.1.13 and remove the closing device *7;*
- Mount the heatwelder in place of the closing device and lock it using the same screw 2 fig. 10.1.14.

The welding temperature is controlled by the digital heat regulator located on the control panel 1 fig. 10.1.15.
On the welding head there is a probe for temperature checking;
- Using handwheel 1 fig. 10.1.14, after loosening 1 and 2, it is possible to vary the pressure of the welding element on the lid.

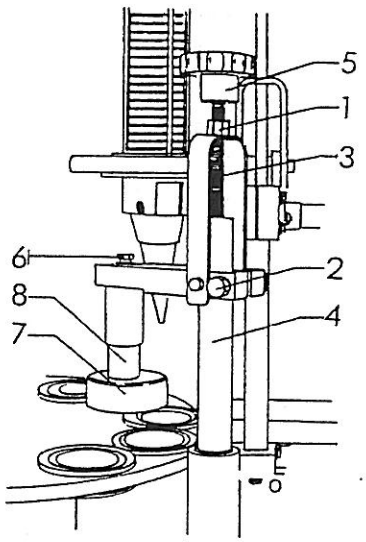

Fig.10.1.13

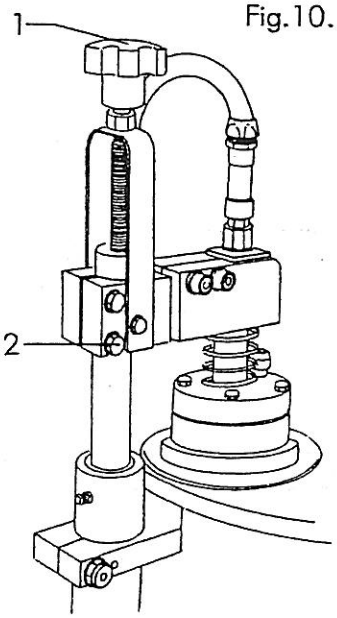

Fig.10.1.14

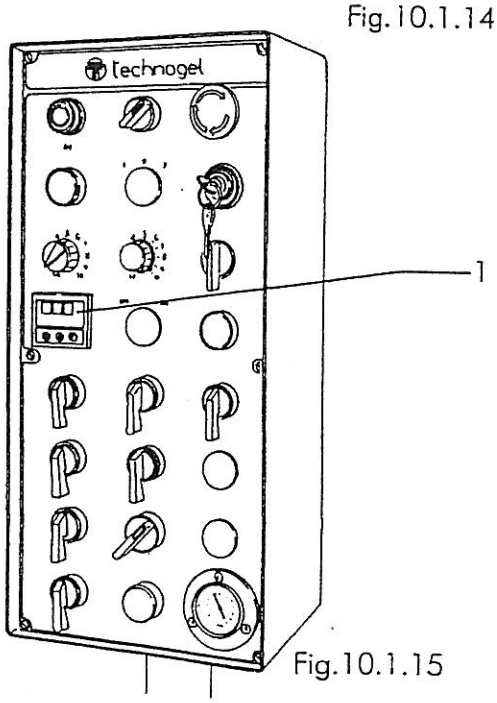

Fig.10.1.15

Station 12 - cone discharge

Positioning:

- Loosen screw 1 fig. 10.1.5;
- Position ejector 2 fig. 10.1.15 in the correct position so that it locks firmly on the support bar and lock screw 1.

Transformation for "cup" cycle:

- Remove the four screws 3 and the chute 4 fig. 10.1.15;
- Mount the cup extraction unit;
- Adjust the height of the unit using knob 2 and lock with screws 3 fig. 10.1.16;
- Connect the air pipes to points 1 and 2 fig. 10.1.17;
- Adjust the speed of the extraction piston using ring nut 1 fig. 10.1.18;
- Replace the ferrule of ejector 2 fig. 10.1.15 with the cup plate.

"Push-up" cycle

For the push-up cycle, no variation of the cone cycle is necessary. The only adjustment necessary is to the height of the ejector.

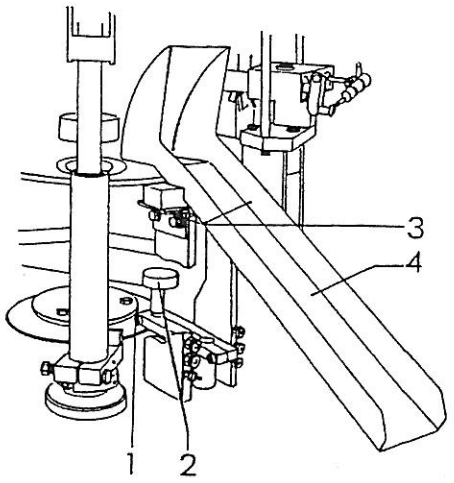

Fig.10.1.15

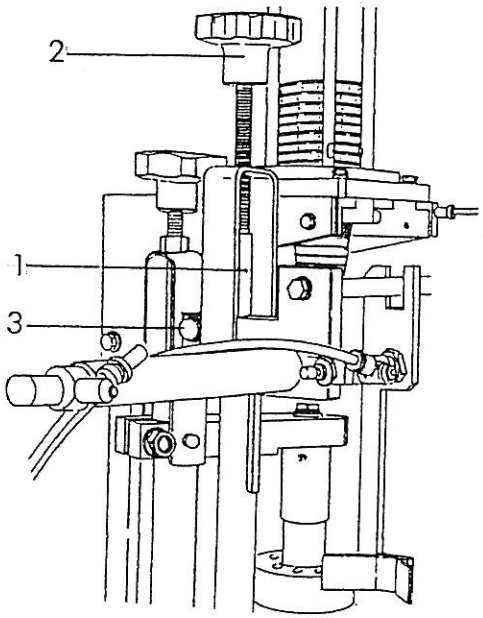

Fig.10.1.16

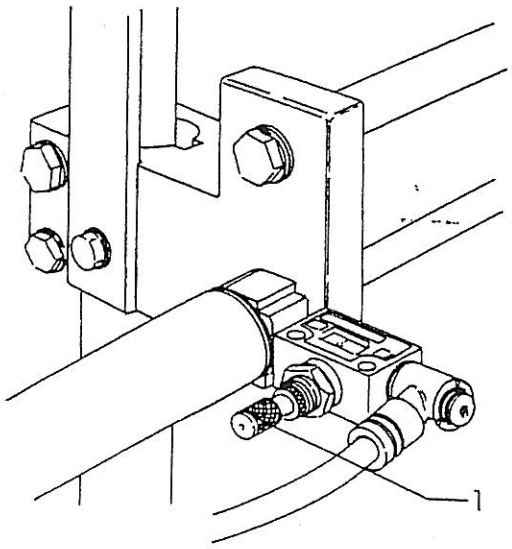

Fig.10.1.18

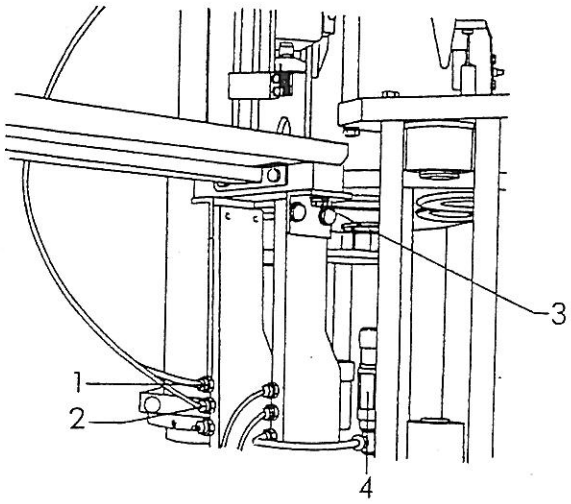

Fig.10.1.17

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11 CONTROLS

11 CONTROLS

The control panel is located on the work station at eye level for the convenience of the operator. The structure is made of AISI 304 stainless steel with a satinized aluminium panel fixed in position by means of screws.
The control panel fig. 11.1.1 includes the following:

1 START BUTTON The green start button starts the operational mode selected.

2 OPERATIONAL MODE SELECTION
Luminous green selector with two positions:
Position 1 - manual phase/phase mode and the selector is on;
Position 2 - Automatic continuous mode.

3 EMERGENCY BUTTON A mushroom-shaped red emergency button. When pressed it disconnects the electricity supply line and the machine stops automatically.
To reset, turn the mushroom-shaped button in a clockwise direction.

4 MAINS ON LIGHT A green light which is on when the electrical system is operating from the electricity supply (mains switch on).

5 SPEED Two-position selector (optional)
Activate the selector to determine the Min and Max operating speeds.

6 MAINS SWITCH
Two position selector with key. Rotating the selector using the key electricity is supplied to the entire electrical system of the machine.

7 HEATING TIMER
Time regulator with graduated scale from 1 to 10.
Regulates the operating time of the heater located under the tank fig. 8.1.1 pos. 2.

8 VIBRATION FREQUENCY
Frequency regulator with graduated scale from 1 to 10.
Regulates the frequency of the vibrator dispensing the nut bits.

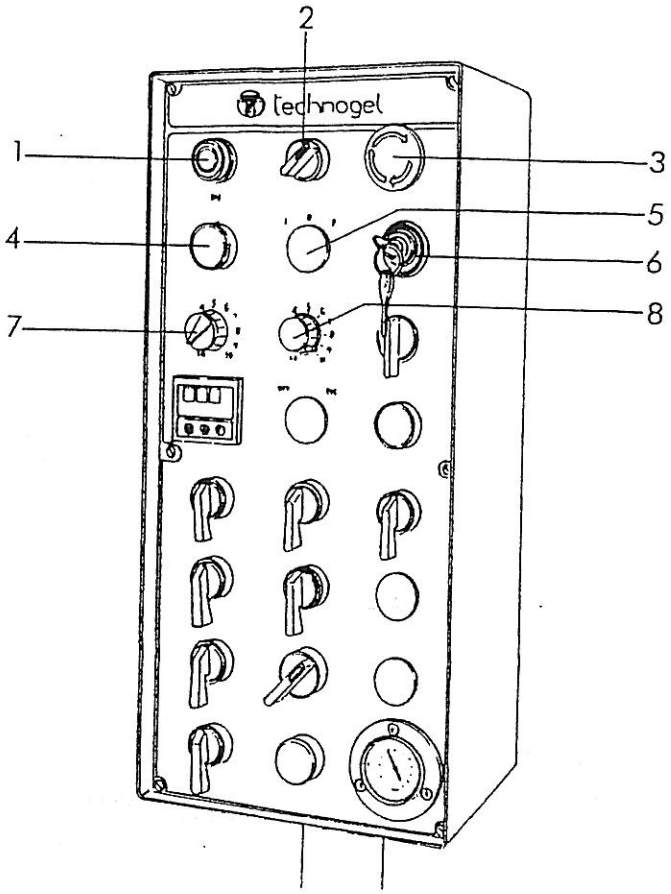

Fig.11.1.1

9 VIBRATOR ON
Selector with three positions:
O = OFF
AUT = the vibrator operates when on automatic continuous mode:
MAN = the vibrator operates alone to allow the hopper to empty on termination of work and to set it up with a different product.

10 WELDING TEMPERATURE ADJUSTMENT
Programmable digital heat regulator.
The digital heat regulator fig. 11.1.2 consists of the following:

1 Temperature display measured by the probe (if the probe is not operating correctly, the message SBR appears);

2 Setpoint temperature display;

3 Key for access to function for setpoint variation;

4 Value increase key;

5 Value decrease key;

6 LED indicating element in operation;

7 Alarm signalling LED;

For variation of the setpoint, proceed as follows:
- press key 3;
- press key 4 or 5 to obtain the new datum.

11 WELDING ON
2-position selector 11 fig. 11.1.1. Use the selector to activate heat welding.

12 HEATING ELEMENT LIGHT
A white light. It comes on when the tank support plate element is on.

13 CUP LOADING STATION ON
2-position pneumatic switch. Use the switch to activate the station.

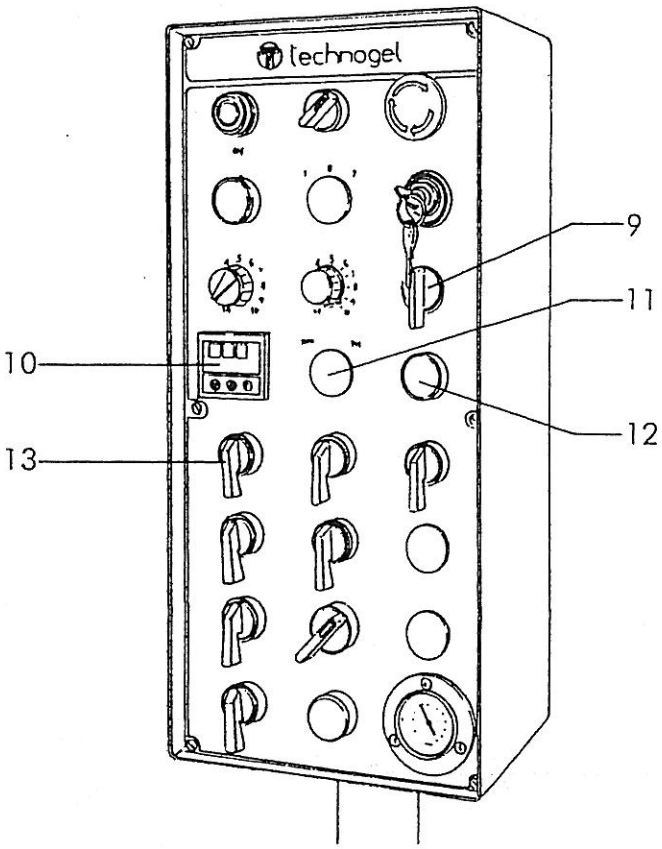

Fig.11.1.1

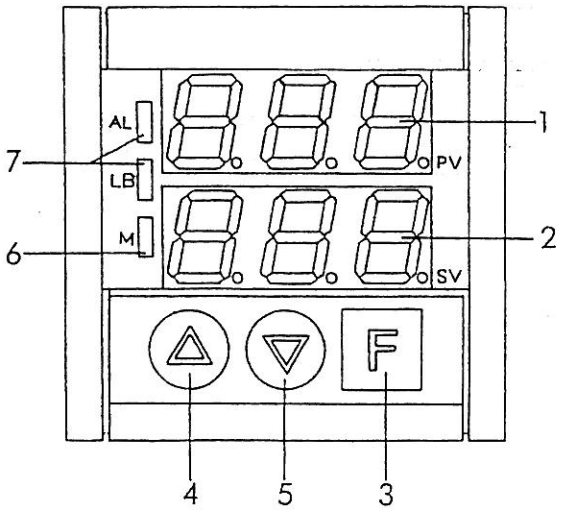

Fig.11.1.2

14 CONE LOADING STATION ON
2-position pneumatic switch. Use the switch to activate the station.

15 CHOCOLATE SPRAY STATION ON
2-position pneumatic switch. Use the switch to activate the station.

16 ICE-CREAM DOSAGE STATION ON
2-position pneumatic switch. Use the switch to activate the station.

17 TOPPING STATION ON
2-position pneumatic switch. Use the switch to activate the station.

18 EMPTY AND LID TURNER
2-position pneumatic switch. Use the switch to activate expulsion of the lids xxxx and the rotating cylinder which turns the lids.

19 CUP EXTRACTION STATION ON
2-position pneumatic switch. Use the selector to activate the station.

20 LID BLOWER ON
2-position switch. Use the switch to activate the blower.

21 AIR WARNING LIGHT
The light comes on when there is insufficient compressed air.

22 PRESSURE INDICATOR
Pressure gauge indicates pressure of the compressed air system.

Speed regulation
Using handwheel 1 fig. 11.1.3 it is possible to adjust the movement speed of the machine. Turn in a clockwise direction to reduce the speed of the machine. This adjustment can be carried out at any time, even when the machine is in operation.

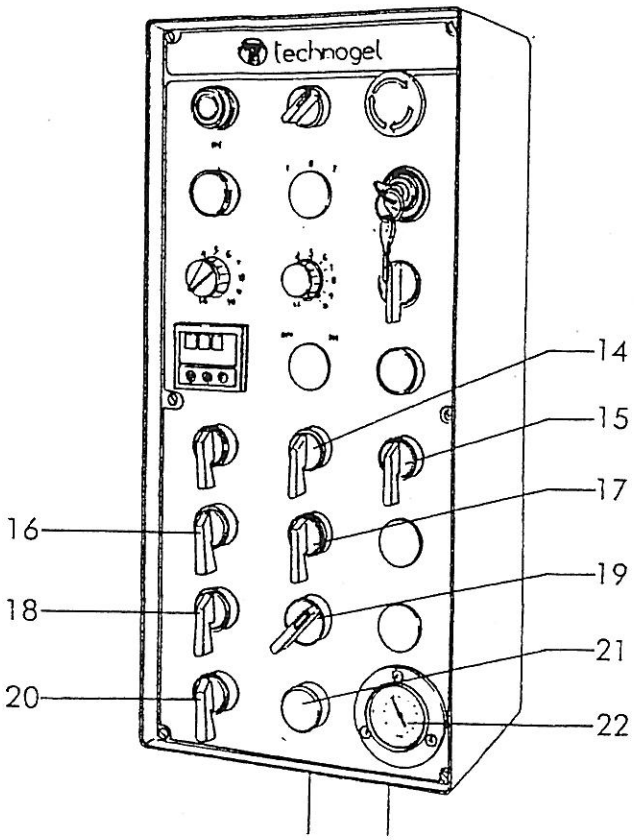

Fig.11.1.1

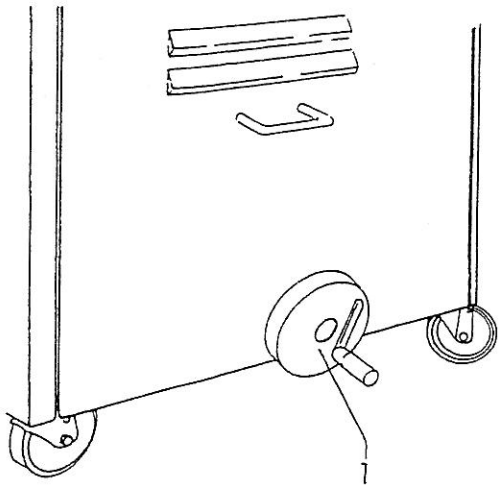

Fig.11.1.3

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12 OPERATION

12 OPERATION

When the machine has been set up for operation with the stations, a number of test cycles are necessary to check correct operation.

Note
When the machine is new or after it has been stopped for a long period of time, before loading the ingredients it is important to carry out a normal preventive maintenance programme on the parts coming into contact with the food (please see ordinary maintenance). Wash and dry them before starting production.

Caution
Each time the machine starts operation, check the emergency procedures and make sure the safety devices are operating efficiently. Check that the tanks and hopper are closed with their respective lids.

12.1 Operation with manual phase/phase cycle

- Load the magazine with the containers and lids
- Switch on the mains switch 1 fig. 12.1 so that light 2 fig. 12.1 comes on;
- Position selector 3 fig. 12.1 on phase/phase mode;
- Using the switches on the control panel (see control page) activate the stations required for the type of cyle to be run;
- Press pushbutton 4 fig. 12.1. The machine will advance as long as the pushbutton is held down and will stop when released.;
- Check that each individual station carries out its function correctly.

Caution
Before carrying out any further regulation on the stations, turn off the machine by turning selector 1 fig. 12.1.

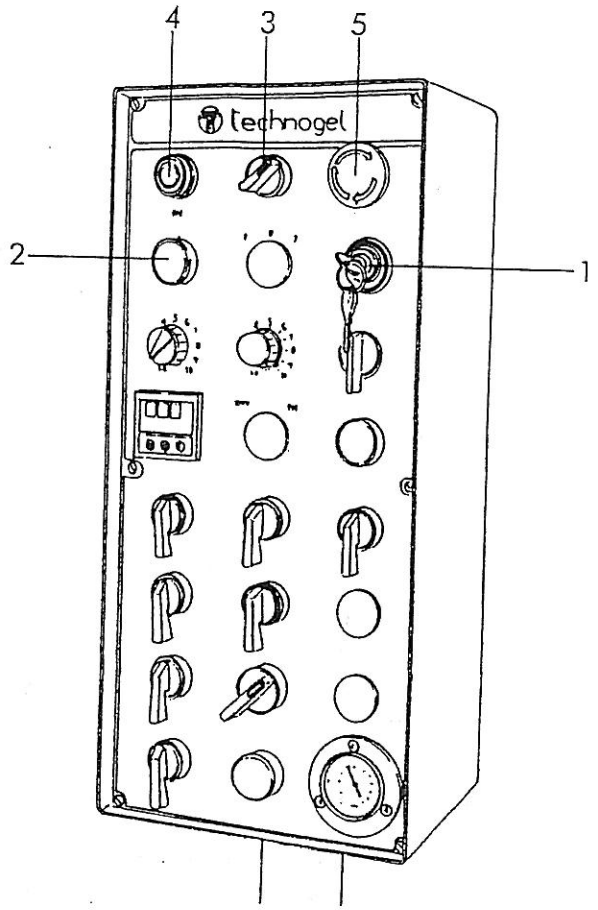

Fig.12.1

12.2 Operation on continuous automatic cycle

- Fill the tanks of the machine and close the lids;
- Turn all the feed taps on fully;
- Turn on the mains switch 1 fig. 12.2.1 so that light 2 comes on;
- Position selector 3 on continuous cycle operation;
- Check that the controls of the stations which are to be used are functioning;
- Press the start button 4.

Note

The machine will not start unless the protection devices are closed.

The red EMERGENCY button 5 fig. 12.2.1 can be pressed at any time to stop the work sequence. This will disconnect the electricity supply to the entire electrical system.

To restore operating conditions, turn the mushroom-shaped red button in a clockwise direction. This will release the hold device and allow the pushbutton to return to its normal position.

Caution

It is absolutely prohibited to remove the protections designed by the manufacturer during the course of operation.

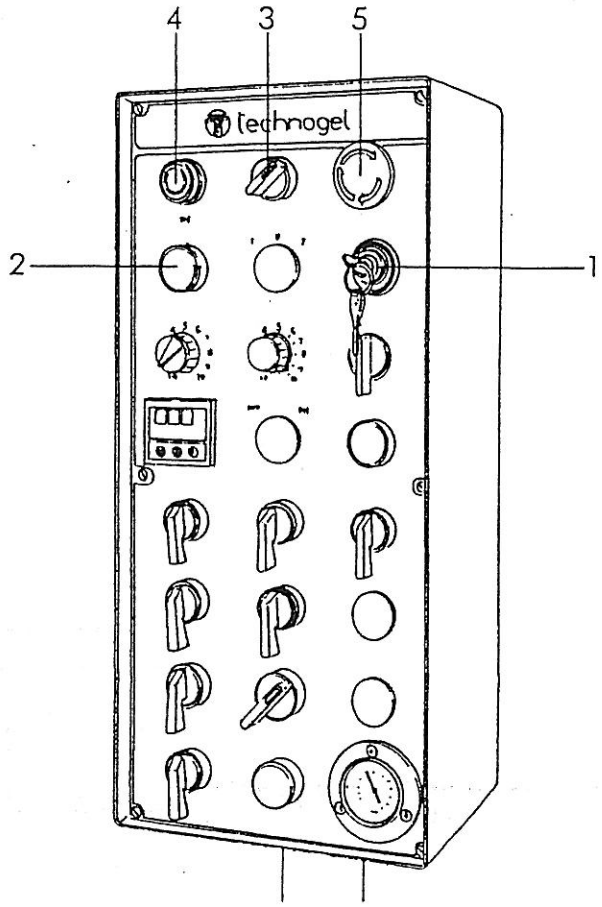

Fig. 12.2.1

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13 MAINTENANCE

13 MAINTENANCE

Adequate maintenance is of vital importance to ensure that the machine operates efficiently with optimum performance over the long term.

Caution
All operations of machine maintenance, checking and adjustment must be carried out with the machine turned off and with the key of the mains switch located on the control panel removed.

13.1 Ordinary maintenance

In the first two weeks:
- Check the tension of the chains fig. 13.9.1.
- Check that synchrony of the stations is correct.
- Check the flow of oil in the lubrication circuit and add oil if necessary using the special beaker.

Checks to be carried out fortnightly:
- Check the tension of the chains.
- Check the pressure gauge for the compressed air unit.

Checks to be carried out monthly:
- Check the level of oil in the compressed air system.
- Grease the bushings of the columns in movement using the appropriate fittings fig. 10.1.4 pos. 2.

Checks to be carried out every six months:
- Grease levers, bushes and gears and check for any excessive wear and tear.
- Check the wear and tear on the transmission belt located between the motor and the main reduction unit.

Checks to be carried out annually:
- Check the level of oil in the gear reduction unit with the warning light fig. 13.9.1 pos. 5.
- Check the state of the flexible piping for the air supply. Replace if worn or damaged especially where piping joins the connectors.

13.2 Ordinary operational maintenance

On termination of work, it is necessary to carry out extensive cleaning and sanitizing of the parts which come into contact with the ingredients as follows:

- empty the tanks (chocolate, nut bits etc.);
- Remove the nozzles and feed pipes through which the product passes.
- Remove the grommets from the parts and clean the seating carefully to ensure removal of all residue of the product which could encourage the growth of bacteria.
- Remove any residue caused by the work cycle which may have remained on the machine.

Warnings

For cleaning and sanitizing, use products which comply with the relative health regulations in force.

Do not use unauthorized chemical products or detergents.

Do not direct jets of water at the machine.

Warnings

If the machine is not going to be used for a long period of time, protect the parts which come into contact with the food using vaseline or other grease suitable for use with food products.

Place the parts detached in a specially created storage place away from dust and damp.

During assembly of the parts, grease the grommets of the nozzles with vaseline or other grease suitable for use with food products.

13.3 Periodic controls

The first two weeks / or 100 hours of operation (running in):
- Check the bolts are tight
- Check correct operation of the mechanical parts.

Daily checking:
- Check efficient operation of the safety devices, the electric connector and the control panel.

Weekly /or after every 50 hours of operation:
- Grease the gears, plates, columns and slides.
- Check operation of the piping for the compressed air system and all other piping on the machine.
- Check the oil level in the gear reduction unit.
- Lubricate the chains.

Monthly /or after every 250 hours of operation:
- Check the oil level on the jogger.
- Check the level of the lubrication tank for the compressed air system.
- Check operation of the reduction unit.
- Replace the filter on the compressed air system.
- Check tension of the chains.
- Check the transmission belt.

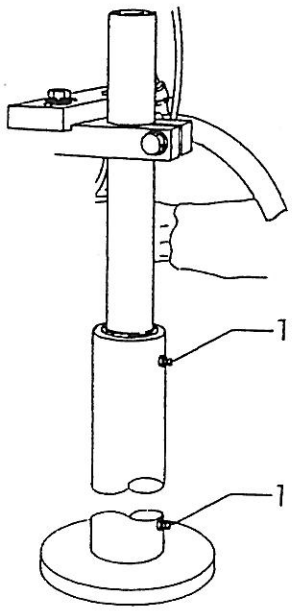

Fig.13.4.1

13.4 Lubrication and greasing points

On the columns of each station there are two greasing points which are visible, e.g. 1 fig. 13.4.1. Apply oil using the appropriate nozzles.
To grease the chains and gears, follow the instructions on the machine so as to identify the most suitable points for the operation.

13.5 Installation feed station:

Pressure adjustment:

- Lift knob 1 fig. 13.5.1 and rotate in a clockwise direction to inrease or in a clockwise direction to decrease pressure.

Filter:

- unscrew oil tank 2 fig. 13.5.1;
- unscrew the filter and replace 3 fig. 13.5.1.

Condensation drainage:

- Rotate the ring-nut fig. 4 13.5.1 and allow condensation to drain away completely then tighten the ring-nut again.

Lubrication oil:

- Unscrew screw fig. 5 13.5.1 and add oil up to the maximum level indicator.

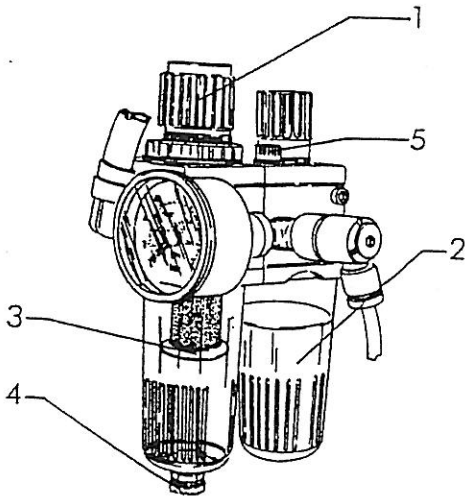

Fig. 13.5.1

13.6 Extractor station

Both the pressure and capacity are regulated by the manufacturer.

13.7 Chains

In case of excessive lengthening of the chains, the tensioner 1 fig. 13.7.1 or pinion 2 will no longer be able to maintain tension. This may cause slipping of the teeth with consquent dephasing of the machine.

Tension adjustment:

- loosen screws 3 or 4 fig. 13.7.1;
- take the tensioner or pinion close to the chain as indicated by the arrows in fig. 13.7.1, then tighten with screws 3 or 4.

Chain replacement:

If it is necessary to replace the chain, it is absolutely essential for the cam phase references to correspond. Do not tauten the chain excessively.

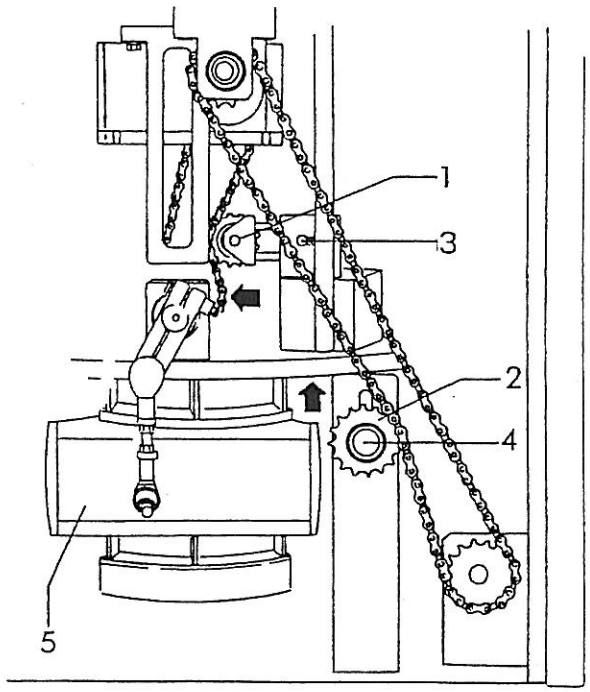

Fig. 13.7.1

Warnings

Use original spare partly only. Do not use any other type and do not use any parts with specifications which differ from those indicated.

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14 TROUBLE-SHOOTING

14 TROUBLE-SHOOTING

- The machine does not start when the start push button is pressed:
Compressed air is not connected;
Check the connection;
Insufficient air pressure; Adjust pressure on the control board.

- Low cylinder speed:
Incorrect setting of air flow;
Adjust the flow with the cylinder regulator.

- The machine stops during operation:
Insufficient air pressure;
Check supply pressure;
Check pressure on the machine control board;
Check the air pipe is intact and positioned correctly;

- Heat relay blockage;
Check the movement mechanisms.
Have a skilled technician check the motor or electrical installation.

- Irregular operation of one station:
Blocked air pipes;
Dismantle the piping and clean.

- The dispenser drips:
Incorrect assembly of nozzle;
Check, assemble and tighten the ring-nut fully.

- The sucker does not take up the lid or cup.
Pipe or VENTURI device is blocked Fig. 10.1.17 pos. 4. Remove the obstruction and try again.

Warnings
For any problem other than those specified above, please request assistance from the service division.

technogel

15 PUTTING THE MACHINE OUT OF OPERATION

15 PUTTING THE MACHINE OUT OF OPERATION

If the machine has to be put out of service, a number of basic rules must be followed to safeguard health and the environment in which we live:

- Empty the oil tanks completely and any compressed air installations so as to eliminate all presence of oil on the machine.

Note

Spent oil must not be allowed to pollute the environment. Contact a company specialized in the disposal ofsuch products.

- Dismantle the flexible pipe sheathing and plastic or non-metal compoments and have these disposed of separately.
- Dismantle the hydraulic, pneumatic and electrical components such as valves, electrovalves, pressure regulators, circuit-breakers, transformers, remote control switches etc. Re-use them if they are still usable or if possible have them overhauled and recycle them.
- The structure and all the metal parts of the machine must be demolished and melted down to allow recycling of the material comprising the original machine.

STRUCTURE GROUP

TAVOLA
DRAWING
TABLE
TAV
BILD
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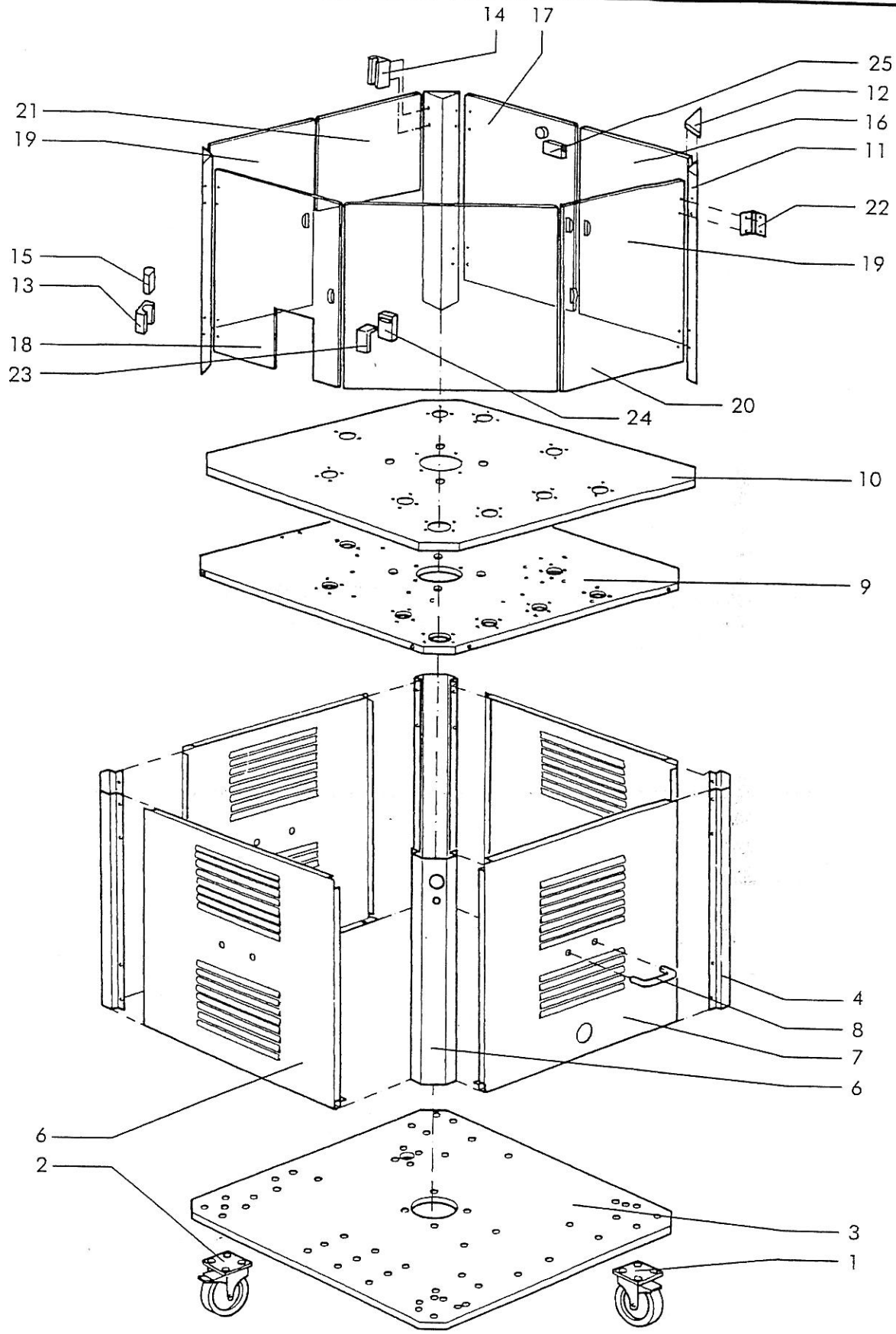

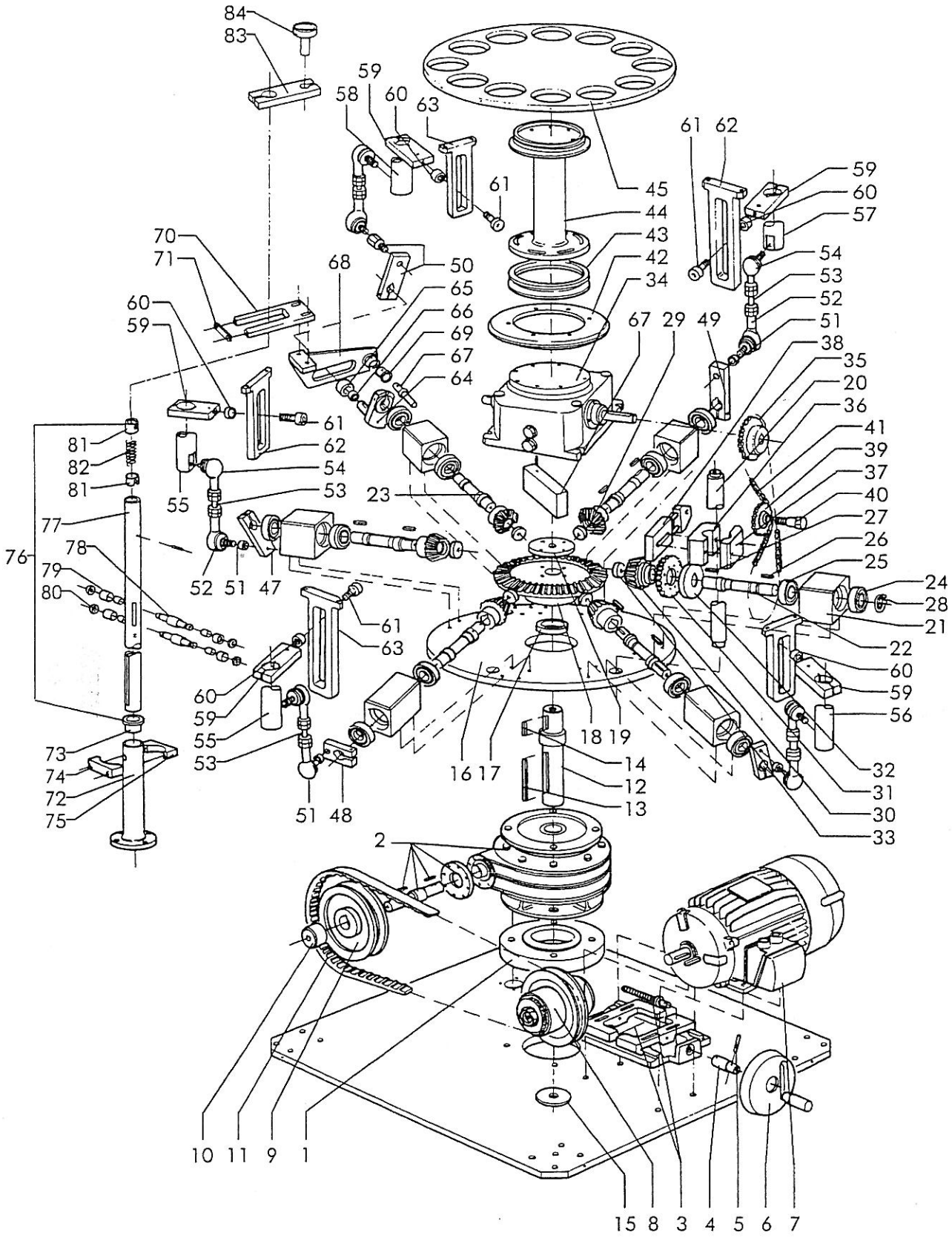
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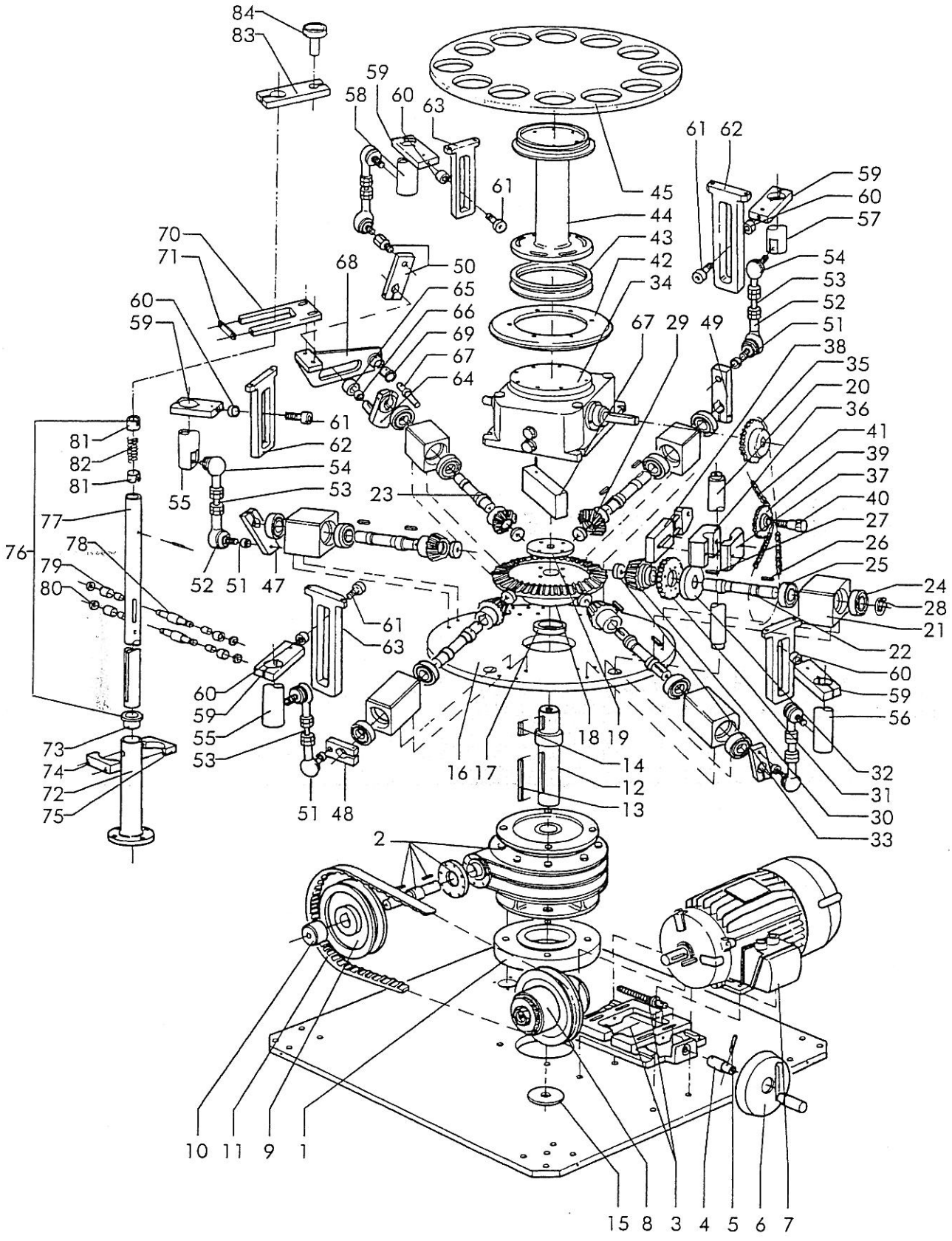
STRUCTURE GROUP

TAVOLA
DRAWING
TABLE
TAV
BILD
1

POS. *POS.* POS. *POS.* POS.	N° DISEGNO *N° DISEGNO* N° DISEGNO *N° DISEGNO* N° DISEGNO	QUANTITA' *QUANTITA'* QUANTITA' *QUANTITA'* QUANTITA'	Denominazione	*Denomination*	Dénomination	*Description*	Beshreibung
1	PC - 6677.6	2		Swivel wheel			
2	PC - 6678.6	2		Swivel wheel with brake			
3	RR - 6100.0	1		Bottom plate			
4	RR - 5733.0	3		Upright			
5	RR - 5734.0	1		Upright for feed cable			
6	RR - 6428.0	3		Side panel			
7	RR - 6429.0	1		Side control panel			
8	PC - 6638.6	4		Handle			
9	RR - 5477.0/20	1		Top plate			
9	RR - 5362.0/20	1		Top plate			
10	RR - 6189.0	1		Plate cover			
11	RR - 4977.3	3		Top upright			
12	RR - 4987.0	3		Cap for upright			
13	RR - 4988.0	10		Plate for fixing door			
14	RR - 5019.0	2		Plate to fix fixed door			
15	RR - 4985.0	12		Right door			
16	RR - 5006.0	1		Left door			
17	RR - 5007.0	1		Left door control side			
18	RR - 5015.0	1		Right door control side			
19	RR - 5016.0	2		Fixed cover			
20	RR - 5018.0	1		Fixed door			
21	RR - 5020.0	1		Hinge			
22	CC - 6981.6	10		Control key			
23	CC - 10974.6	5		Proximity switch			
24	CC - 10873.6	5		Magnetic closure			
25	RR - 10871.6	5					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TRANSMISSION GROUP

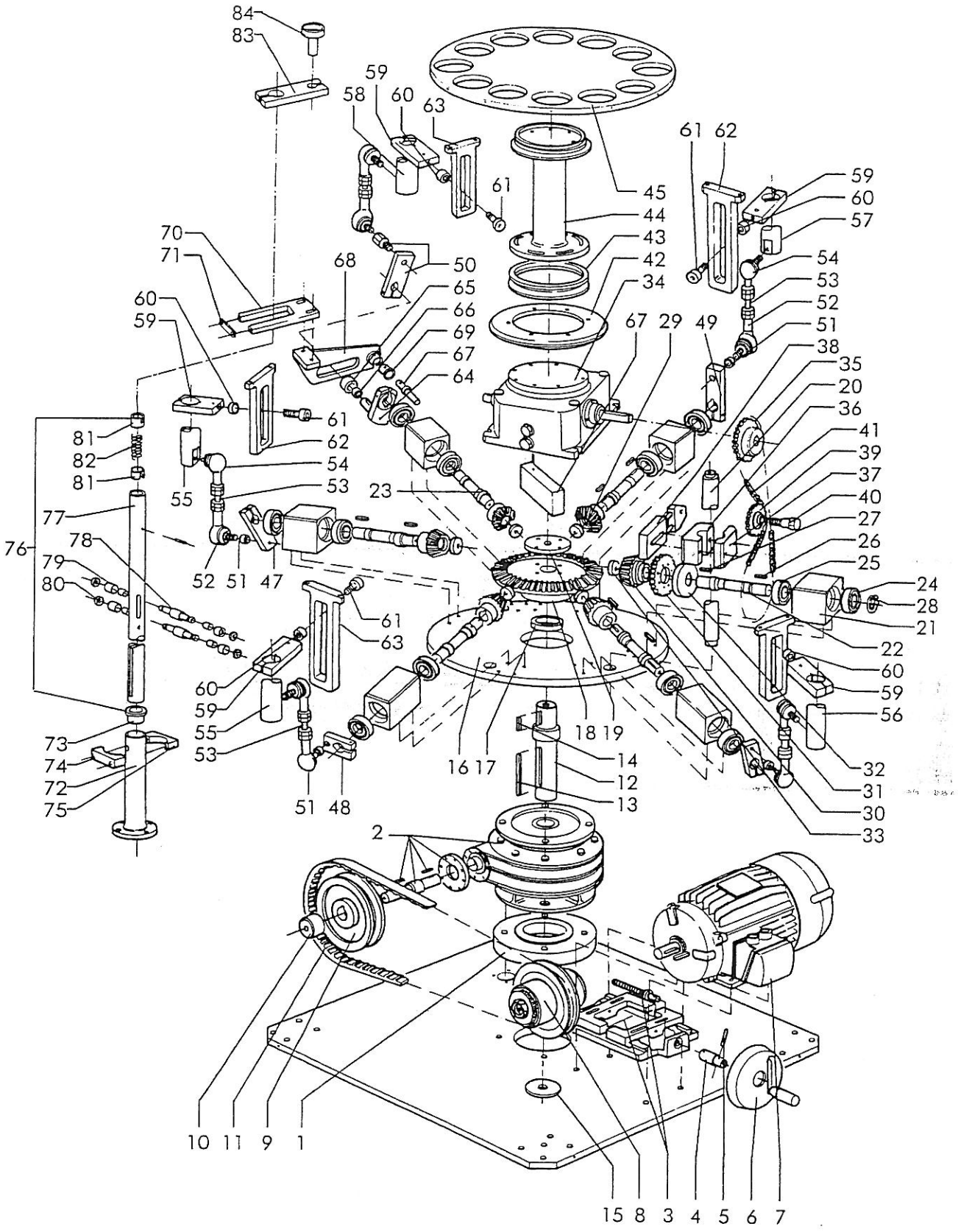
TAVOLA / *DRAWING* / TABLE / *TAV* / BILD: 2/1

POS. / *POS.* / POS. / *POS.* / POS.	N° DISEGNO / *N° DISEGNO* / N° DISEGNO / *N° DISEGNO* / N° DISEGNO	QUANTITA' / *QUANTITA'* / QUANTITA' / *QUANTITA'* / QUANTITA'	Denominazione	*Denomination*	Dénomination	*Description*	Beshreibung
1	RR - 5479.0	1		Spacer			
2	RV - 5536.6	1		Reduction unit 1:100 (Rotary model 3000)			
2	RV - 6223.6	1		Reduction unit 1:80 (Rotary model 4000)			
3	RR - 5481.6	1		Motor support slide			
4	RR - 6489.0	1		Joining nipple			
5		1		Elastic plug 5x25 UNI 6873			
6	PC - 5561.6	1		Handwheel			
7	MO - 5962.6	1		1.5 HP motor			
8	PU - 6488.6	1		Motor pulley			
9	PU - 5965.0	1		Motor pulley			
10	RR - 4742.0	1		Pulley stop spacer			
11	PU - 6629.6	1		Toothed belt 28x8x1120			
12	RR - 5424.0	1		Reduction unit shaft			
13	CHI - 12x8x100	1		Tab A 12x8x100 UNI 6604			
14	CHI - 12x8x40	1		Tab A 12x8x40 UNI 6604			
15	RR - 6119.0	1		Bott. washer for shaft			
16	RR - 5385.0/10	1		Satellite support plate			
17	GU - 6631.6	1		O ring MIM85110			
18	IG - 5555.0/20	1		Central crown			
19	RR - 6484.0	1		Crown locking disc			

TRANSMISSION GROUP

TAVOLA / DRAWING / TABLE / TAV / BILD 2/3

POS. / POS. / POS. / POS. / POS.	N° DISEGNO / N° DISEGNO / N° DISEGNO / N° DISEGNO / N° DISEGNO	QUANTITA' / QUANTITA' / QUANTITA' / QUANTITA' / QUANTITA'	Denominazione	Denomination	Dénomination	Description	Beshreibung
36	RR - 5548.0	1		Tensioner fix. block			
37	RR - 5547.0	1		Tensioner fix. block			
38	IG - 5549.6	1		Auto tensioner type ET1			
39	IG - 5550.6	1		Neutral pinion for chain tensioner			
40	RR - 5551.0	1		Pinion fixing pin			
41	IG - 6246.6	mt.1		Plain 1/2" roller chain			
42	RR - 5964.0/20	1		Ring for washer			
43	GU - 5591.6	1		Lip seal type VA-0170			
44	RR - 5654.2	1		Table support			
45	PV - 5995.0	1		Mould holding table (Rotary model 3000)			
45	PV - 5745.0	1		Mould holding table (Rotary model 3000)			
46							
47	AE - 5423.0	1		Eccentric plate (cone loading stat.)			
48	AE - 5469.0	2		Eccentric plate (Dosing gauge station)			
49	AE- 5470.0	1		Eccentric plate (Lid loading station)			
50	RR - 6268.0	1		Eccentric (Rot. 3000)			
50	RR - 6267.3	1		Eccentric (Rot. 4000)			
51	AE - 4778.0	5		Articul. spacer			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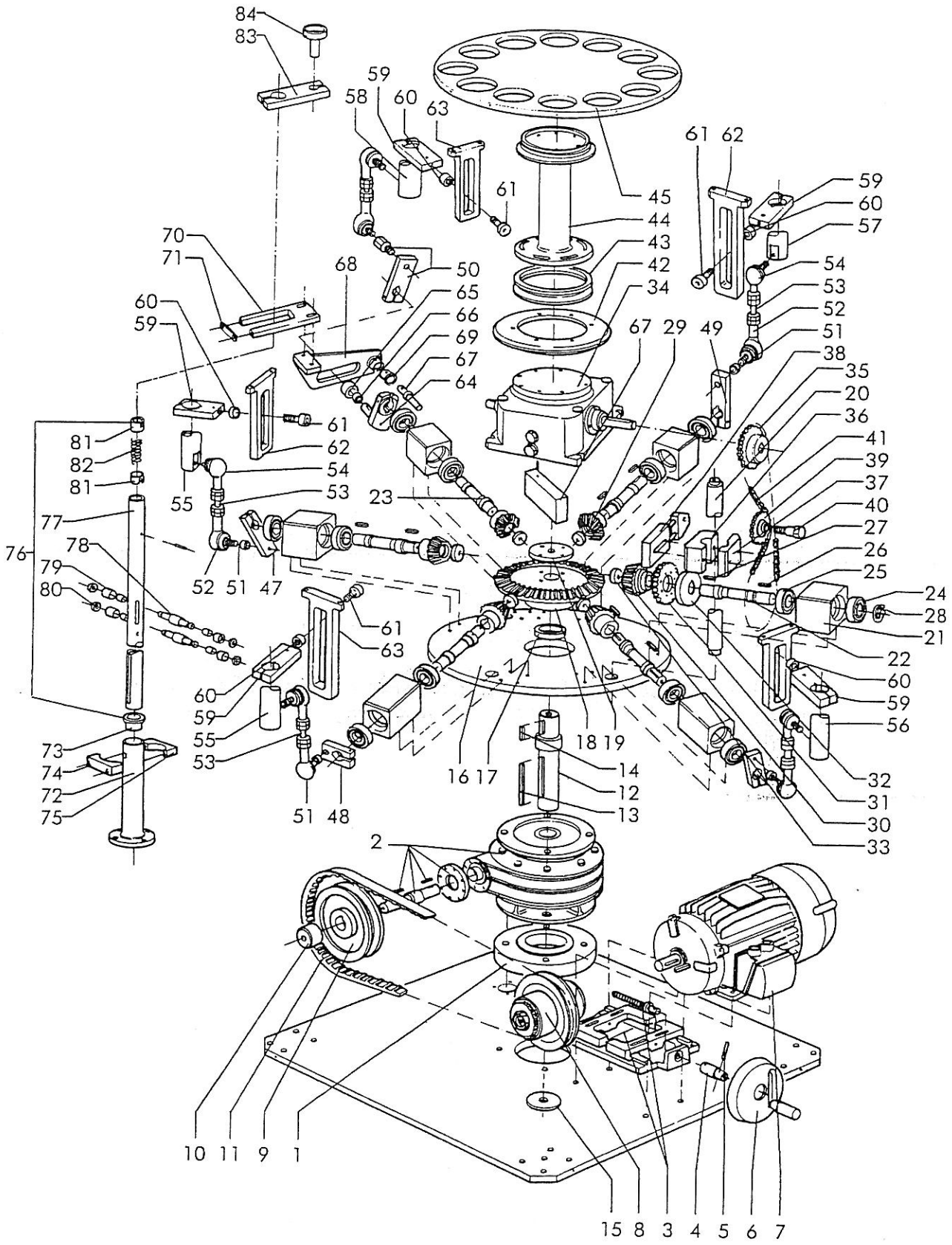
TRANSMISSION GROUP

TAVOLA
DRAWING
TABLE
TAV
BILD
2/4

POS. POS. POS. POS. POS.	N° DISEGNO N° DISEGNO N° DISEGNO N° DISEGNO N° DISEGNO	QUANTITA' QUANTITA' QUANTITA' QUANTITA' QUANTITA'	Denominazione	Denomination	Dénomination	Description	Beshreibung
52	RR - 0057	5		Articul. type RBL 12 L			
53	AE - 4940.0	5		Adjustment pin			
54	RR - 0122	5		Articul. type RBL 12			
55	CL - 5344.2/11	2		Shaft (Loading stat. - gauger)			
56	CL - 5309.2/20	1		Shaft (dosage stat.)			
57	CL - 5216.2/10	1		Shaft (Lid loading stat.)			
58	CL - 6682.2	1		Shaft (Press-calking tool)			
59	AE - 5627.0	5		Anti-rotation block (Rotary model 3000)			
59	AE - 5215.0	5		Anti-rotation block (Rotary model 4000)			
60	AE - 5108.0	5		Spacer for roller			
61	CS - 6130.6	5		Neutral roller with pin			
62	AE - 4942.2	2		Guide for neutral roller			
63	AE - 4943.2/10	3		Guide for neutral roller (Dosage-calking tool gauge station)			
64	RR - 6271.0	1		Eccentric			
65	RR - 6260.3/01	1		Complete roller			
66	CS - 6671.6	1		Bushing			
67	RR - 6263.3	1		Block for complete connect. rod			
68	RR - 6171.3/10	1		Complete connecting rod			
69	CS - 6161.0	1		Bushing			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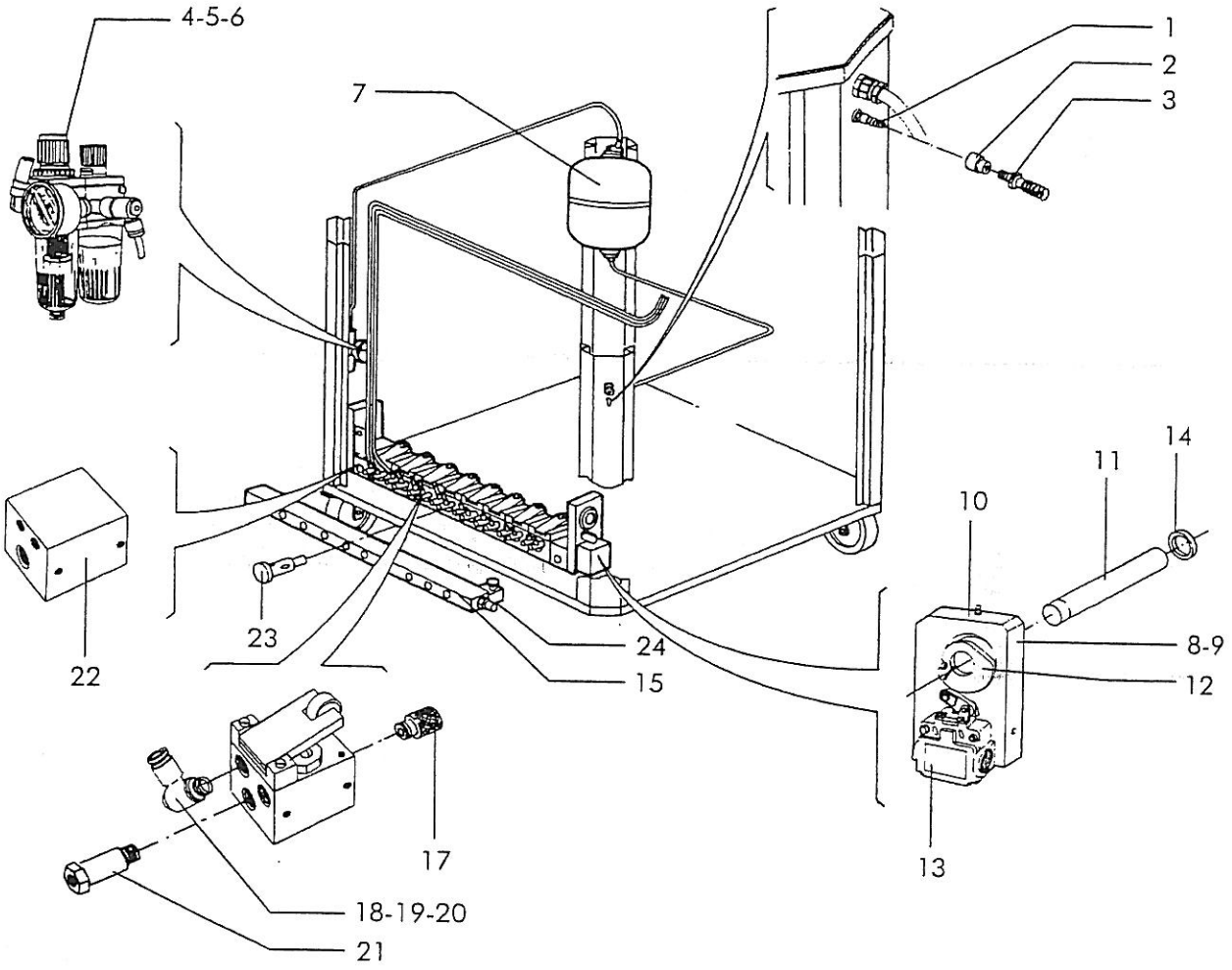
TRANSMISSION GROUP

TAVOLA / *DRAWING* / TABLE / *TAV* / BILD: 2/5

POS. / *POS.* / POS. / *POS.* / POS.	N° DISEGNO / *N° DISEGNO* / N° DISEGNO / *N° DISEGNO* / N° DISEGNO	QUANTITA' / *QUANTITA'* / QUANTITA' / *QUANTITA'* / QUANTITA'	Denominazione	*Denomination*	Dénomination	*Description*	Beshreibung
70	RR - 6173.0	1		Fork			
71	RR - 6174.0	1		Fork plate			
72	RR - 6168.3	1		Complete pipe guide			
73	CS - 6163.0	1		Bushing			
74	RR - 6197.2/01	1		Antirotat. clamp			
75	RR - 6180.0	1		Clamp			
76	RR - 6188.4/20	1		Complete shaft			
77	RR - 6164.2/20	1		Shaft			
78	RR - 6175.0	2		Pin			
79	RR - 6184.3	4		Complete roller			
80	RR - 6196.0	8		Spacer for roller			
81	RR - 6296.0	2		Spring-pusher ratchet			
82	ML - 6177.6	1		Spring			
83	RR - 6199.0/20	1		Transmission plate (Rotary model 3000)			
83	RR - 6276.0/20	1		Transmission plate (Rotary model 4000)			
84	RR - 6166.2/10	1		Platelet for cone extr.			
84	RR - 9091.0	1		Platelet for push-up ex.			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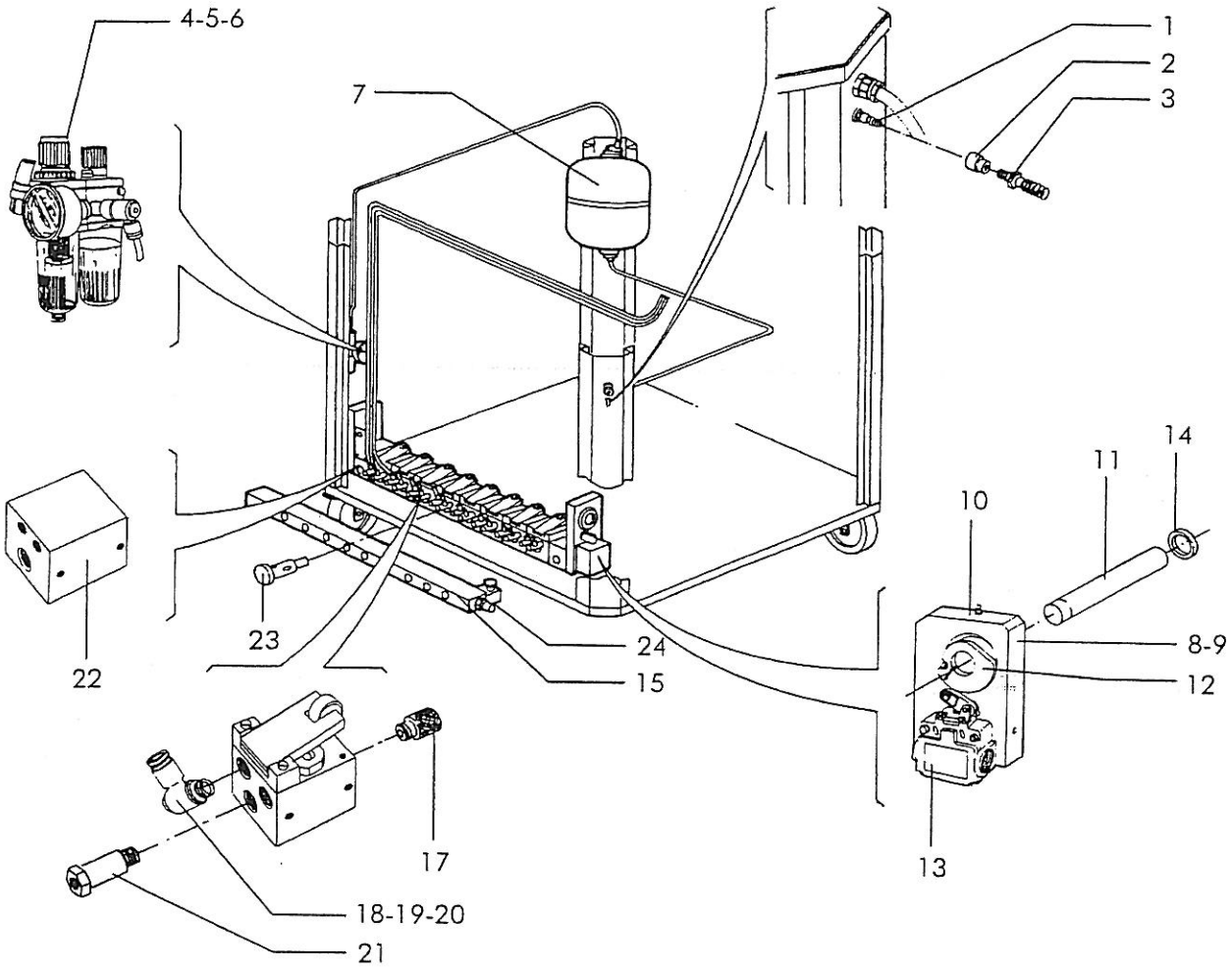
PNEUMATIC PROGRAMMER GROUP

TAVOLA
DRAWING
TABLE
TAV
BILD
3/1

POS. *POS.* POS. *POS.* POS.	N° DISEGNO *N° DISEGNO* N° DISEGNO *N° DISEGNO* N° DISEGNO	QUANTITA' *QUANTITA'* QUANTITA' *QUANTITA'* QUANTITA'	Denominazione	*Denomination*	Dénomination	*Description*	Beshreibung
1	T1 - 0201	1		1/4" male joint type 111 - 100			
2	DE - 0202	1		1/4" rapid joint			
3	DE - 0244	1		Connector with spring			
4	PM - 5526.6	1		Pressure reducer compl. w. filter + spray			
5	PM - 5854.6	1		NL2 quadruple distrib.			
6	PM - 5855.6	1		O.8÷5 bar regul. transd.			
7	PM - 7864.6	1		Alum. air tank			
8	RR - 5447.0	2		Microswitch support			
9	CS - 5528.6	2		Spherical joint			
10	T1 - 0283	2		Direct greaser M6x1 UNI 7663			
11	RR - 6139.0/10	1		10-calce programmer shaft			
11	RR - 6140.0/10	1		8-valve programmer shaft			
12	RR - 5369.6	***		Programmer cam			
13	CC - 6101.6	1		Limit switch * vibrat.			
14	RR - 6407.0	2		Shim adjust. washer			
15	RR - 6136.0	1		Air distributor for 10-valve programmer			
15	RR - 6137.0	1		Air distributor for 8-valve programmer			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PNEUMATIC PROGRAMMER GROUP

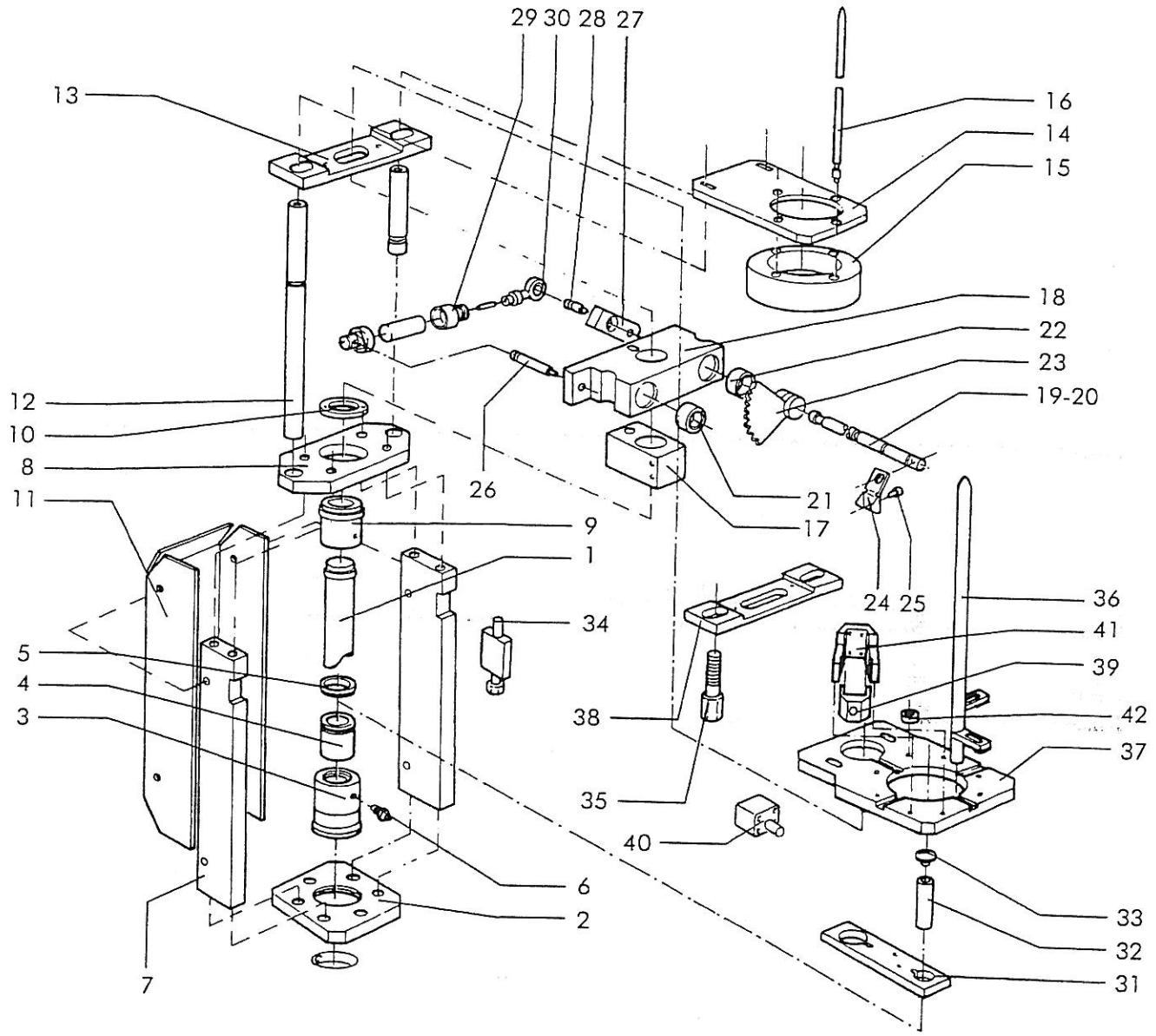
TAVOLA
DRAWING
TABLE
TAV
BILD
3/2

POS. POS. POS. POS. POS.	N° DISEGNO N° DISEGNO N° DISEGNO N° DISEGNO N° DISEGNO	QUANTITA' QUANTITA' QUANTITA' QUANTITA' QUANTITA'	Denominazione	Denomination	Dénomination	Description	Beshreibung
16	PM - 6091.4	***		4/2 valve for programmer			
17	RG - 8092.6	***		1/4" discharge silencer			
18	RG - 8097.6	***		90° 1/4" male connector pipe diam. 8			
19	RG - 8000.6	***		90° 1/4" male connector pipe diam 8			
20	RG - 9092.6	***		90° 1/4" male connector pipe diam 6			
21	RG - 6090.6	***					
22	RR - 6116.0	2		Valve spacer			
23	RG - 6089.6	***		1/4" connector type 1631-02			
24	DE - 0250	2		F/M Reduction 1/4"-1/2"			

*** NB: Quantity to be defined on the basis of machine arrangement

CONE/CUP MAGAZINE GROUP

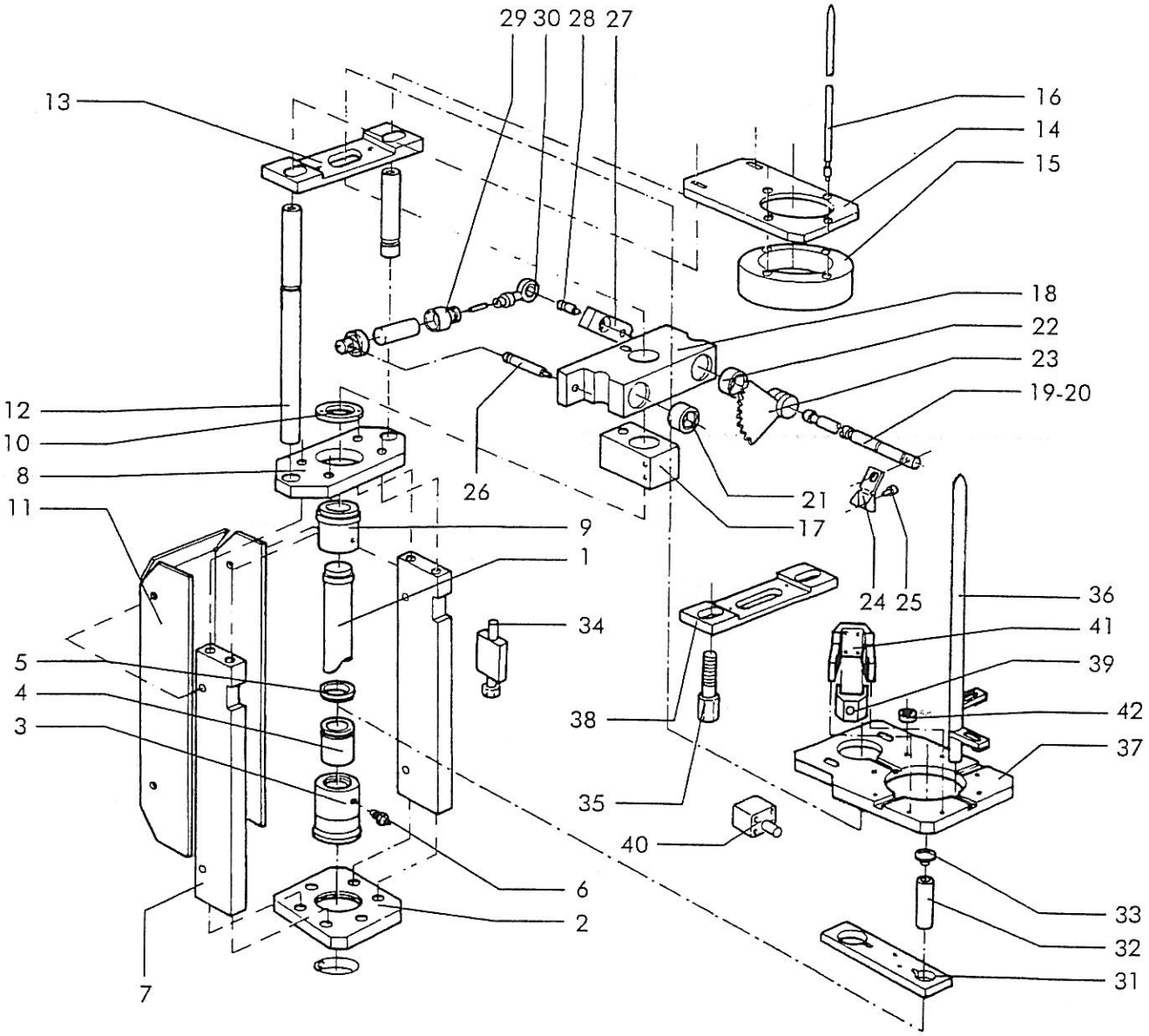
TAVOLA
DRAWING
TABLE
TAV
BILD
4/1



CONE/CUP MAGAZINE GROUP

TAVOLA DRAWING TABLE TAV BILD 4/2

POS. / *POS.* / POS. / *POS.* / POS.	N° DISEGNO / *N° DISEGNO* / N° DISEGNO / *N° DISEGNO* / N° DISEGNO	QUANTITA' / *QUANTITA'* / QUANTITA' / *QUANTITA'* / QUANTITA'	Denominazione	*Denomination*	Dénomination	*Description*	Beshreibung
20	RR - 5272.0	1		Duct shaft			
21	CS - 5671.6	4		Bearing SKF6002-2RS1			
22	RR - 5274.0	2		Spacer			
23	RR - 5275.0	2		Toothed sector			
24	RR - 5669.2/10	2		Loading arm			
25	RR - 6191.0	2		Ferrule for cone grips			
26	RR - 5276.0	1		Cylinder pin			
27	RR - 5278.0	1		Shaft movement lever			
28	RR - 5279.0	1		Pin artic. seat			
29	CI - 5507.6	1		Cylinder ext. diam 16x15			
30	RR - 0100	1		Artic. PHS 6			
	LIST OF PARTS FOR CUP LOADING						
31	RR - 6181.0	1		Clamp plate			
32	RR - 6358.0	1		Spacer for sucker holder			
33	VN - 5372,6	1		Sucker VAS 30 1/8"			
33	VN - 6094.6	1		Sucker VAS 40 1/4"			
34	VN - 5371.6	1		Vac. device CV-10HS			
35	RR - 4989.0	1		Plate support			
36	Rr - 7246.0	2		Columns for plate			
37	RR - 7242.0	1		Magazine plate			
38	RR - 7954.0	1		Magazine plate			
38	RR - 7245.2	4		Container guide rod			
38	RR - 7955.2	4		Container guide rod			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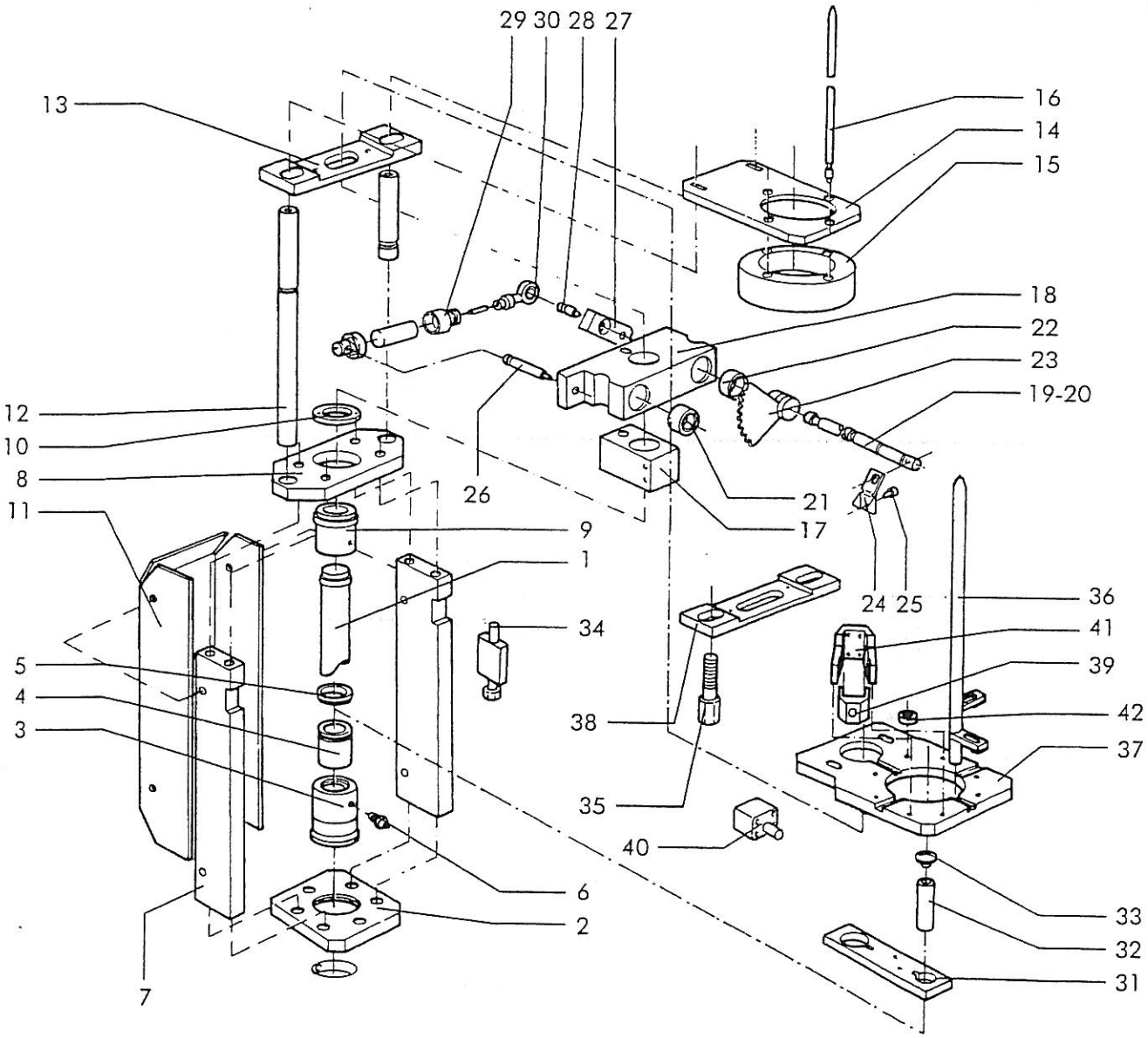
CONE/CUP MAGAZINE GROUP

TAVOLA
DRAWING
TABLE
TAV
BILD
4/1

POS. *POS.* POS. *POS.* POS.	N° DISEGNO *N° DISEGNO* N° DISEGNO *N° DISEGNO* N° DISEGNO	QUANTITA' *QUANTITA'* QUANTITA' *QUANTITA'* QUANTITA'	Denominazione	*Denomination*	Dénomination	*Description*	Beshreibung
1	CL - 5344.2/11	1		Entrainment shaft			
2	RR - 5455.0	1		Bottom plate			
3	RR - 5918.0	1		Bottom sleeve			
4	CS - 6006.0	2		Bushing			
5	LN - 0054	4		Lip seal ASOB -30-4			
6	DFA - 0410.6	2		Greaser M6x1 UNI 7663			
7	RR - 5448.0	2		Spacers for column			
8	RR - 5295.0	1		Top plate			
9	RR - 5919.0	1		Top sleeve			
10	RR - 5920.0	1		Cover for sleeve			
11	RR - 6656.0	1		Protection			
12	RR - 6011.0	2		Columns for loading			
13	RR - 4989.0	1		Support for bar			
14	RR - 4976.0	1		Cone mag. plate diam.65			
15	RR - 5969.0/10	1		Sector ⍁52 for cones of diam. 65			
15	RR - 4575.0/10	1		Sector ⍁50 for cones of diam. 65			
15	RR - 7133.0	1		Sector ⍁56 for cones of diam. 72			
16	RR - 5474.0	4		Magazine rod			
17	RR - 5267.0	1		Support block			
18	RR - 5268.0/10	1		Shaft guide support			
19	RR - 5271.0	1		Conductor shaft			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CONE/CUP MAGAZINE GROUP

TAVOLA
DRAWING
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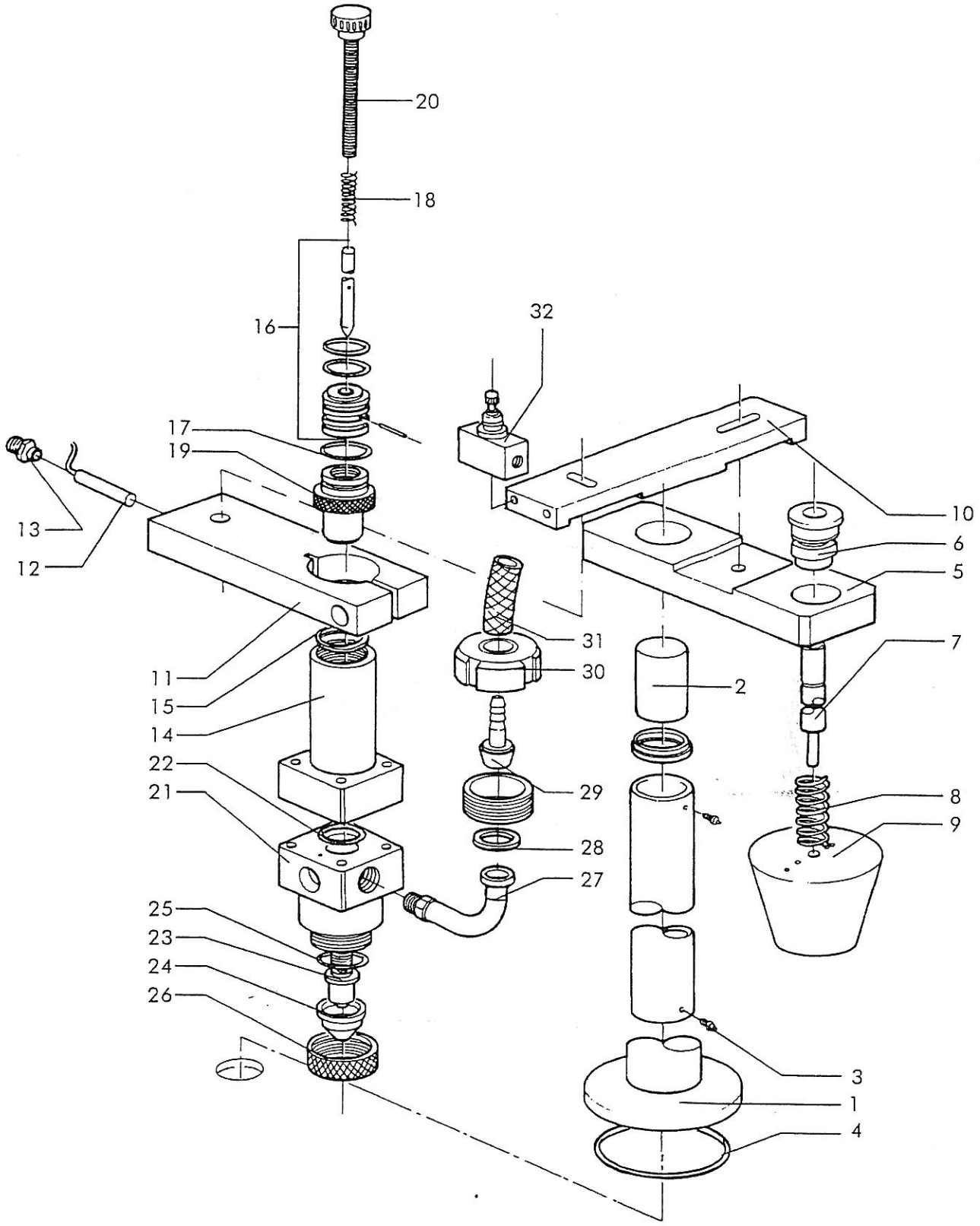
TAV
BILD
4/3

POS. POS. POS. POS. POS.	N° DISEGNO N° DISEGNO N° DISEGNO N° DISEGNO N° DISEGNO	QUANTITA' QUANTITA' QUANTITA' QUANTITA' QUANTITA'	Denominazione	Denomination	Dénomination	Description	Beshreibung
39	RR - 7244.0/10	4		Hold for containers			
40	CI- 7154.6	4		Cylinder ext. diam.16x5			
41	RR - 7243.0	4		Cylinder block			
42	must be defined on basis of contain.	4					

SPRAY CALIBRATOR GROUP

TAVOLA
DRAWING
TABLE
TAV
BILD
5/1



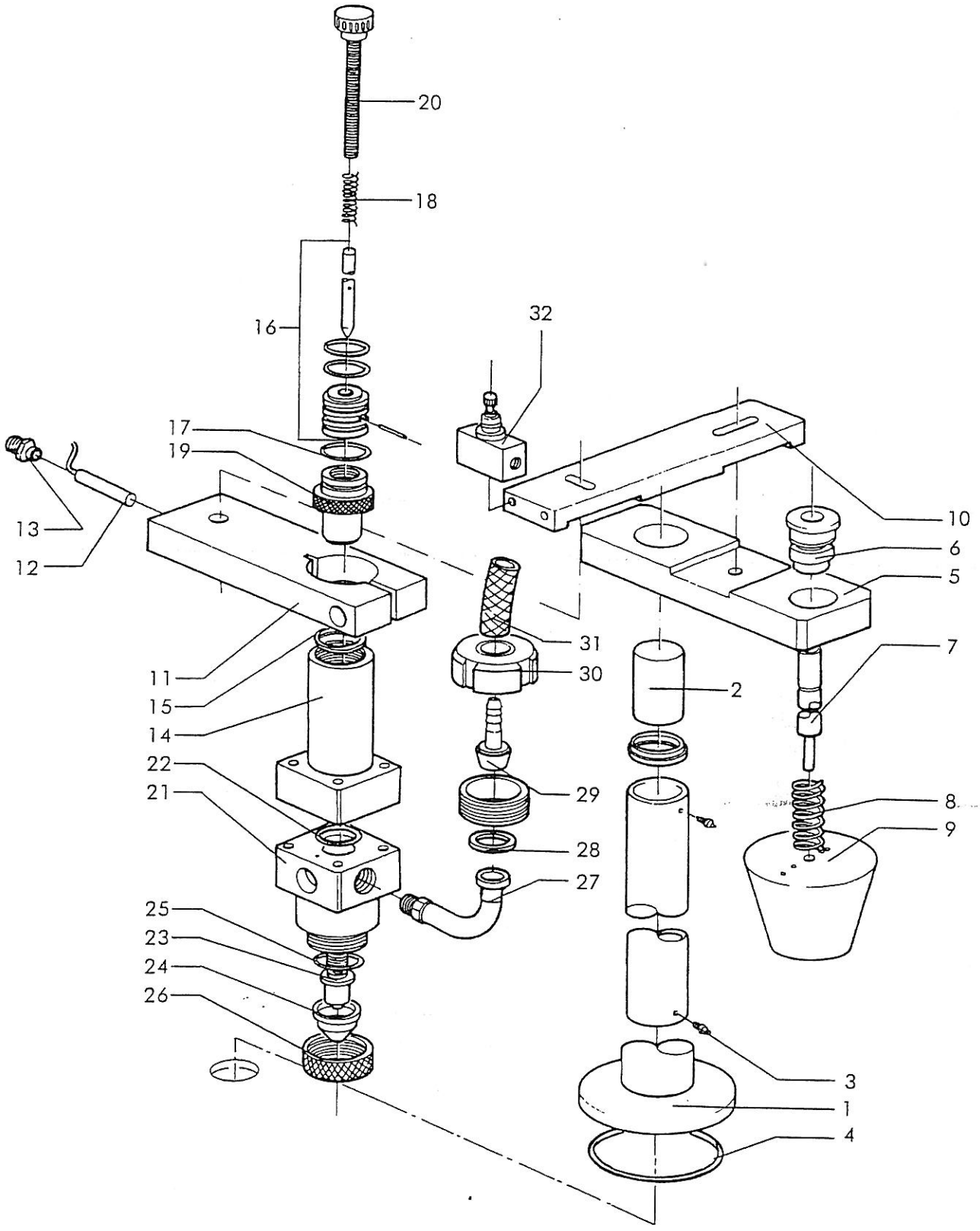
SPRAY CALIBRATOR GROUP

TAVOLA / *DRAWING* / TABLE / *TAV* / BILD **5/1**

POS. / *POS.* / POS. / *POS.* / POS.	N° DISEGNO / *N° DISEGNO* / N° DISEGNO / *N° DISEGNO* / N° DISEGNO	QUANTITA' / *QUANTITA'* / QUANTITA' / *QUANTITA'* / QUANTITA'	Denominazione	*Denomination*	Dénomination	*Description*	Beshreibung
1	CL - 5305.3/10	1		Complete guide colum			
2	CL - 5344.2/11	1		Entrainer shaft			
3	DFA - 0410.6	2		Straight greaser M6x1 UNI 7663			
4	RR - 0101	1		O-ring OR3350			
5	RR - 5451.0/10	1		Support plate			
6	RR - 5924.0	1		Guide bushing			
7	RR - 5925.0	1		Buffer rod			
8	ML - 4997.0	1		Calibrator spring			
9	RR - 5926.0/10	1		Buffer			
10	RR - 6212.0/10	1		Plate support			
11	RR - 6210.0/10	1		Clamp support			
12	RR - 0049	1		Elem. diam. 10x65 150W			
13	E - 00212	1		1/4" connector ref. RTA - 82001			
14	RR - 6202.0	1		Piston cylinder			
15	GU - 6228.6	1		Seal ref. GACO DI031			
16	RR - 5933.3	1		Complete shutter			
17	AV - 00090	2		O-ring OR2075 VITON			
18	ML - 5942.6	1		Return spring			
19	RR - 6206.3	1		Complete top head			
20	PC - 6229.3	1		Knob			
21	RR - 6203.0	1		Spray body			
22	FR6 - 0188	1		O-ring OR 3087			

SPRAY CALIBRATOR GROUP

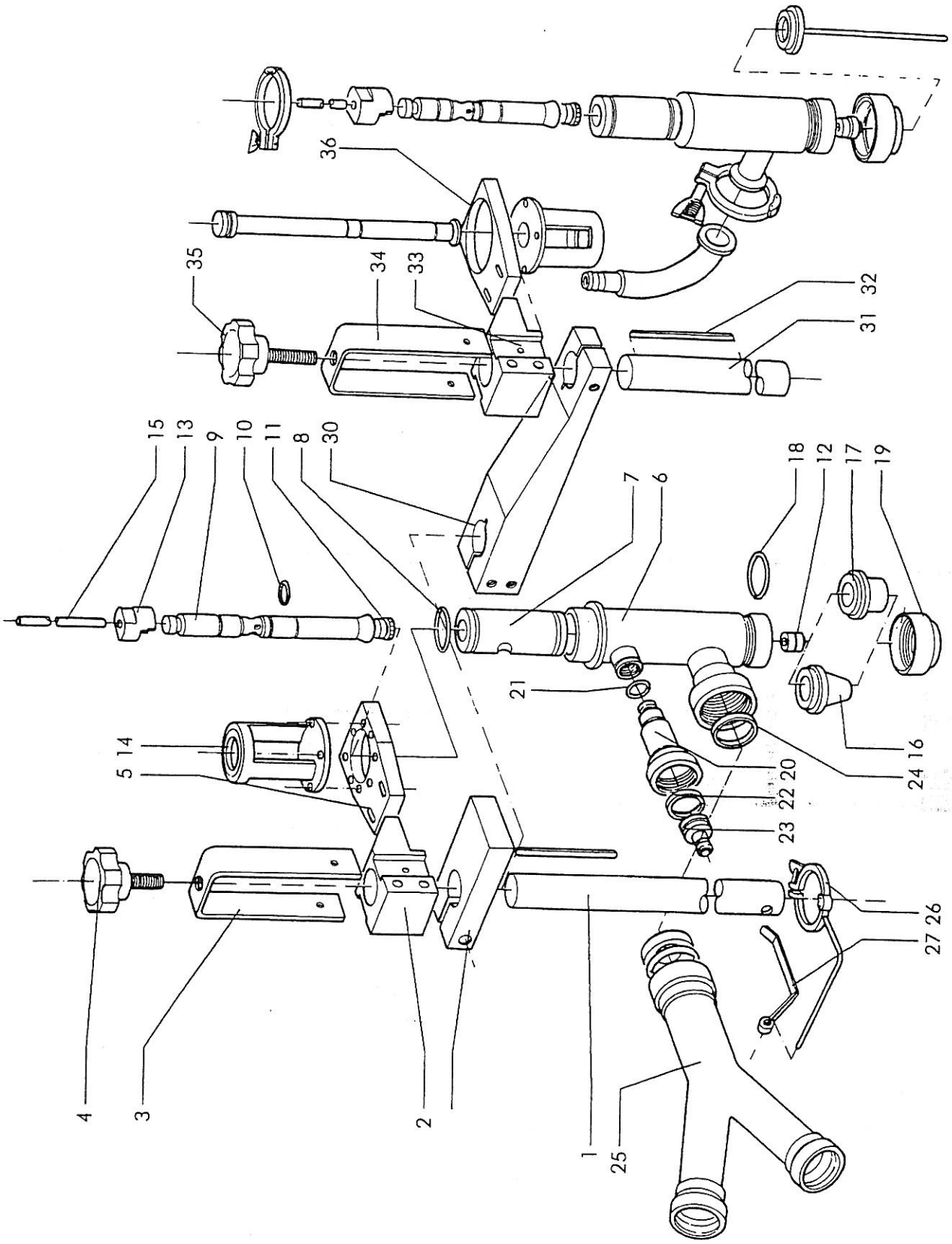
TAVOLA
DRAWING
TABLE
TAV
BILD
5/2



SPRAY CALIBRATOR GROUP

TAVOLA
DRAWING
TABLE
TAV
BILD
5/2

POS. *POS.* POS. *POS.* POS.	N° DISEGNO *N° DISEGNO* N° DISEGNO *N° DISEGNO* N° DISEGNO	QUANTITA' *QUANTITA'* QUANTITA' *QUANTITA'* QUANTITA'	Denominazione	*Denomination*	Dénomination	*Description*	Beshreibung
23	RR - 6207.0	1		Spray nozzle			
24	RR - 5941.0	1		Nozzle holder unit			
25	FR6 - 0188	1		O-ring OR 3087			
26	RR - 5939.0	1		Ring nut			
27	ED - 9209.2	1		Outlet for chocolate			
28	R - 013.15	1		Washer DN 15			
29	ED - 9211.2	1		Rubber holder			
30	R - 012.15	1		Wheel DN 15			
31	VA - 0048	1		Atoxic pipe			
32	PM - 5505.6	1		1-direc. flow regulat.			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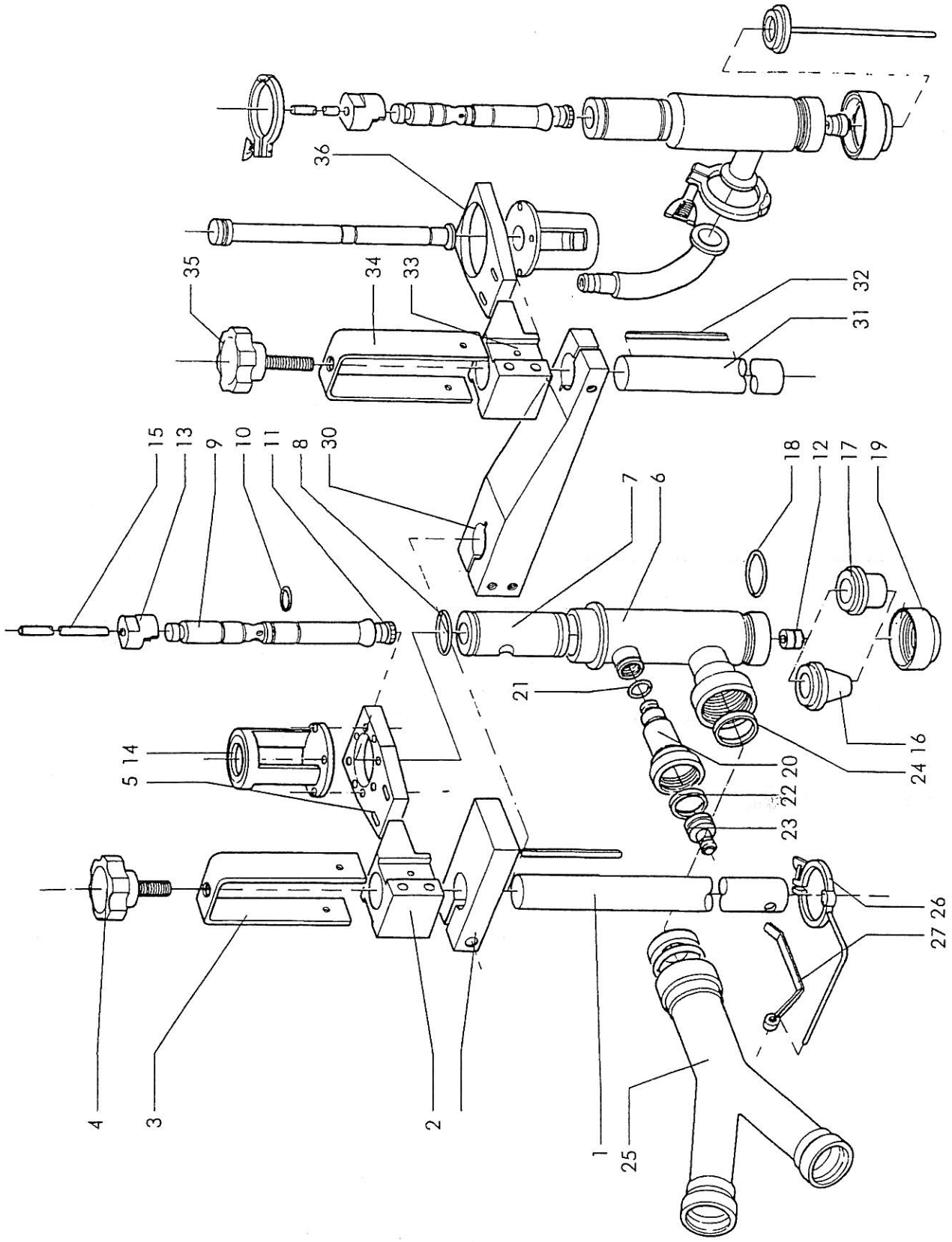
DOSER GROUP

TAVOLA
DRAWING
TABLE
TAV
BILD
6/1

POS. *POS.* POS. *POS.* POS.	N° DISEGNO *N° DISEGNO* N° DISEGNO *N° DISEGNO* N° DISEGNO	QUANTITA' *QUANTITA'* QUANTITA' *QUANTITA'* QUANTITA'	Denominazione	*Denomination*	Dénomination	*Description*	Beshreibung
1	CL - 5309.2/20	1		Entrainment shaft			
2	RR - 6064.0/10	1		Top clamp			
3	ED - 6066.0/10	1		Adjustment fork			
4	PC - 5865.3	1		Adjustment knob			
5	RR - 6065.0	1		Dispenser support plate			
6	ED - 6070.2	1		Dispenser body			
7	ED - 6068.0	1		Guide bushing			
8	AV - 00076	2		O-ring OR4131			
9	ED - 6069.0/01	1		Shutter			
10	OM - 0012	2		O-ring OR 119			
11	ED - 5927.0	1		Shutter cap			
12	ED - 5921.0	1		Ripple outlet			
13	RR - 5705.0	1		Shutter connection bushing			
14	ED - 6060.2	1		Cylinder attachment spacer			
15	CI - 6156.6	1		Cylinder ext diam 32x50			
16	ED - 6784.0	1		Cup outlet			
17	ED -6038.0	1		Cone outlet			
18	FR3 - 0055	1		O-ring OR 147			
19	ED -5868.0/10	1		Outlet fixing ring nut			
20	ED - 7938.2	1		Large ripple outlet			
21	AV - 00086	1		O-ring OR 2050			
22	R - 013.20	1		Washer DN 20			
23	ED - 9281.0	1		Rubber holder DN 20			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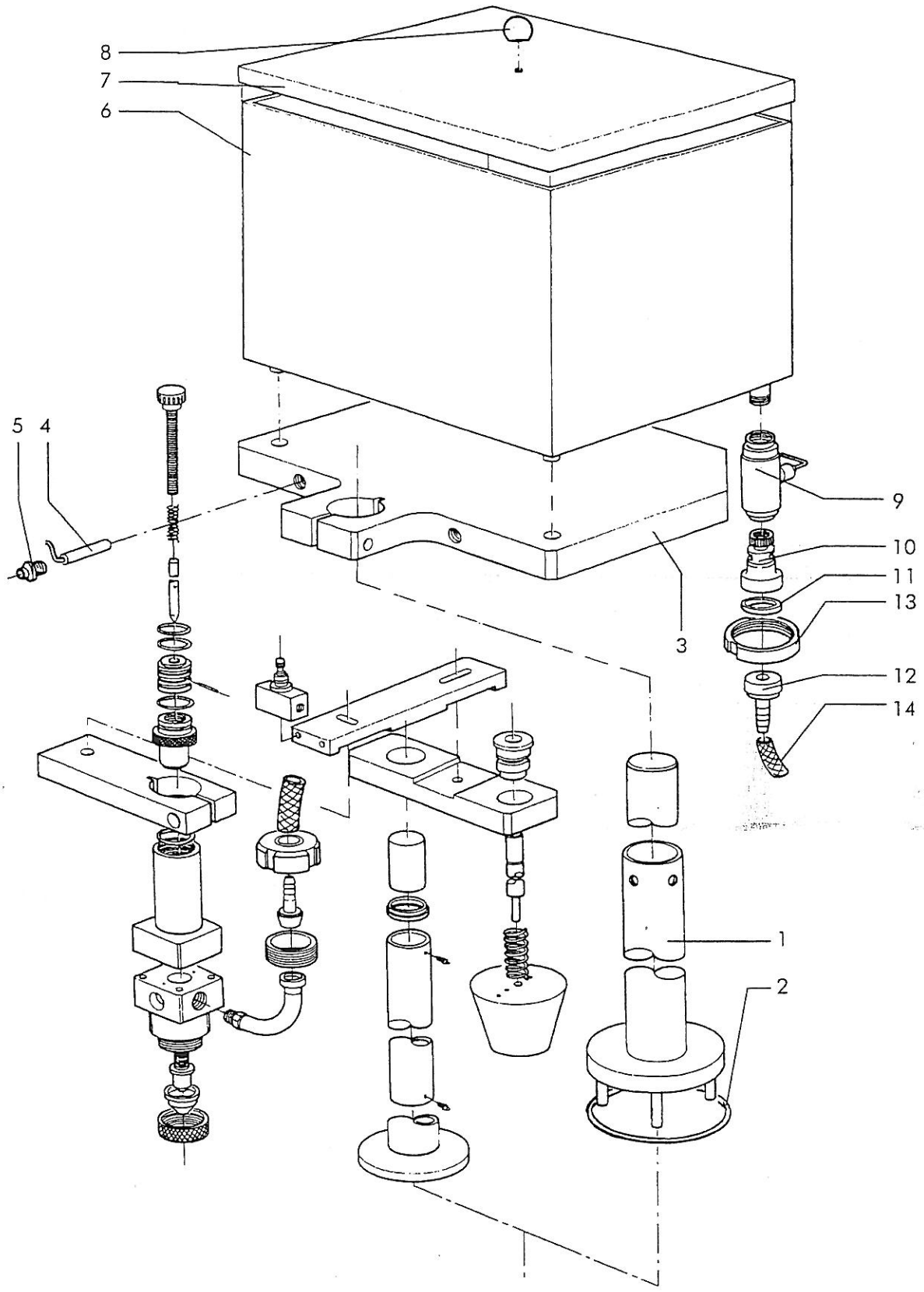
DOSER GROUP

TAVOLA
DRAWING
TABLE
TAV
BILD
6/2

POS. *POS.* POS. *POS.* POS.	N° DISEGNO *N° DISEGNO* N° DISEGNO *N° DISEGNO* N° DISEGNO	QUANTITA' *QUANTITA'* QUANTITA' *QUANTITA'* QUANTITA'	Denominazione	*Denomination*	Dénomination	*Description*	Beshreibung
24	R - 013.32	1		Washer DN 32			
25	RR - 7117.3	1		2-flavour dispenser pipe			
26	RR - 6372.3/10	1		Container hold clamp			
27	RR - 6373.2	2		Container hold plate			

LIST OF PARTS OF PENCIL FILLER DISPENSER UNIT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CHOCOLATE TANK GROUP

TAVOLA
DRAWING
TABLE
TAV
BILD
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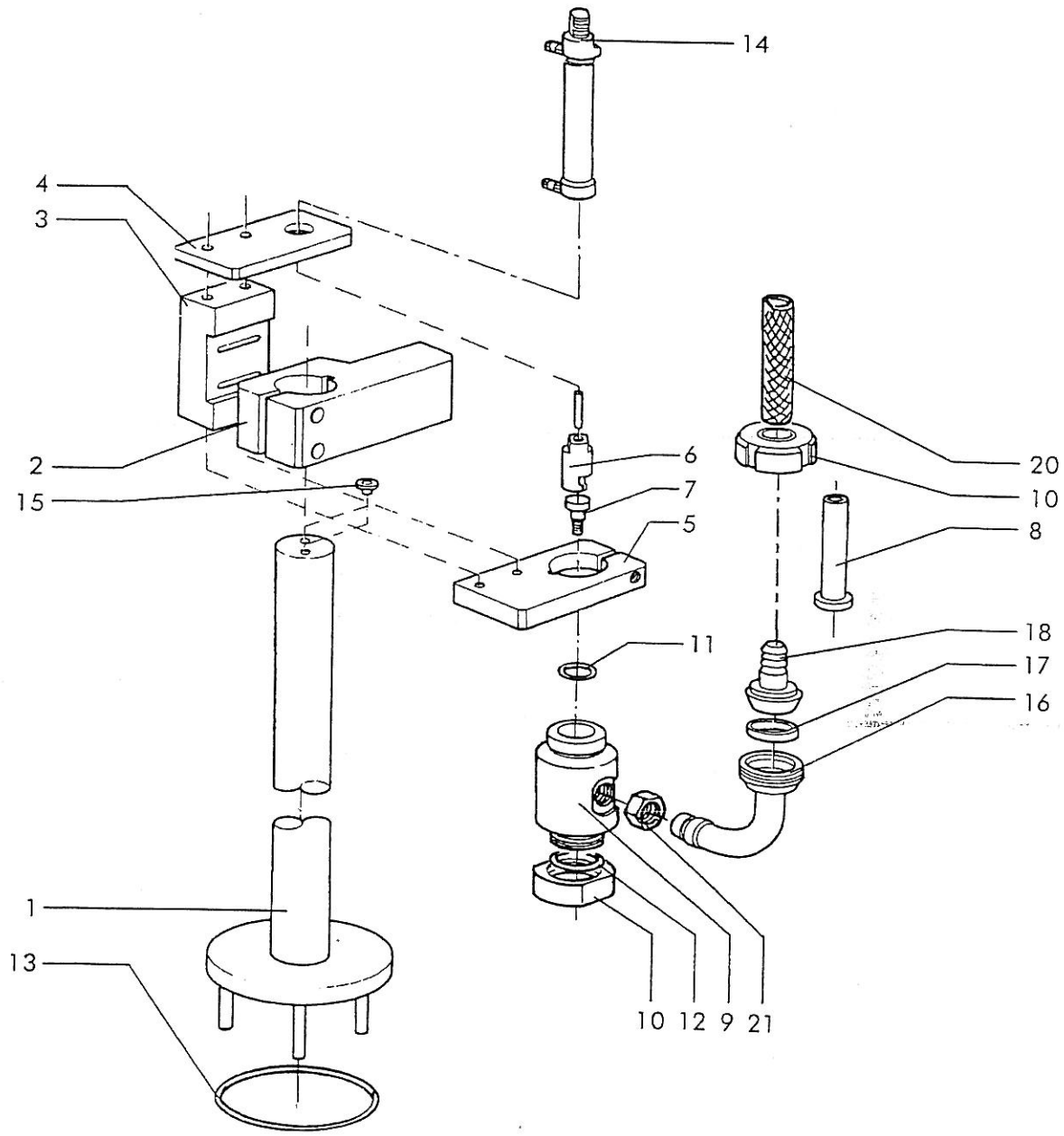
POS. POS. POS. POS. POS.	N° DISEGNO N° DISEGNO N° DISEGNO N° DISEGNO N° DISEGNO	QUANTITA' QUANTITA' QUANTITA' QUANTITA' QUANTITA'	Denominazione	Denomination	Dénomination	Description	Beshreibung
1	CL - 5955.3	1		Support column			
2	RR - 0101	1		O-ring OR 3350			
3	RR - 5359.0/10	1		Heat plate			
4	RR - 0049	2		Element diam 10x65-150W			
5	E - 00212	2		1/4" connector ref. RTA -82001			
6	VC - 5475.2/10	1		Chocolate tank			
7	VC - 5476.0/10	1		Lid			
8	RR - 0172	1		Round knob			
9	RG - 10036.6	2		Ball valve 3/8" DN 15			
10	ED - 9210.2	2		Outlet			
11	R - 013.15	2		Washer DN 15			
12	ED - 9211.2	2		Rubber holder			
13	R - 012.15	2		Wheel DN 15			
14	VA - 0048	2mt		Atoxic pipe			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TOPPING GROUP

TAVOLA
DRAWING
TABLE
TAV
BILD
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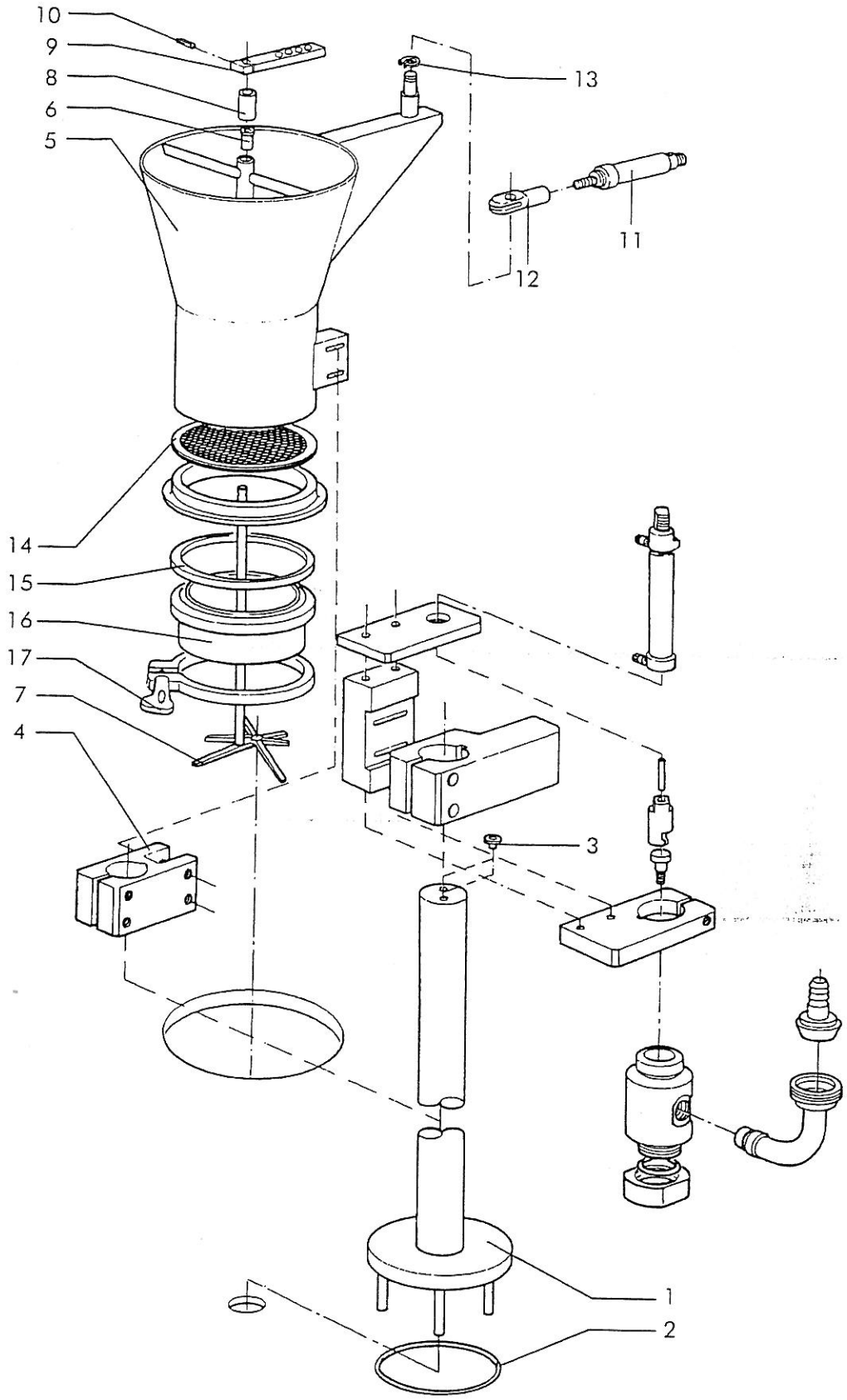
POS. *POS.* POS. *POS.* POS.	N° DISEGNO *N° DISEGNO* N° DISEGNO *N° DISEGNO* N° DISEGNO	QUANTITA' *QUANTITA'* QUANTITA' *QUANTITA'* QUANTITA'	Denominazione	*Denomination*	Dénomination	*Description*	Beshreibung
1	CL - 4840.3/20	1		Complete column			
2	RR - 4870.0/10	1		Support			
3	RR - 4871.0	1		Plate support			
4	RR - 4873.0/10	1		Cylinder fixing plate			
5	RR - 4872.0	1		Fixing plate			
6	RR - 4838.0	1		Tang for connection			
7	RR - 4837.0	1		Ferrule for piston			
8	RR - 5928.0/01	1		Piston for dispenser			
9	RR - 5471.0/10	1		Dispenser body			
10	RR - 5430.2/10	1		Choc. mouth outlet			
11	AV - 00027	1		O-ring OR 115			
12	FR3 - 0071	1		O-ring OR 3112			
13	RR - 0101	1		O-ring OR 3350			
14	CI - 5376.6	1		Cylinder ext. diam 16x25			
15	RR - 5932.0	2		Pipe bushing			
16	ED - 9209.2	1		Chocolate outlet			
17	R - 013.15	1		Washer DN 15			
18	ED - 9211.2	1		Rubber holder			
19	R - 012.15	1		Wheel DN 15			
20		mt1		Reticulated feed pipe diam 13 x 20			
21	DAI - 3/8 B	1		Low 3/8" nut			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CACAO DISTRIBUTOR GROUP

TAVOLA
DRAWING
TABLE
TAV
BILD
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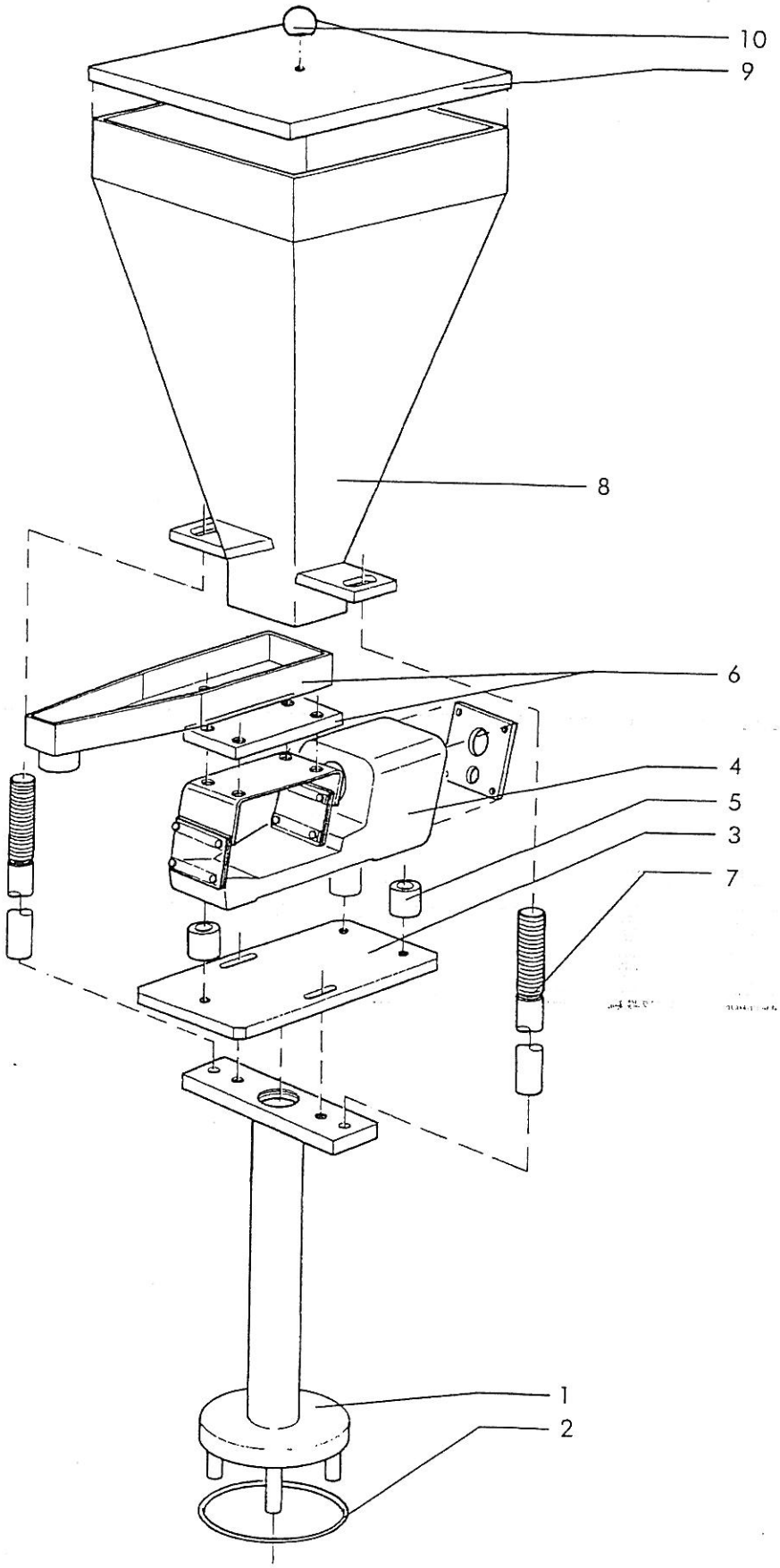
POS. *POS.* POS. *POS.* POS.	N° DISEGNO *N° DISEGNO* N° DISEGNO *N° DISEGNO* N° DISEGNO	QUANTITA' *QUANTITA'* QUANTITA' *QUANTITA'* QUANTITA'	Denominazione	*Denomination*	Dénomination	*Description*	Beshreibung
1	CL - 4840.3/20	1		Complete column			
2	RR - 0101	1		O-ring OR 2250			
3	RR - 5932.0	2		Bushing for air supply pipe			
4	RR - 5138.0	1		Support for dispenser			
5	RR - 5140.3/10	1		Complete dispenser body			
6	CS - 6150.6	2		Bushing			
7	RR - 5135.2/30	1		Mixer			
8	RR - 5136.0	1		Spacer			
9	RR - 5137.0/20	1		Square			
10	SPEI - 3x10	1		Spring pin diam 3 x 10UNI 6874			
11	CI - 5376.6	1		Cylinder ext diam 16x stroke 25			
12	CI - 7573.6	1		Fork for cylinder			
13	SEEI - 6E	1		Circlip for ext diam 6 UNI 7475			
14	RR - 5141.3	1		Retic for mesh 1x1			
14	RR - 8065.3	1		Retic for mesh 2x2			
14	RR - 8066.3	1		Retic for mesh 3.6x3.6			
15	DFA - 0161	1		Seal 4" Clamp			
16	RR - 7076.0	1		Bottom trunk for single portion			
16	RR - 5159.0	1		Bottom trunk for truffle			
17	RR - 5139.0	1		Bottom trunk			
17	DFA - 0160	1		4" Clamp			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CHRUNCHED NUTS DISTRIBUTOR GROUP

TAVOLA
DRAWING
TABLE
TAV
BILD
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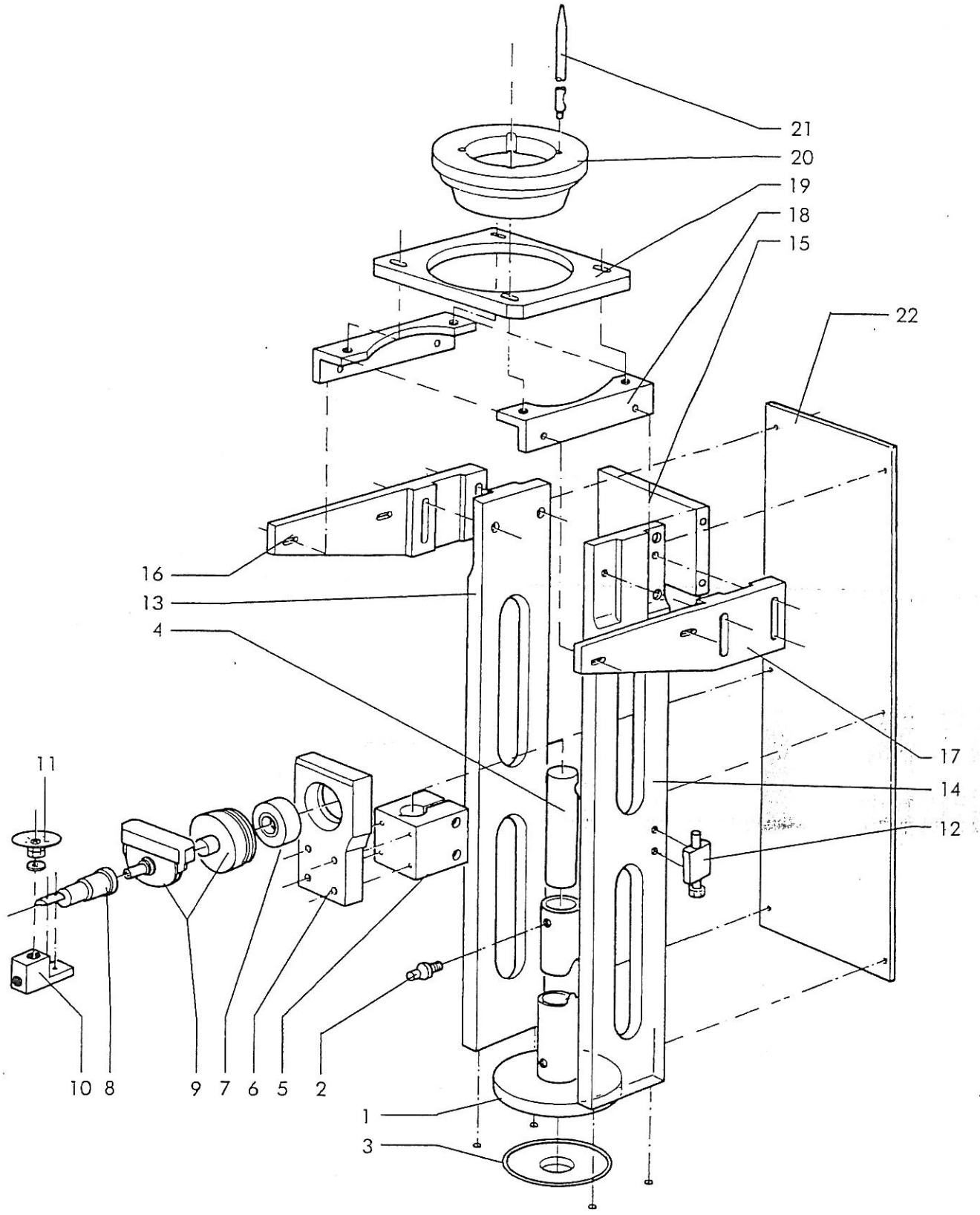
POS. *POS.* POS. *POS.* POS.	N° DISEGNO *N° DISEGNO* N° DISEGNO *N° DISEGNO* N° DISEGNO	QUANTITA' *QUANTITA'* QUANTITA' *QUANTITA'* QUANTITA'	Denominazione	*Denomination*	Dénomination	*Description*	Beshreibung
1	RR - 5458.3	1		Complete support column			
2	RR - 0101	1		O-ring OR 3350			
3	RR - 5951.0	1		Vibrator support			
4	RR - 0035	1		Vibrator type STO FTO Syntron			
5	RR - 0162	3		Anti-vibrat. rubber			
6	RR - 5947.3	1		Complete duct			
7	RR - 5949.0	2		Column for hopper			
8	RR - 5945.3/10	1		Hopper			
9	RR - 5950.0/10	1		Lid			
10	RR - 0172	1		Round knob			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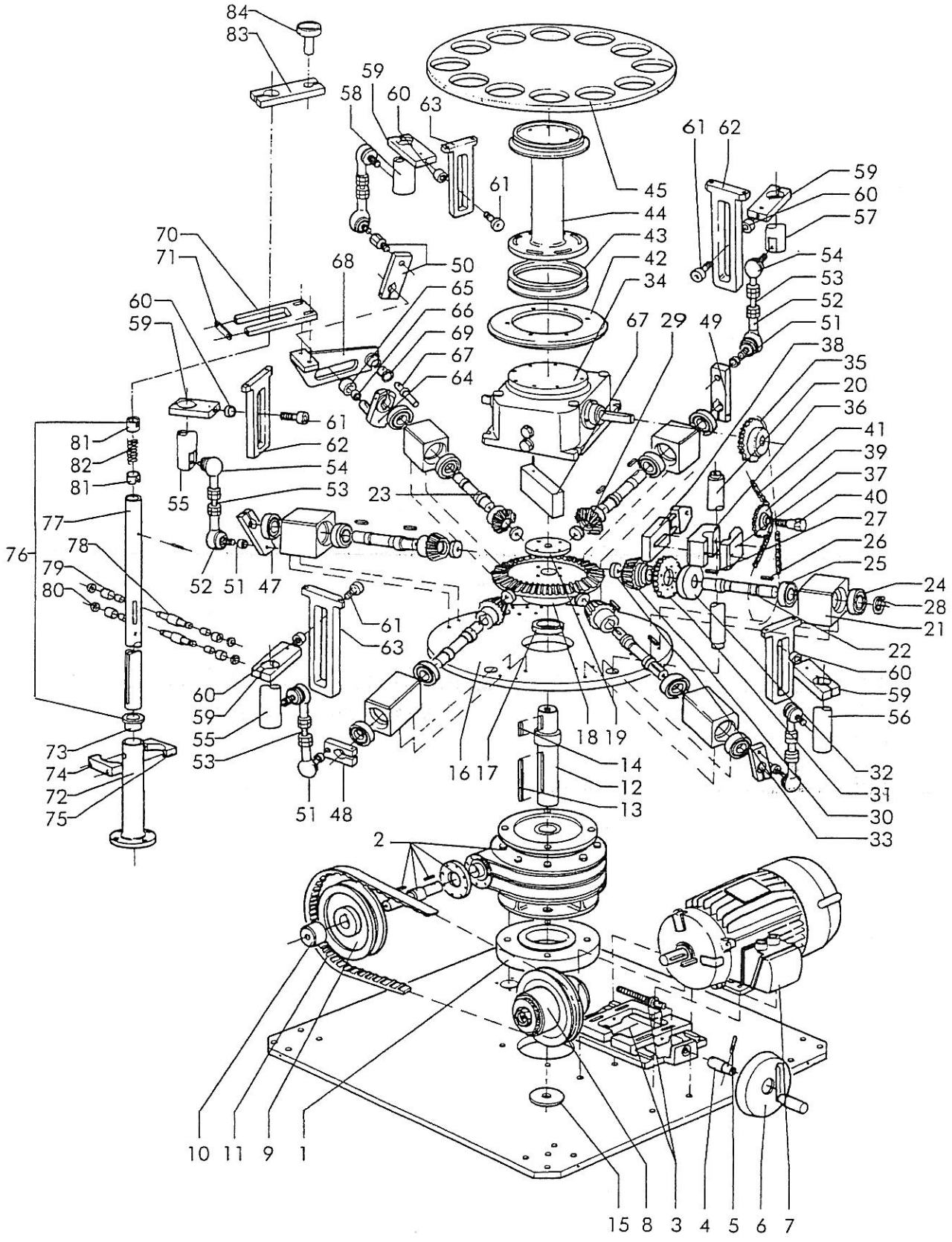
TRANSMISSION GROUP

TAVOLA
DRAWING
TABLE
TAV
BILD
2/2

POS. *POS.* POS. *POS.* POS.	N° DISEGNO *N° DISEGNO* N° DISEGNO *N° DISEGNO* N° DISEGNO	QUANTITA' *QUANTITA'* QUANTITA' *QUANTITA'* QUANTITA'	Denominazione	*Denomination*	Dénomination	*Description*	Beshreibung
20	RR - 5882.0	4		Support spacers			
21	RR - 5425.0/10	6		Pinion blocks			
22	RR - 5432.0	5		Pinion connect. shaft (Rotary model 3000)			
22	RR - 5431.0	5		Pinion connect. shaft (Rotary model 4000)			
23	RR - 6270.0	1		Extraction pinion shaft			
24	CS - 5635.6	6		Bearing ref. SKF 6205-2RS1			
25	CS - 5509.6	6		Bearing Ref. SKF 62205-2RS1			
26	CHI - 8x7x25	6		Tab a 8x7x25 UNI 6604			
27	CHI - 8x7x35	6		Tab A 8x7x35 UNI 6604			
28	SEEI - 24 E	6		Seeger for int diam 24 UNI 7435			
29	IG - 5554.0/10	5		Pinion			
30	IG - 5556.0/10	1		Reel holder pinion			
31	IG - 5464.0	1		Reel			
32	IG - 5802.0	1		Reel holder disk			
33	RR - 6135.0	6		Washer for pinion			
34	RV - 5532.6	1		Jogger rotat. table			
35	IG - 5465.0	1		Conduit pinion for jogger			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LID MAGAZINE GROUP

TAVOLA / DRAWING / TABLE / TAV / BILD: 11/1

POS. / POS. / POS. / POS. / POS.	N° DISEGNO / N° DISEGNO / N° DISEGNO / N° DISEGNO / N° DISEGNO	QUANTITA' / QUANTITA' / QUANTITA' / QUANTITA' / QUANTITA'	Denominazione	Denomination	Dénomination	Description	Beshreibung
1	CL - 5304.3/10	1		Complete guide column			
2	DFA - 0410.6	2		Straight greaser M6x1 UNI 7663			
3	RR - 0101	1		O-ring OR 3350			
4	CL - 5216.2/10	1		Entrainment shaft			
5	RR - 5185.0	1		Block			
6	RR - 6318.0/10	1		Cylinder support			
7	CS - 6167.6	1		Bearing SKF 6003-2RS1			
8	RR - 6319.0	1		Sucker rotation shaft			
9	CI - 6165.6	1		Rotating cylinder ref. Festo DSR -16			
10	RR - 6521.0/10	1		Sucker holder			
11	VN - 5372.6	1		Sucker VAS 30 - 1/8"			
11	VN - 6094.6	1		Sucker VAS 40 - 1/4"			
12	VN - 5371.6	1		CONVUM vacuum device			
13	RR - 4999.0/01	1		Right upright			
14	RR - 4998.0/01	1		Left upright			
15	RR - 4994.0	1		Connection plate			
16	RR - 4995.0	1		RH adjustment plate			
17	RR - 4996.0	1		LH adjustment plate			
18	RR - 4992.0	2		Support for plate			
19	RR - 4993 0	1		Plate for mould			
20		1		Mould to be selected on basis of tyupe of lid			
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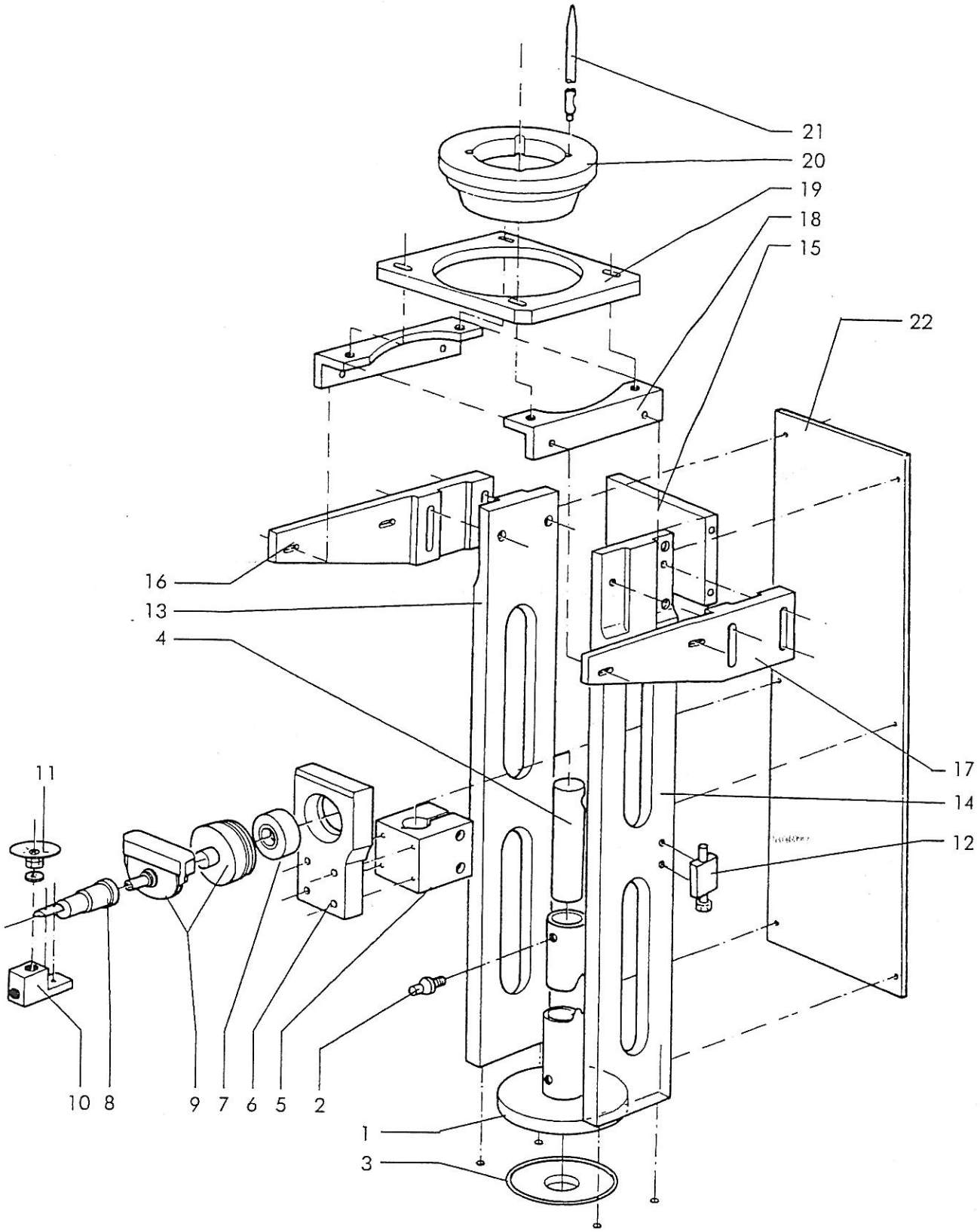
22	RR - 4979.0	4		Guide rod			
23	RR - 6554.0	1		Protection plate.pa			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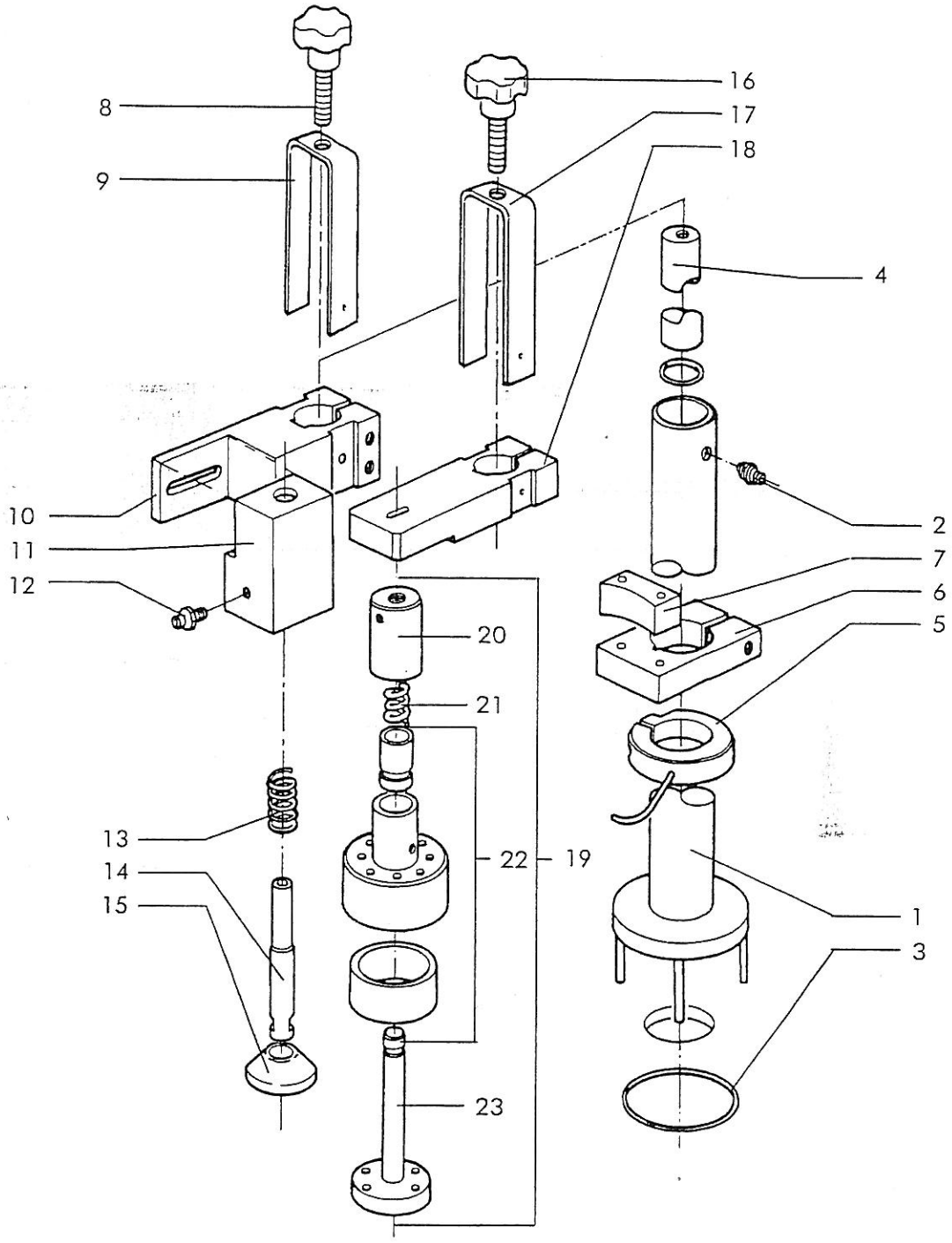
LID MAGAZINE GROUP

TAVOLA / DRAWING / TABLE / TAV / BILD 11/2

POS. / POS. / POS. / POS. / POS.	N° DISEGNO / N° DISEGNO / N° DISEGNO / N° DISEGNO / N° DISEGNO	QUANTITA' / QUANTITA' / QUANTITA' / QUANTITA' / QUANTITA'	Denominazione	Denomination	Dénomination	Description	Beshreibung
	NB FOR INCREASED LID LOADING THE FOLLOWING PIECES ARE MOUNTED						
16	RR - 6322.0	1		RH adjustment plate			
17	RR - 6323.0	1		LH adjustment plate			
18	RR - 6179.0	2		Support for plate			
19	RR - 6321.0	1		Plates for moulds			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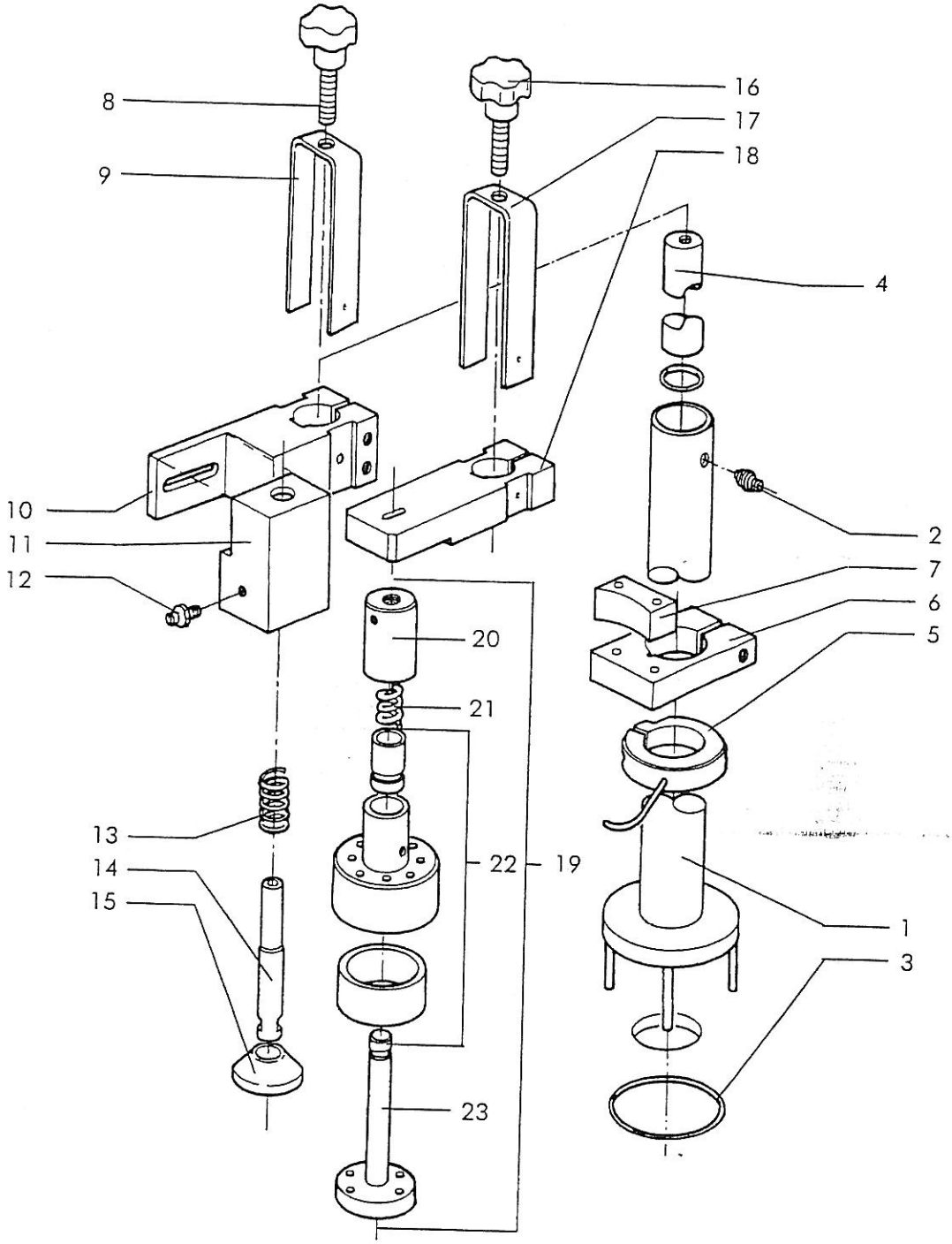
CALKING TOOL GROUP

TAVOLA
DRAWING
TABLE
TAV
BILD
12/1

POS. *POS.* POS. *POS.* POS.	N° DISEGNO *N° DISEGNO* N° DISEGNO *N° DISEGNO* N° DISEGNO	QUANTITA' *QUANTITA'* QUANTITA' *QUANTITA'* QUANTITA'	Denominazione	*Denomination*	Dénomination	*Description*	Beshreibung
1	CL - 5305.3/10	1		Complete guide column			
2	DFA - 0410.6	2		Straight greaser M6x1 UNI 7663			
3	RR - 0101	1		O-ring OR 3350			
4	CL - 6682.2	1		Entrainment shaft			
5	RR - 5666.2/10	1		Cone locking ring			
6	RR - 6684.0/10	1		Clamp for pad (Rotary model 3000)			
6	RR - 6633.0/10	1		Clamp for pad (Rotary model 4000)			
7	RR - 6634.0	1		Pad			
8	PC - 5865.3	1		Adjustment knob			
9	ED - 6066.0/10	1		Fork			
10	RR - 4951.0/10	1		Press group support			
11	RR - 4955.3/10	1		Complete press body			
12	DFA - 0410.6	1		Straight greaser M6x1 UNI 7663			
13	ML - 6247.6	1		Spring for body			
14	RR - 4953.0/01	1		Press shaft			
15		1		Lid press disk to be selected on basis of containers			
16	PC - 5865.3	1		Adjustment knob			
17	ED - 6066.0/10	1		Fork			
18	RR - 5827.0/10	1		Bevel support			
19	RR - 6072.4/20	1		Complete bevel for cone diam 65			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CALKING TOOL GROUP

TAVOLA
DRAWING
TABLE
TAV
BILD
12/2

POS. *POS.* POS. *POS.* POS.	N° DISEGNO *N° DISEGNO* N° DISEGNO *N° DISEGNO* N° DISEGNO	QUANTITA' *QUANTITA'* QUANTITA' *QUANTITA'* QUANTITA'	Denominazione	*Denomination*	Dénomination	*Description*	Beshreibung
20	RR - 6621.0	1		Cap			
21	ML - 6004.6	1		Spring			
22	RR - 5231.3/20	1		Complete press guide			
23	RR - 4927.0/10	1		Presser			
19	RR - 7142.4	1		Complete bevel for cone diam 72			
20	RR - 6621.0	1		Cap			
21	ML - 6004.6	1		Spring			
22	RR - 7140.3	1		Complete presser guide			
23	RR - 6622.0	1		Presser			

ROTARY 12 DIVISIONI

MACCHINA ROTARY 4000

N.° ORDINE

CLIENTE ALFRED

DATA 13/10/04

NOTE