Tetra Pak
Hoyer

18/11/99
M/191399

TO WHOM IT MAY CONCERN

EC DECLARATION OF CONFORMITY

(In accordance with EU Machinery Directive 89/392/UE, Annex II A)

By means of this document

TETRA PAK HOYER Spa
Via Monferrato 52
20098 San Giuliano Milanese
(Milano) Italia
hereby declares that the following machines:

COMET RC Filling machine
Serial number 9800874
Year of production 1999

have been designed and constructed in the form supplied by us in compliace with the Essential Health and Safety Requitements indicated in Annex I of the EU Machinery Directive 89/392/UE and relevant European standard
UNI EN 292/1 – 292/2 – 294 – 349 - 418
CEI EN 60204/1
DPR 777/82 – DIRECTIVE 76/893

GIUSEPPE NAPOLITANO
Managing Director

Tetra Pak Hoyer S.p.A.

We hope that the information contained in this manual will be of help to you. It is based on concrete data and on the best of our current knowledge.
Read the contents of this manual carefully, including warnings and recommendations.

Machine HOYER COMET RC "SQUEEZE UP TUBE"

Serial No.

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HOYER COMET RC

1 - MACHINE IDENTIFICATION DATA

Contents

1.1 Introduction

Thank you for buying a machine manufactured by Tetra Pak Hoyer.
We recommend you read this manual as it is essential for the installation, checking and maintenance operations required to keep your machine in perfect condition.

The manual contains tables, drawings and diagrams which will allow you to gain familiarity with all parts of the machine.

1.2 Identification plate

For maintenance and service operations not described in this manual, or for any other problems of a technical nature, our Service Department is at your complete disposal for information or to arrange for the necessary measures to be taken.
When contacting our Service Department, please quote the data given on the identification plate affixed to the machine and shown in Fig.1.1.

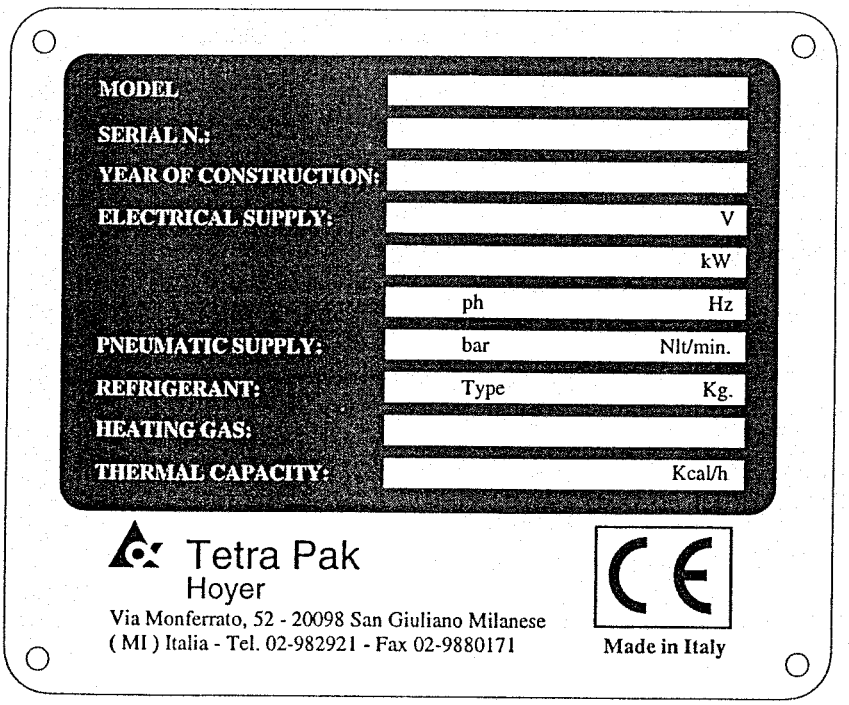

Fig.1.1 - Identification plate

1.3 Service Centres

If you have any requirement or problem that requires our assistance, please contact one of the following service centres, which are authorised to perform maintenance and technical service under warranty to Tetra Pak Hoyer machines.

EUMEA:

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Fax: +7 502 2242162

HOYER COMET RC

2 - GENERAL

Contents

2.1 Declaration of conformity

This machine has been manufactured in accordance with international standards and hygiene and sanitary legislation applicable to food machinery. In particular, Tetra Pak Hoyer certifies, through the Declaration of Conformity supplied together with the machine, that the **HOYER COMET RC (squeeze-up tubes)** production unit has been designed and manufactured in accordance with the provisions of Directive 89/392/CE (Machinery Directive) and in line with the above mentioned standards applicable to this Directive.

2.2 Preliminary points

- The illustrations and drawings showing the machine are intended for general reference only and are not necessarily accurate in every detail.
- The machine dimensions and specifications given in this manual are not binding and may change without advance warning.
- The drawings and all other documents provided as a part of this machine remain the property of Tetra Pak Hoyer and must not be passed on to third parties without the written permission of Tetra Pak Hoyer.
- The manual includes the instructions for all accessories mounted on the standard machine .
- **The machine is covered by warranty as laid down in the purchase contract. Any repair work not authorised by Tetra Pak Hoyer carried out during the warranty period will automatically invalidate the warranty.**

2.3 General safety rules

- THESE SAFETY RULES HAVE BEEN DRAWN UP IN YOUR INTEREST. Strict observance will reduce the risk of accident to yourself or to others.
- DO NOT attempt the move, install or operate the machine before reading and assimilating the contents of this manual. Ask your superior in case of doubt.
- Make sure that all the guards and safety covers are in position BEFORE starting the machine.
- NEVER leave tools, mechanical parts or other foreign materials on or inside the machine.
- If a malfunction occurs, press the emergency stop button.
- NEVER PLACE YOUR HANDS INSIDE THE MACHINE WHILE IT IS RUNNING.
- Proceed with the utmost care even when the main switch is in the OFF position as the power cables are still live.
- Turn off the air supply before disconnecting any pneumatic parts.
- Make sure that all guards and safety covers are correctly in place BEFORE restarting the production cycle subsequent to maintenance or repair operations.
- Proceed with caution at all times. Remember that you are responsible for your own safety and for that of your colleagues.
- Make sure that all the applicable regulations are observed when moving or lifting the machine.

2.4 Special warnings

- All personnel operating the machine must be familiar with the general safety rules and must observe them strictly. Failure to follow these rules may result in personal injury or damage to machine components.
- Maintenance work must be performed with the machine turned off. The main switch must be in the OFF position, the air valve closed and a "work in progress" sign affixed to the machine.
- The user must make sure that all the instructions given in this manual are strictly observed.
- Users will be solely responsible for risks caused by tampering with the safety system.
- The safety of other plant used together with this machine, unless supplied directly by Tetra Pak Hoyer, is the responsibility of the customer.
- The pressure, speed, temperature and voltage limits and all instructions given are indispensable for the correct operation of the machine and must always be complied with by the customer.
- Ambient conditions must be taken into consideration during installation.
- National legislation governing this type of machine must also be observed.

2.5 Ambient operating limits

The machine is able to operate within the following ambient limits:

- Temperature: from 4°C to 40°C
- Humidity : from 20% to 95%.

☞ **NOTE:**

Our company will accept no responsibility for damage or injury caused by failure to comply with the above warnings.

HOYER COMET RC

3 - DESCRIPTION OF THE MACHINE AND TECHNICAL DATA

Contents

3.1 Description of the machine

The Hoyer Comet RC rotary squeeze-up tube filler is designed and built to provide the dependability and safety required of machinery for the production of squeeze-up tube containers.

The Hoyer Comet RC rotary squeeze-up tube filler consists of a free-standing anodised aluminium and stainless steel structure on which the following components are mounted:

- in the lower part of the machine, mechanisms which command the rotation of the rotating table and the movement of the workstations;
- an ice cream bypass unit (*Pos. 1, Fig. 3.1*);
- a container feed unit (*Pos. 2, Fig. 3.1*);
- a dosing and filling unit (*Pos. 3, Fig. 3.1*);
- a lid pick-up unit (*Pos. 4, Fig. 3.1*);
- a lid sealing unit (*Pos. 5, Fig. 3.1*);
- a date stamping unit;
- an ejector unit (*Pos. 6, Fig. 3.1*).

A combination of mechanical and pneumatic movements is used to pick up an empty container from the magazine and put it in position in a slot on the rotating table. The table is jogged to bring the container into alignment with the operating units listed above, so that it can be filled, packaged and then ejected.

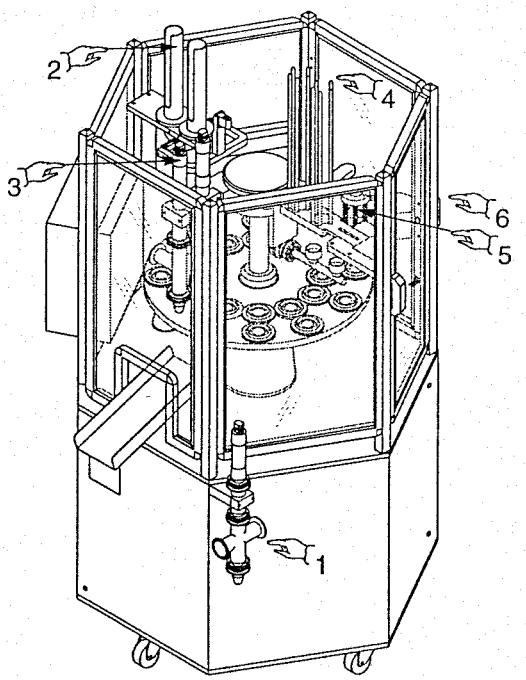

Fig. 3.1

3.2 Technical specifications

Motor: 0.75 kW

Resistance on first sealer: 0.5 kW

Resistance on second sealer: 0.5 kW

Accessories: 0,15 kW

Total installed power: 3.25 kW

Compressed air:
Total consumption 500 Nlt/min
Inlet pressure 6/7 bar
Connection diameter (inches): 1/2 "

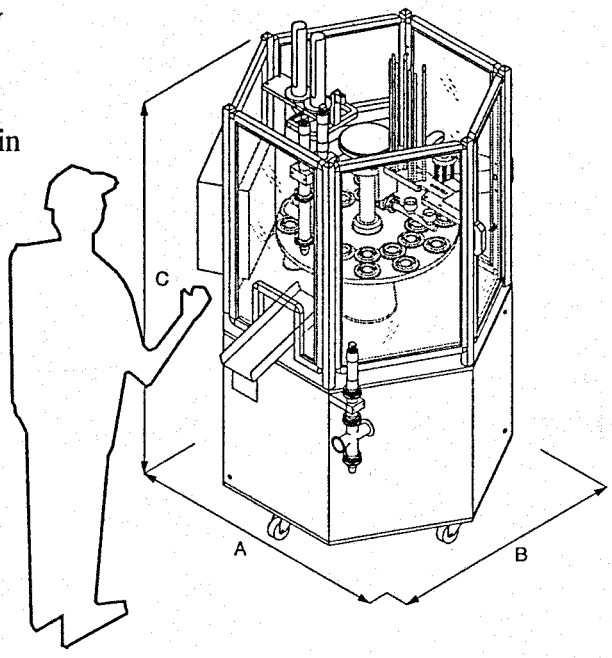

Fig. 3.2

Dimensions:
A (mm) 1050
B (mm) 1050
C (mm) 1800

Total weight: approx. Kg. 375

No. of operators 1

The position of the operator during operation is illustrated in Fig. 3.2.

Standard power supply: 380V/50 Hz

Noise level: 70.5 dBA

Equivalent Weighted Acoustic Pressure A at 1 metre: 70.5 dBA – leq (A)

Max. Instantaneous Weighted Acoustic Pressure C in the workplace: less than 130 dB/20uPa

Max. Instantaneous Non-Weighted Acoustic Pressure in the workplace: Less than 140 dB/20uPa

3.3 Control panel

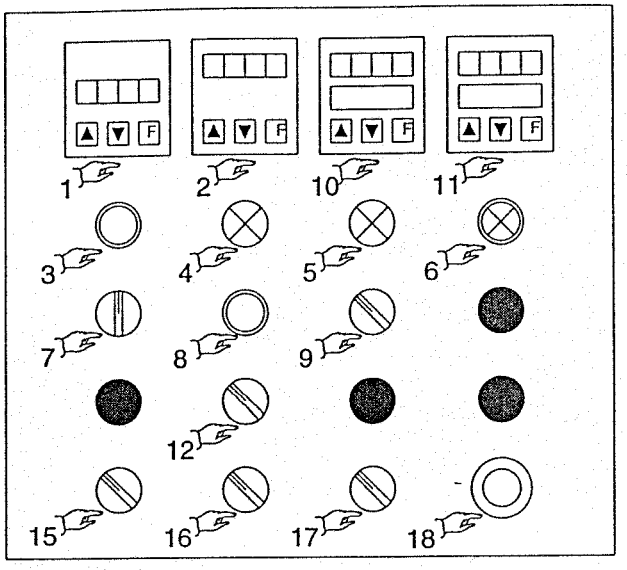

Fig.3.3

1 Stroke counter
2 Dosing time
3 Bypass on switch
4 Overload indicator light
5 No air supply indicator light
6 Reset button with light
7 Jog switch
8 Stop button
9 Tube feed switch
10 First sealer temperature selector
11 Second sealer temperature selector
12 Dosing switch
15 Lid feed switch
16 Date stamping switch
17 Sealer on switch
18 Emergency button

HOYER COMET RC

4 - INSTALLATION

Contents

4.1 Transporting packages

The simplest way to move the crate in which the Hoyer Comet RC filler is supplied is to use a pallet truck or lift truck. The crate should be deposited as close to the place of installation as possible.
All information required to identify the contents of the crate is marked on the outside of the crate:

- addresses of buyer and sender
- dimensions: length – width – height
- gross weight, net weight, tare
- packing list plate

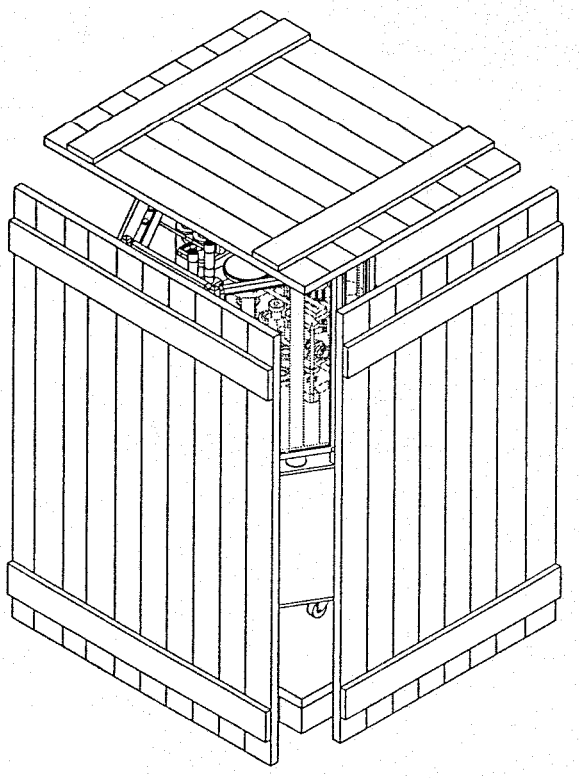

Fig. 4.1

4.2 Unpacking and delivery checks

When the crate has been positioned correctly, unpack as follows:

a. Remove the nails in the lid and remove it. Do the same thing with the side panels. Pay particular attention to the wooden spacer blocks located between the sides of the crate.
b. Remove the spare parts box and other components from the crate.
c. Remove the nails in the wooden blocks that hold the machine in place during transport and remove the cellophane sheet.
d. Check that the contents of the crate correspond to the description given in the shipping documents.
e. Check that all the covers and panels have been correctly fitted and that there are no loose parts.
f. Visually inspect all the electrical components to make sure that they are not damaged.
g. If any part/component is missing, stop unpacking and immediately notify Tetra Pak Hoyer.
h. If the machine has been damaged during transit, notify the insurance company immediately. Do not proceed with unpacking until you are authorised to do so.

4.3 Transport and installation

The machine is assembled on wheels (*Pos. 1, Fig. 4.3*) so that it is easy for the operator to push it into place.

a. Put the machine in position in the production area, checking that there is sufficient space to allow removal of the guards and ease of access to internal machine parts.
b. Check the data shown on the plate to make sure that the machine is compatible with the factory power supply (*Fig. 4.3*).
c. The machine's components are protected electrically against short circuits (with appropriate safety devices). Connect up the electrical cable down-line of a master switch with thermal overload cutout and ultrarapid fuses of adequate amperage or an automatic magnetothermal circuit breaker of adequate size.
d. Connect the compressed air supply to the manifold and check that the pressure reducer is set to 6 bar.

IMPORTANT:

Connections must be made only by skilled technicians familiar with accident prevention legislation.

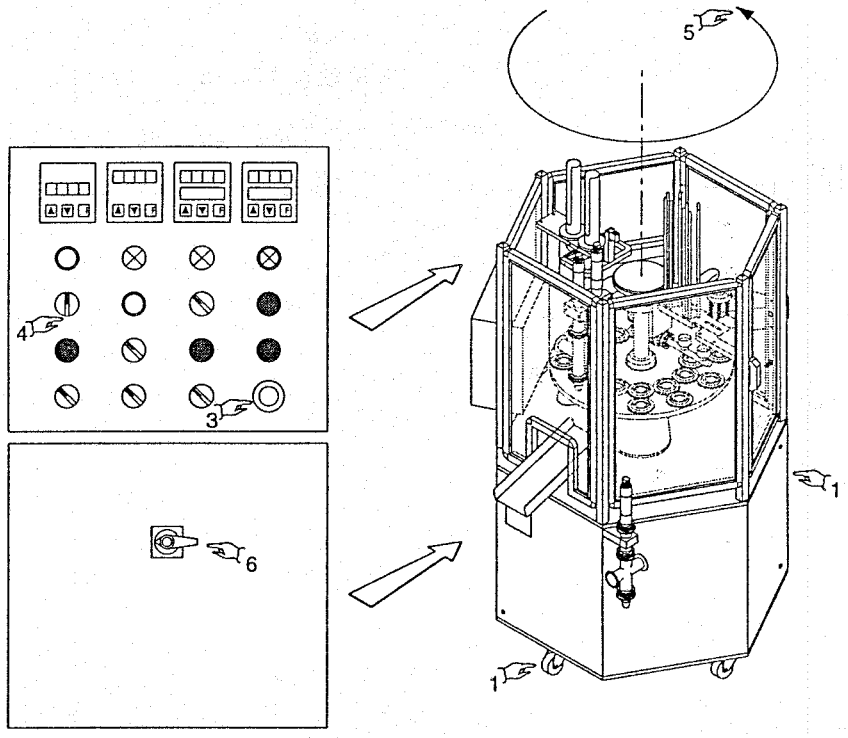

Fig. 4.2

4.3 Functional checks

Before starting up the machine, perform the following control procedures:

a. Check that the emergency button is released (*Pos. 3, Fig. 4.2*).
b. Turn on the main power switch (*Pos. 6, Fig. 4.2*).
c. Turn the switch (*Pos. 4, Fig. 4.2*) to start the motor. Check that the table turns in the correct direction (*Pos. 5, Fig. 4.2*). If not, invert the phases.

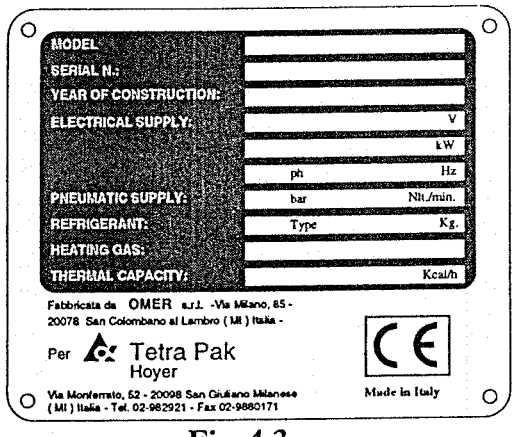

Fig. 4.3

HOYER COMET RC

5 - ADJUSTMENT PROCEDURES AND PRODUCT CHANGEOVER

Contents

5.2.5 Lid sealing station adjustment

The sealing head is fixed to the raise/lower slide. It can be centred over the lid by loosening the screw (*Part. 1, Fig. 5.5*); tighten the screw again when finished.
Adjustment is important for correct sealing.
Controls on the operator control panel (*Pos. 10-11, Fig. 5.8*) may be used to adjust the temperature of the sealing head (press "F" and then press + to increase temperature or – to decrease it).

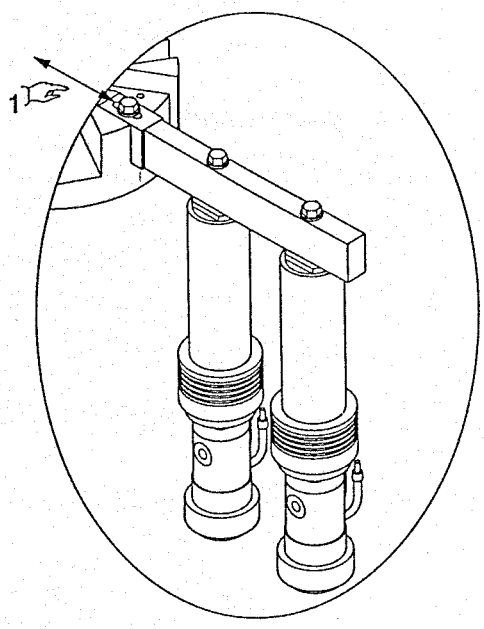

Fig. 5.5

5.2.6 Stamping station adjustment

The stamp is fixed to the raise/lower slide.
It can be centred over the lid by loosening the screws (*Part. 1/2, Fig. 5.6*); tighten the screws again when finished.
Adjustment is important for correct stamping.

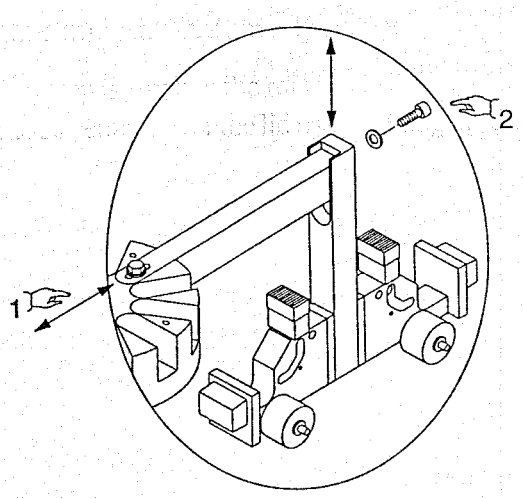

Fig. 5.6

5.2.7 Ejector station adjustment

Adjust the positions of the ejector bends (*Part. 2, Fig. 5.7*) and the chute so that the squeeze-up tubes do not interfere with these parts when they are ejected.
The angle of the ejector bends (*Part. 2, Fig. 5.7*) can be adjusted by slackening the fixing screw and correcting the positioning of the container on the chute.
To adjust the height of the ejection shaft, loosen the screws that fasten it to the block (*Part. 1, Fig. 5.7*), remembering to tighten them afterwards.

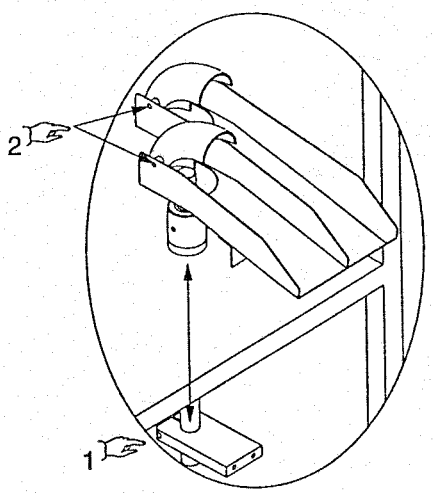

Fig. 5.7

5.2.8 Settings on the control panel

a. Adjusting temperature of sealing heads. Check that the emergency push button (*Part. 18, Fig. 5.8*) is released. Turn the main switch to the ON position and set the desired sealing head temperature using the digital thermostats (*Part. 10-11, Fig. 5.8*).

b. Set the dosing time using the appropriate control (*Part. 2, Fig. 5.8*).

c. Set the desired production using the appropriate control (*Part. 1 Fig. 5.8*).

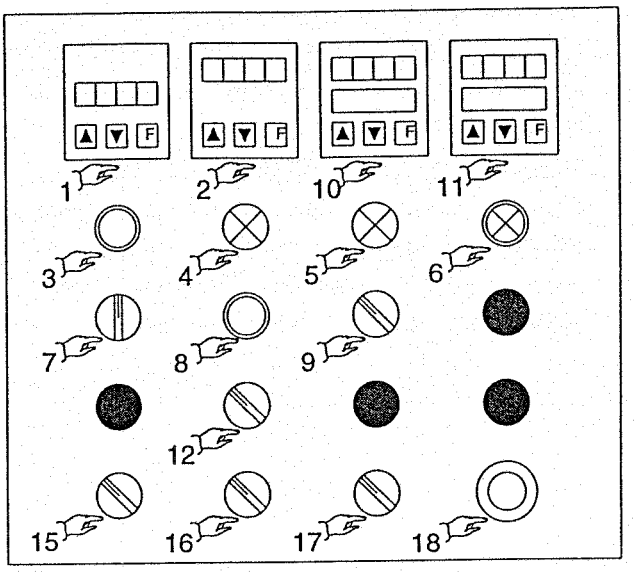

Fig. 5.8

5.2.9 Mechanical and pneumatic settings

a. Container magazine: Adjust dowel and tighten lock nut.

b. Intervention time of pneumatic mechanisms:
- Open lower guard.
- Adjust cams (*Part. 2, Fig. 5.9*) which activate pneumatic valves, rotating them anticlockwise (*Part. 3, Fig. 5.9*) to anticipate intervention start or clockwise to delay it.

c. Number of cycles per minute: Adjust outer flywheel.

d. Air pressure:
- Open lower guard.
- Adjust gearmotor/filter knob.

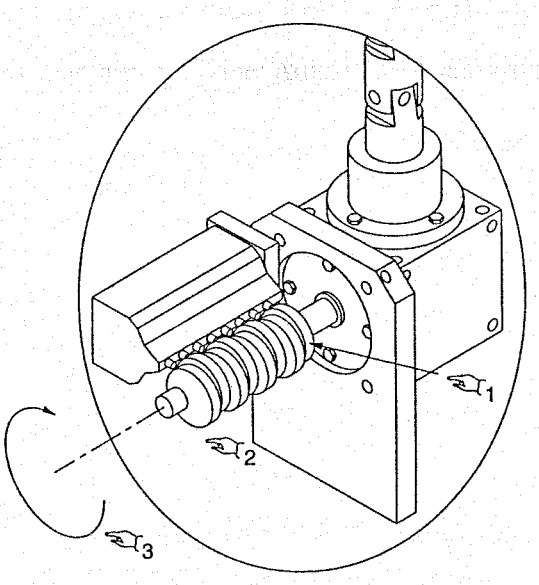

Fig. 5.9

Cam identification:

1. Container feed (*Part. 1, Fig. 5.9*)
2. Dosing
3. Lower lids
4. Upper lids
5. Date stamp

HOYER COMET RC

6 - OPERATING PROCEDURES

Contents

6.1 Preliminary checks

Before starting up the machine, check that:

a. All panels (*Part. 1, Fig. 6.1*) and guards (*Part. 2, Fig. 6.1*) on the machine are fixed securely in place.

b. The machine has been thoroughly washed and cleaned. Cleaning and washing procedures are described in **CHAPTER 7 – CLEANING AND MAINTENANCE.**

c. The electric power supply cable has been connected up properly.

d. The compressed air supply is correct and the pressure reducer housed in the pneumatic panel is set to 6 bar.

e. The emergency stop button (*Part. 3, Fig. 6.1*) is disengaged.

f. The mobile panels have been closed properly.

g. Connect the bypass valves (*Part. 4, Fig. 6.1*) to the freezers.

6.2 Start-up

The start-up procedure is as follows:

a. Switch on the electric power supply to the machine by turning the main switch (*Part. 5, Fig. 6.1*) to "ON".

b. Turn off the container feed unit using the switch (*Part. 6, Fig. 6.1*).

c. Turn off the lid pick-up unit using the switch (*Part. 7, Fig. 6.1*).

d. Put containers in the feed magazine (*Part. 8, Fig. 6.1*).

e. Put lids in the lid magazine (*Part. 13, Fig. 6.1*)

f. Place an appropriate container underneath the ejector chute (*Part. 9, Fig. 6.1*).

g. Start feeding ice cream mix from the freezer and wait until the ice cream coming from the bypass (*Part. 4, Fig. 6.1*) is of the required consistency.

h. Press the "START" button (*Part. 10, Fig. 6.1*) and turn on the doser switch (*Part. 11, Fig. 6.1*), checking that the right quantity of product is dosed.

i. Turn on the container feed unit with the switch (*Part. 6, Fig. 6.1*).

j. Turn on the lid pick-up unit with the sleeve valve (*Part. 7, Fig. 6.1*).

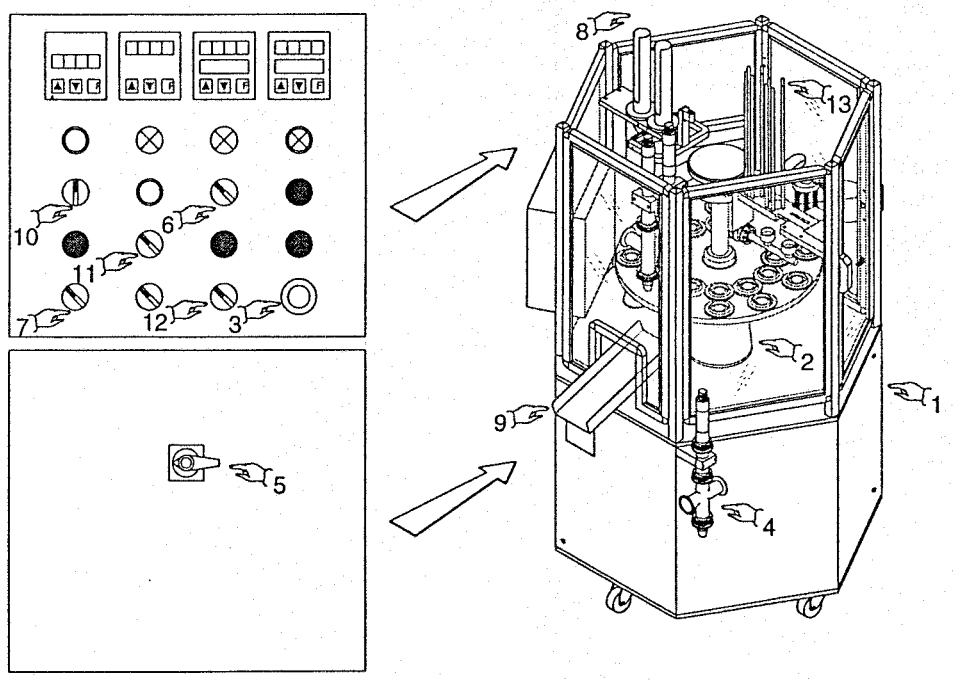

Fig. 6.1

6.3 Emergency stop

In the event of malfunctioning of any component, press the emergency button (*Part. 3, Fig. 6.1*) to turn off all the machine's electrical functions.
To prepare the machine for use again, first eliminate the cause of the malfunction, then turn the emergency button (*Part. 3, Fig. 6.1*) anticlockwise and release it and press the reset button on the control panel.

6.4 Fine tuning and adjustment

Refer to chapter 5
– ADJUSTMENT PROCEDURES.

6.5 End of production

Press the STOP button and the machine will stop.
Cleaning and washing procedures are described in chapter 7 – **CLEANING AND MAINTENANCE.**

6.6 Product changeover (to container of different size)

Product changeover requires the following operations:

- It may be necessary to adjust the position of screws which hold containers in place in the magazine (*Part. 8, Fig. 6.1*).
- Adjustment of cams commanding pneumatic valves. Release the cams using the tools provided and adjust them so that timing will be correct, then lock the cams in place by tightening the ring nuts using the tools provided.
- Adjustment of the machine as described in Chapter 5 – **ADJUSTMENT PROCEDURES.**

HOYER COMET RC

7 - CLEANING AND MAINTENANCE

Contents

7.1 Washing procedure

7.1.1 Washing the outside of the machine

Before washing the machine, make sure that the main switch is turned to OFF.

The procedure for washing the filling machine is as follows:

a. Prewash with hot water (50°C).
b. Detergent wash. Use a foaming alkaline detergent or gel detergent which is a powerful fat emulsifier in a concentration of 2% to 10%, depending on how dirty the machine is and on the hardness of the water supply.
c. Rinse with water. Wait 10 minutes and then rinse thoroughly to remove the dirt emulsified by the detergent.
d. Disinfectant wash. Use an appropriate disinfectant diluted in water, in a concentration of 1 – 1.2%. It should remain in contact for at least 15 – 20 minutes.
e. Rinse with water.
f. Descaling wash. Use an acidic descaler with low viscosity containing a mixture of wetting agents and emulsifiers in a concentration of 2% to 3%. It should remain in contact for at least 15 – 20 minutes.
g. Rinse with water

IMPORTANT:

Do not use water under high pressure.

Recommended products

Detergent	Disinfectant	Descaler
SU928(DiverseyLever)	P3-topax99(60°)(HenkelEcolab)	P3-topax52(50/60°)(HenkelEcolab)
SU616(DiverseyLever)		
P3-topax17(60°)(HenkelEcolab)		

7.2 Regular maintenance

7.2.1 Beginning of the season

- Wash machine thoroughly as described in section **7.1.1 – Washing the outside of the machine**
- dismantle dosers and pipes, wash and disinfect thoroughly;
- check the condition of the seals, and replace if necessary;
- lubricate seals;
  material required: vaseline oil
- check that the emergency button is working correctly;
- inspect the machine and tighten any screws that may have come loose;
- check that there is no leakage at connection points;
- check the functioning of all moving parts, and replace if necessary;
- check that the cams which command the pneumatic valves are locked in position.

7.2.2 Daily

- Wash the machine at the end of production as described in section **7.1.1 – Washing the outside of the machine**, points **a, b, c, d** and **e.**
- dismantle dosers and pipes, wash and disinfect thoroughly;
  material required: water – detergent – disinfectant
- lubricate seals, dry components and lubricate them with neutral vaseline before reassembling them.
  material required: vaseline oil

7.2.3 Every 15 days

- Wash the machine at the end of production as described in section **7.1.1 – Washing the outside of the machine**, carrying out the procedures described in points **a, b, c, f, g, d,** and **e** in this order.
- Dismantle the dosers, and wash and disinfect them thoroughly.
  material required: water – detergent – disinfectant
- Lubricate seals, dry all components and lubricate with neutral vaseline before reassembling them.
  material required: vaseline oil
- Check that the pneumatic connections are working properly.

7.2.4 End of the season

- Wash and dry all components, then lubricate them (especially the seals) with vaseline oil and reassemble them.
  materials required: water – detergent – disinfectant - vaseline oil
- Check the condition of electrical resistances.

7.3 Mix doser maintenance

Periodically check the efficiency of the dosers.
Proceed as follows:

1 - Shut off the compressed air supply;
2 - Slacken the screws holding the doser retaining bar;
3 - Remove the doser;
4 - Dismantle the doser:
- unscrew the bottom ring nut *(Pos. 1, Fig. 7.1)*;
- open the clamp joining the lower and upper parts *(Pos. 2, Fig. 7.1)*;
- extract the doser piston shaft *(Pos. 3, Fig. 7.1)*.

With the doser dismantled, check the efficiency of the O-rings *(Pos. 4-5, Fig. 7.1)* on the stem.
If they are worn, ice cream mix will leak from the top of the doser.

5 - Wash using the recommended products shown in the table and reassemble.

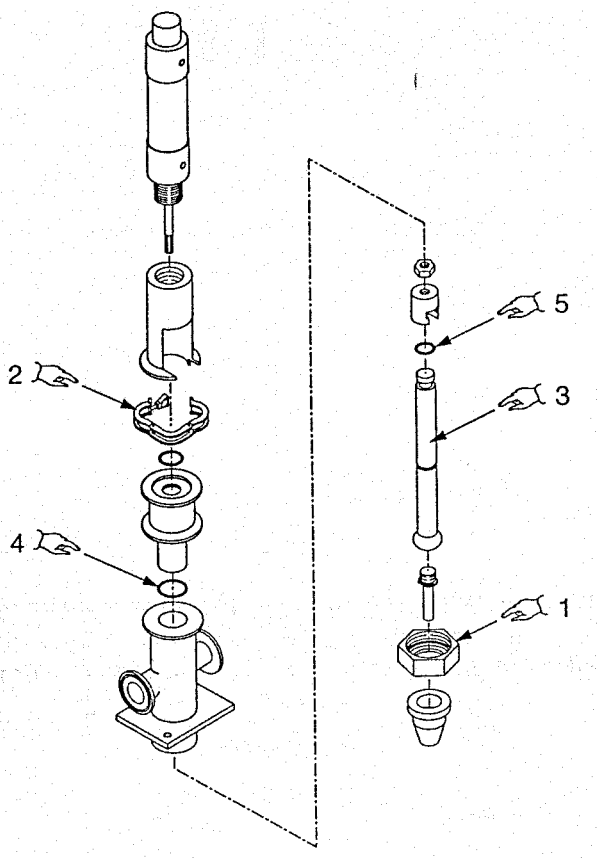

Fig. 7.1

7.4 Maintenance of the electrical system

The electrical system is designed and built to provide filler components with the greatest possible protection.
If the thermal is tripped again shortly after the machine is restarted, this indicates that the problem or short circuit is still in effect and that it will be necessary to inspect the electrical system or lock up mechanical components.

7.5 Maintenance of the pneumatic system

The procedure for maintenance of the pneumatic system involves:
- Checking the condition of the pneumatic valves;
- Inspecting the pneumatic cams;
- Inspecting connections;
- Inspecting the reducer filter unit;
- Inspecting the pressure switch;
- Inspecting the cylinders

HOYER COMET RC

8 - TROUBLESHOOTING

Contents

8.1 Troubleshooting

Problem	Probable cause	Remedy
The machine does not start.	• No electric power.	• Check that the machine is plugged in. • Main switch is faulty.
The stations are not working.	• No compressed air.	• Check slider valve. • Check pressure switch setting. • Check for leakage of air from pneumatic system.
The cycle is interrupted.	• Overload.	• Check magnetothermal switch.
The containers do not go down	• Magazine has not been set up correctly.	• Check magazine settings.
	• The pins do not gasp the squeeze up tube.	• Check pin limit switches and adjust position if necessary. • Move cylinders by hand and check that the pins grasp the container.
Containers do not descend.	• Pins do not grip squeeze-up tube.	• Adjust head position.
Container is not sealed properly.	• Sealer head is not in correct position. • Resistance temperature is incorrect.	• Adjust temperature. • Check that the temperature probe on each of the sealer heads is working properly.

HOYER COMET RC

9 - SPARE PARTS

Contents

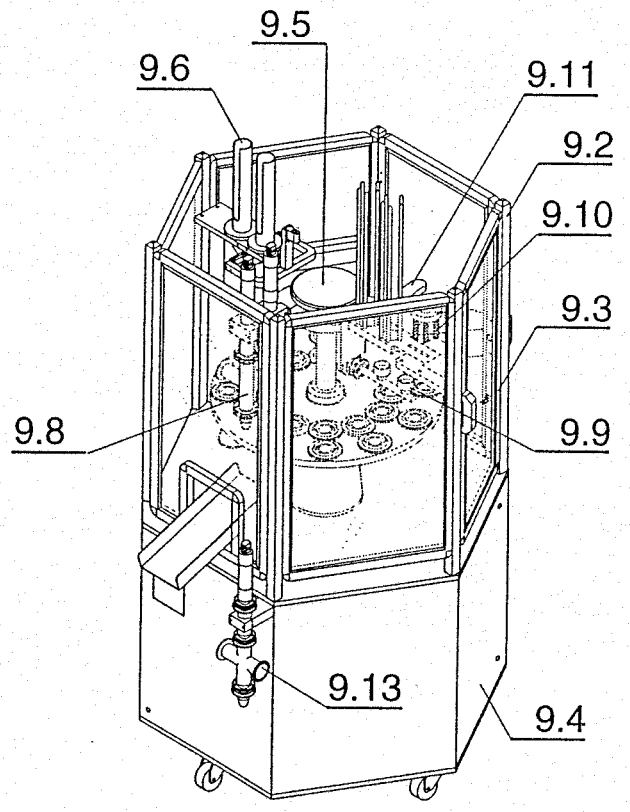

Fig. 9.1 - General layout

Structure - Fig. 9.2

Pos.	Code	Description	Q.ty
1	120420301	Rotary steel structure	1
2	R445002080	Wheel	4
3	12040360	Product ejector chute	1

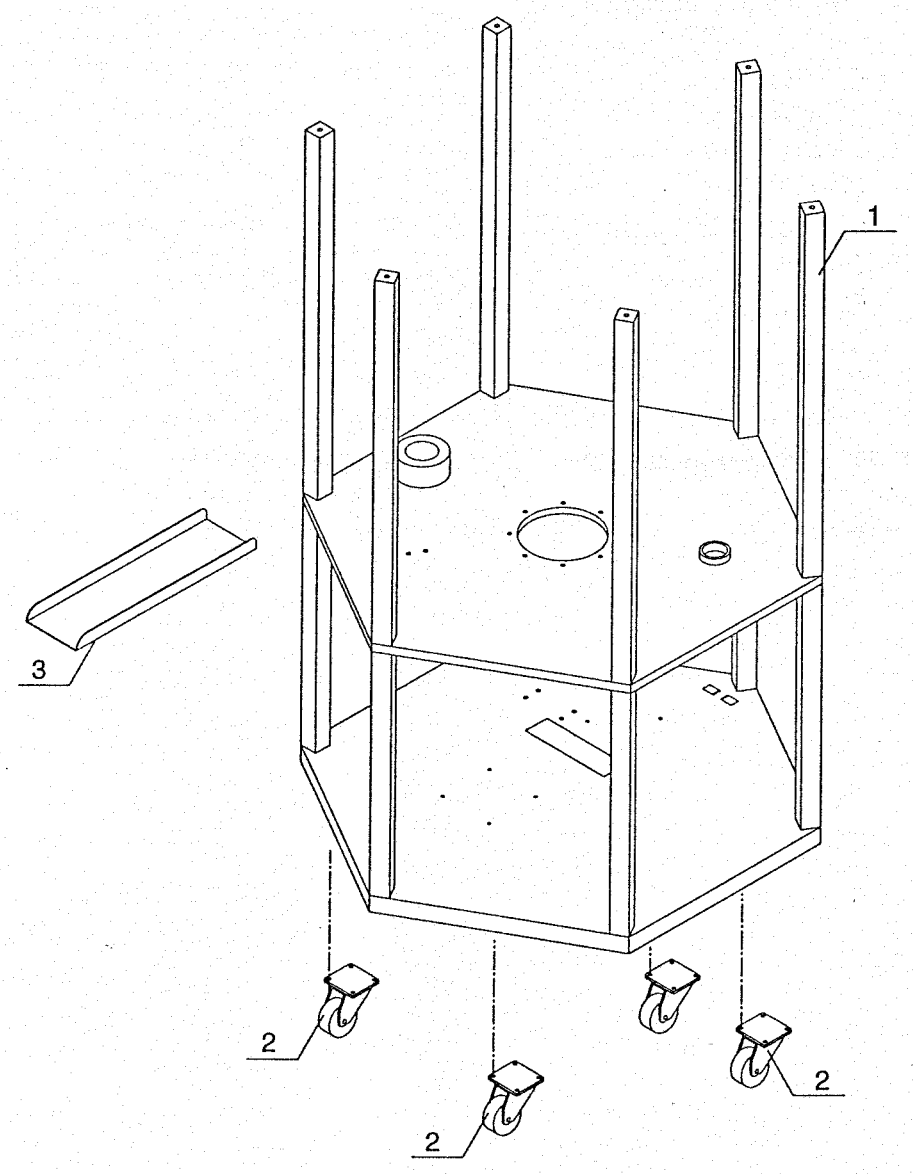

Fig.9.2 - STRUCTURE

Covers - Fig. 9.3

Pos.	Code	Description	Q.ty
1	12042098	Panel	3
2		Handle	3
3	12040303	Electrical control panel	1
4	12004718	Square	2
5	12040425	Square	8
6	12042097	Ejector panel	1
7	12042096	Granule panel	1
8	12042094	Control cabinet panel	1
9	12040302	Cover	1
10	12040304	Cover	1
11	12040305	Cover	1
12	12040307	Cover	3
13	17040043	Hinge	8
14	12040308	Electric power panel	1

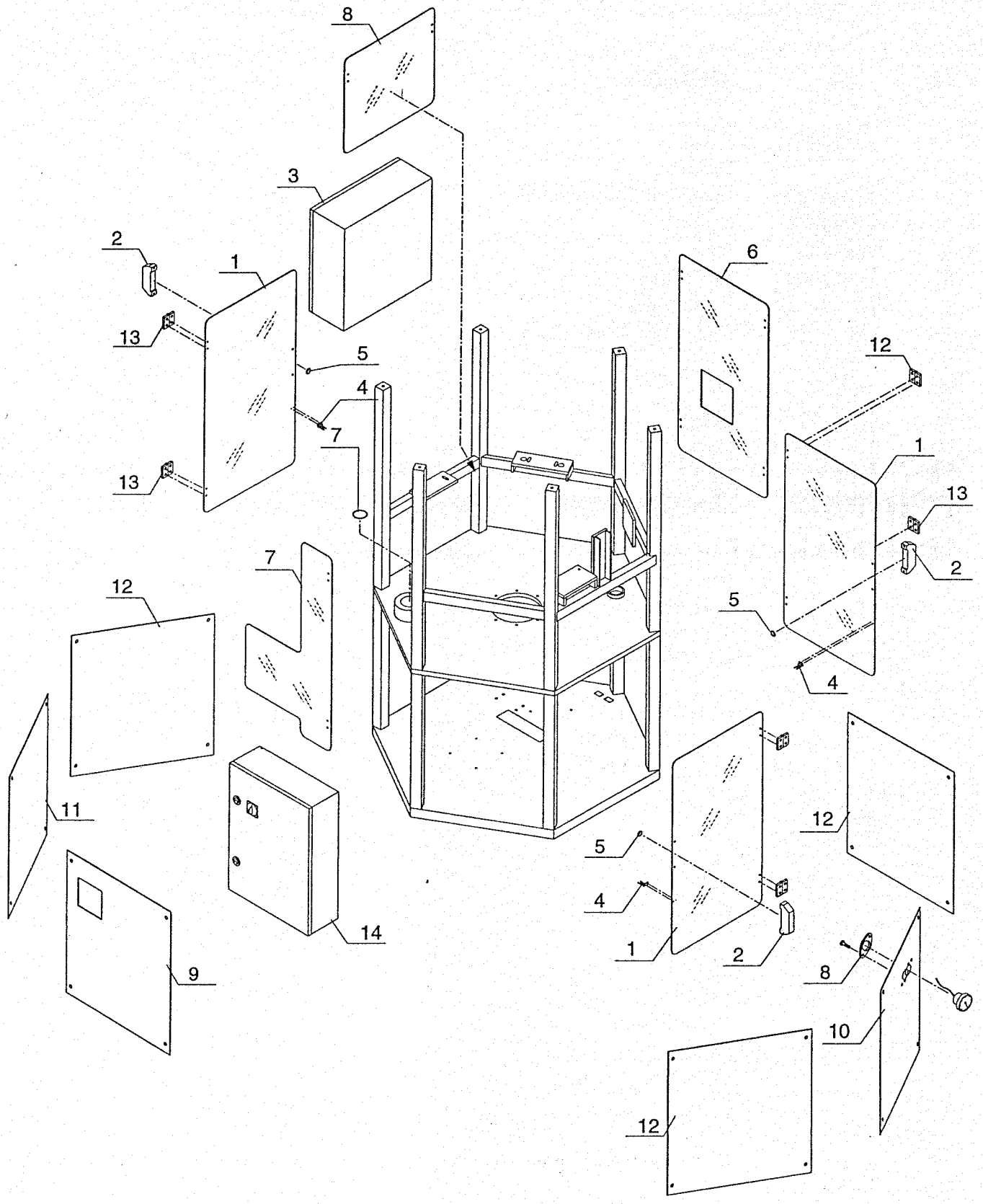

Fig.9.3 - COVERS

Motor drive - Fig. 9.4

Pos.	Code	Description	Q.ty
1	12040310	Crankshaft	1
2	336005845	Locking bushing	1
3	12040402	Universal joint	1
4	12040311	Return support	2
5	33601226	Hollow shaft return	1
6	326013075	6x20 key	1
7	12040320	Central anti-revolution shaft	1
8	12040339	Lower bearing support	1
9	12040313	Spacer	2
10	12040325	Upper bearing support	1
11	336007056	Koyo UCF 206 support	2
12	336001423	Bearing	2
13	336071185	Oil guard	1
14	336071156	Oil guard	1
15	326019025	25e circlip	1
16	12040314	Lever support	1
17	12040404	Lever	1
18	336008105	Idle pin	1
19	336078027	Right female coupling	2
20	336050012	Right M12 nut	1
21	12040346	Tie rod	1
22	12040346	Left nut	2
23	336078028	Left female coupling	1
24	336078039	Left male coupling	1
25	12040351	Tie rod	1
26	336078054	Right female coupling	1
27	12040316	Driven shaft	1
28	326013085	Key	2
29	326013132	Key	1
30	326013130	Key	2
31	12040018	Eccentric	1
32	12040019	Adjustment flange	1
33	170040012	Reduction gear	1
34	12040404	Spacer	2
35	17040013	Speed change gear	1
36	12040413	Flywheel shaft	1
37	12040434	Flywheel	1
38		Motor (depends on voltage)	1
39	17040034	Programmer	1
40	12040825	Cam	12
41	17040042	Idle pin	1
42	17040035	Maltese cross crank	1

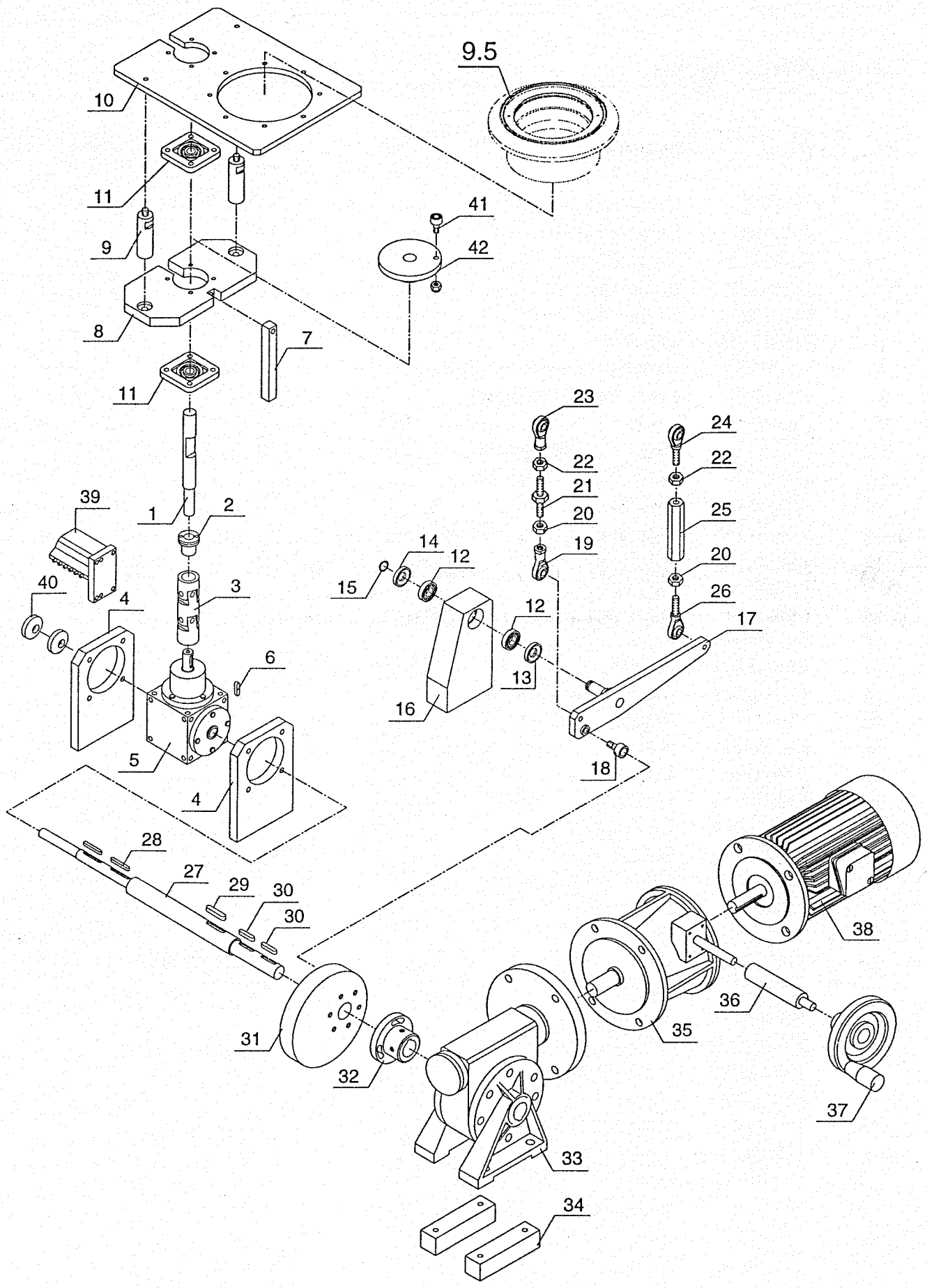

Fig.9.4 - MOTOR DRIVE

Motor drive - Fig. 9.5

Pos.	Code	Description	Q.ty
1	12040326	Station support closing plate	1
2	336066034	O-ring seal	1
3	12040327	Station support plate	1
4	336005808	Brass	2
5	12042036	Slotted disk	1
6	17040010	Keyer	1
7	12042036	Slotted disk	1
8	12040331	Central disk support column	1
9	336071971	Seal ring	1
10	12040837	Spacer	1
11	12040833	Spacer	1
12	12040334	Central bearing support	1
13	336001400	Bearing	2
14	336066204	Seal	1
15	12040335	Maltese cross	1
16	12040336	Vertical shaft for central movement	1
17	12040322	Central shaft bolt	1
18	12040337	Central shaft rotation lock	1
19	326024213	Pin	24
20	336001345	Bearing	2
21	326019008	Circlip	2
22	12040338	Pin	1
23	326019150	150i circlip	1
26	336069702	40-50-7 scraper ring	2

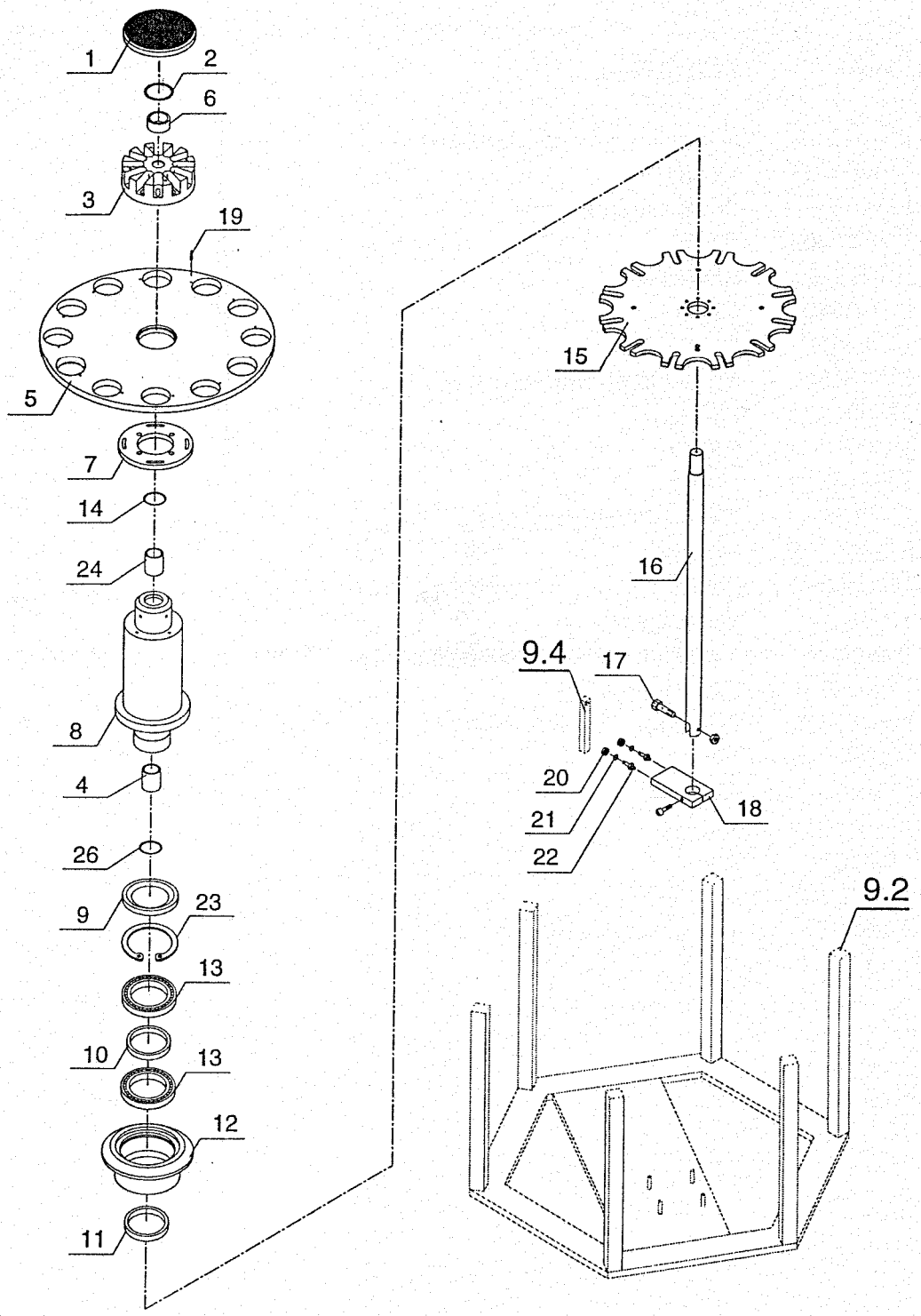

Fig.9.5 - VERTICAL DRIVE

"Squeeze-up tube" container pick-up – Fig. 9.6

Pos.	Code	Description	Q.ty
1	12040369	Magazine	2
2	12040370	Container magazine plate	1
3	12040371	Plate	4
4	12040372	Support	2
5		Cylinder	2
6	12040373	Support base	1
7		Lid guide	8
8	12040375	Cylinder support	1
9	12040313	Support	1

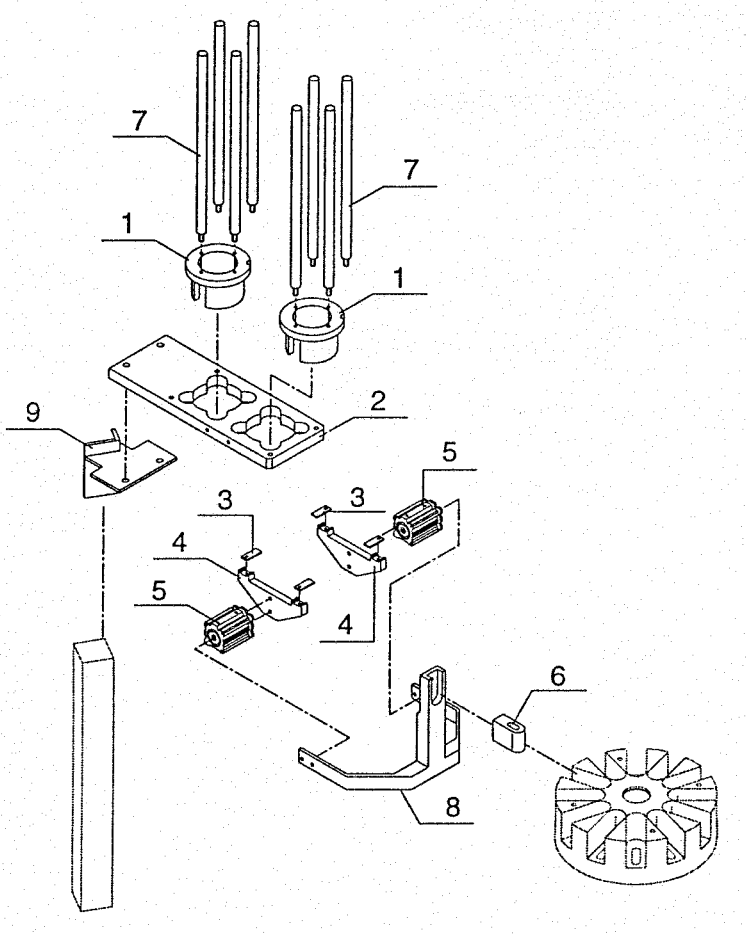

Fig.9.6 - "SQUEEZE-UP TUBE" CONTAINER PICK-UP

Gauge - Fig. 9.7

Pos.	Code	Description	Q.ty
1	540302006	Bushing	2
2	12042032	Support	1
3	D-FM0606	Spring	2
4	FM0605	Tie rod	2
5		Gauge (depending on format)	2
6		Plate	1

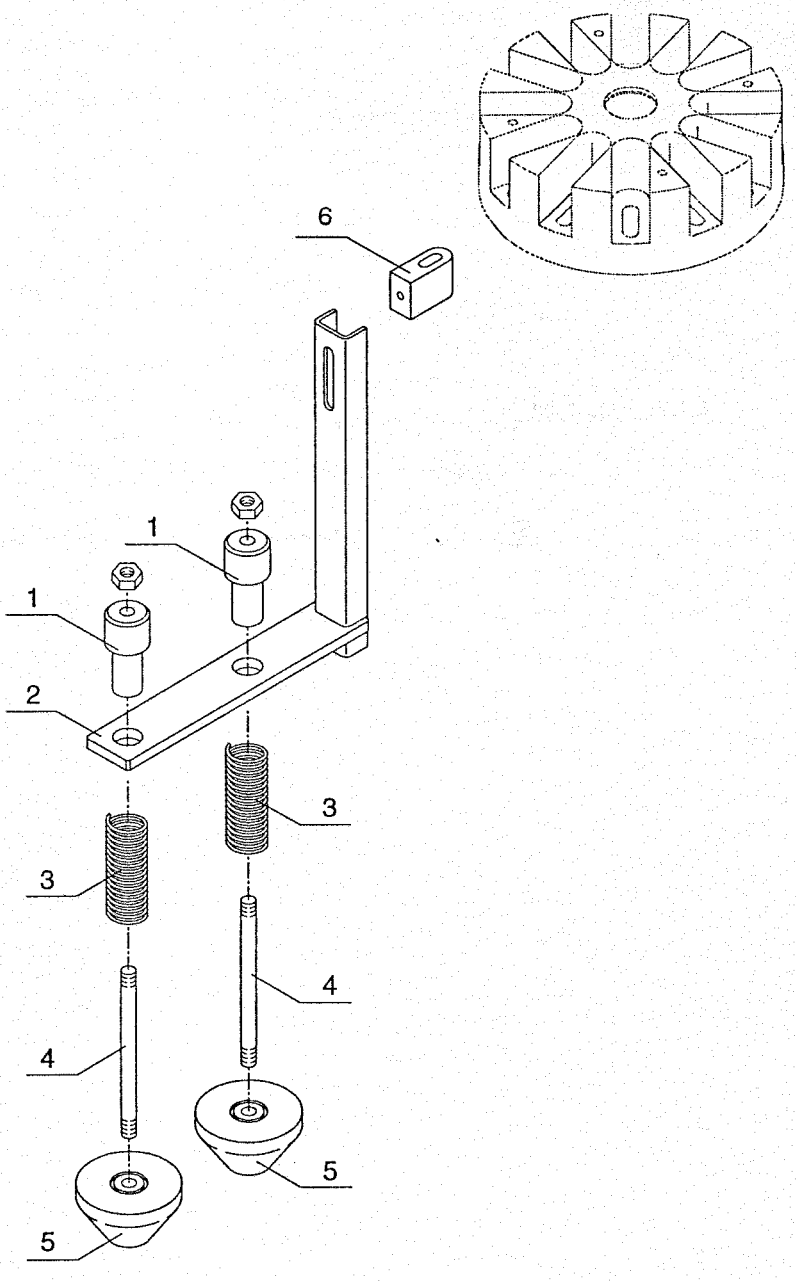

Fig.9.7 - GAUGE

Dosers - Fig. 9.8

Pos.	Code	Description	Q.ty
1	C425000001	Cylinder	2
2	12040354	Pneumatic piston connection joint	2
3	12040344	Pneumatic piston connection	2
4	A460000005	1½" clamp	4
5	G450000004	Clamp seal	4
6	12040356	Doser support	1
7	12040357	Doser body	2
8	G450600001	O-ring seal	4
9	12040358	Doser piston	2
10	12040359	Squeeze-up tube nozzle	2
11	12040360	Product recovery chute	2
12	G450000020	DN20 seal	2
13	12040361	Chute support	1

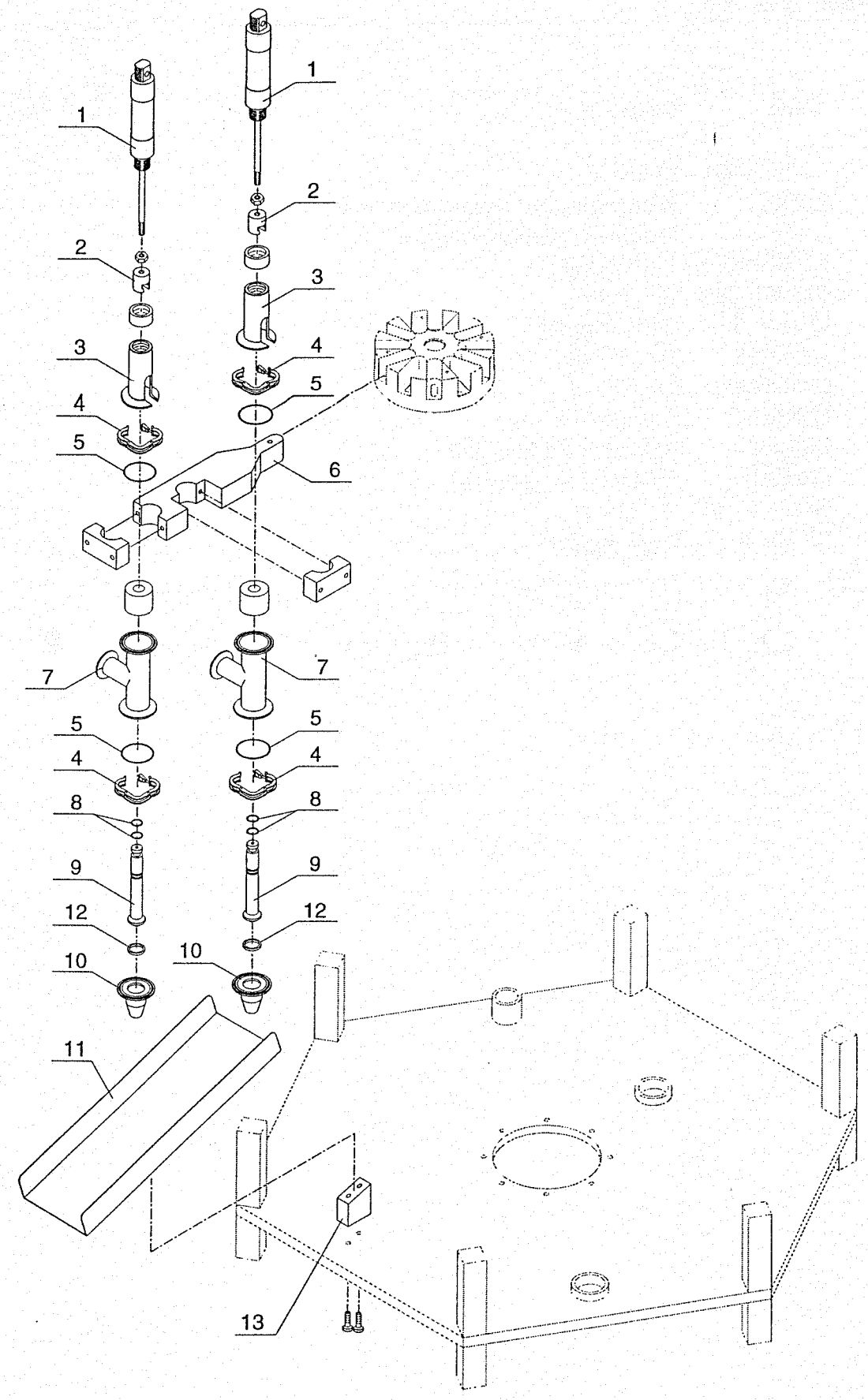

Fig.9.8 - DOSERS

Lid pick-up - Fig. 9.9

Pos.	Code	Description	Q.ty
1	12040340	Product guide rods	10
2	12040341	Suction cup support	2
3	12040342	Squeeze-up tube lid plate	1
4	12040343	Manifold shaft	1
5	12040344	Upper lid plate	1
6	333001007	Rotating cylinder	1
7	12040401	Cylinder support	1
8		Support plate	1
9	12040312	Support	1
10		Suction cup (depending on format)	2

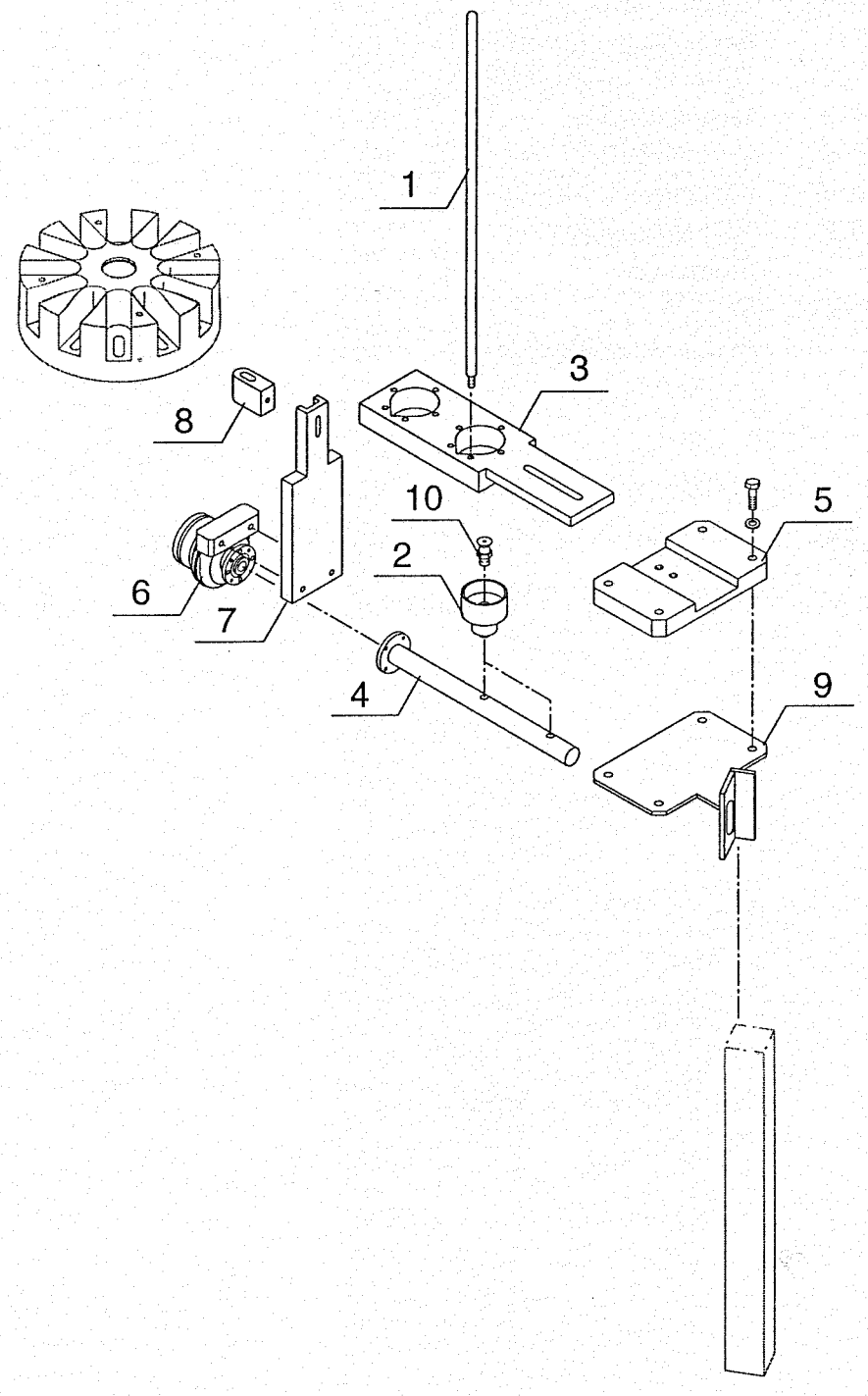

Fig.9.9 - LID PICK-UP

Lid sealer - Fig. 9.10

Pos.	Code	Description	Q.ty
1	120400985	Sealing head support	2
2	12042118	Threaded cap	2
3	12042116	Sliding pin	2
4	12042117	Guiding brass	2
5	12042115	Sleeve	2
6		Spring	2
7	12042113	Finned head	2
8	12042119	Insulation	2
9	12040367	Sleeve	2
10	01PO0026	Sealing unit	2
11	12040984	Sealing cap	2

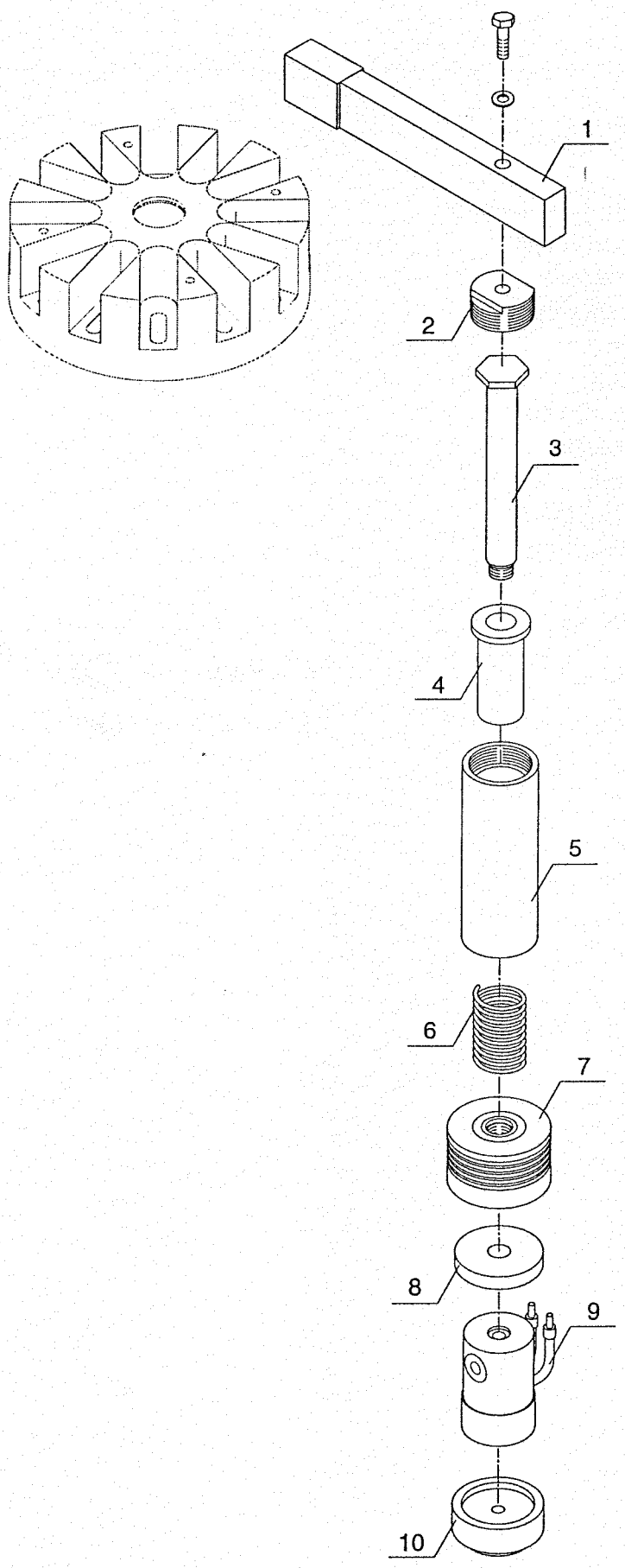

Fig.9.10 - LID SEALER

Date stamp - Fig. 9.11

Pos.	Code	Description	Q.ty
1	12040394	Stamp support plate	1
2	12040395	Stamp fastening plate	1
3-4	336090211	Stamp	2

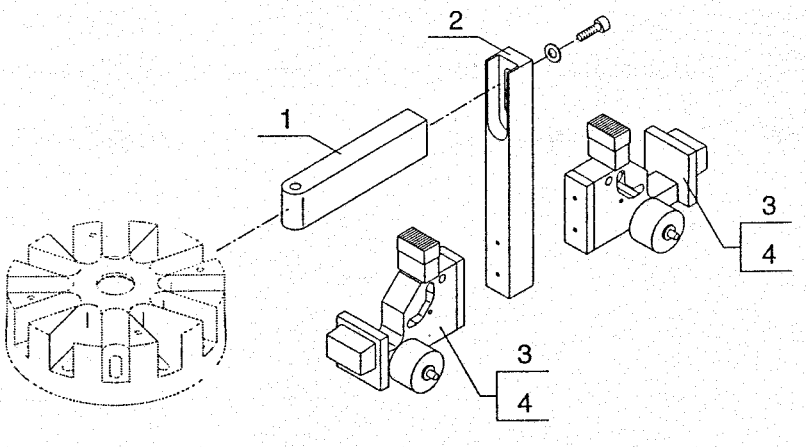

Fig.9.11 - DATE STAMP

Ejector - Fig. 9.12

Pos.	Code	Description	Q.ty
1	12040376	Pusher	1
2	336069740	Scraper	2
3		Sleeve support plate	1
4	336005804	Brass	2
5	326015095	Lubricator	2
6	12040377	Feed and extraction guide column	1
7	12040338	Pin	1
8	336003980	Ring nut	1
9	12040379	Extraction shaft	1
10	12040380	Internal row contrast	1
11	12040381	Ejector chute	1
12	12040382	Ejector chute support	1
13	12040383	Chute fastening rod	1
14	12040384	Pusher	1
15	12040385	Pusher support plate	1
16	12040386	External row contrast	1
17	12040387	Anti-rotation bar	1
18	12040388	Ejector shaft anti-rotation	1
19	336001345	Bearing	1
20	326019008	8E circlip	2

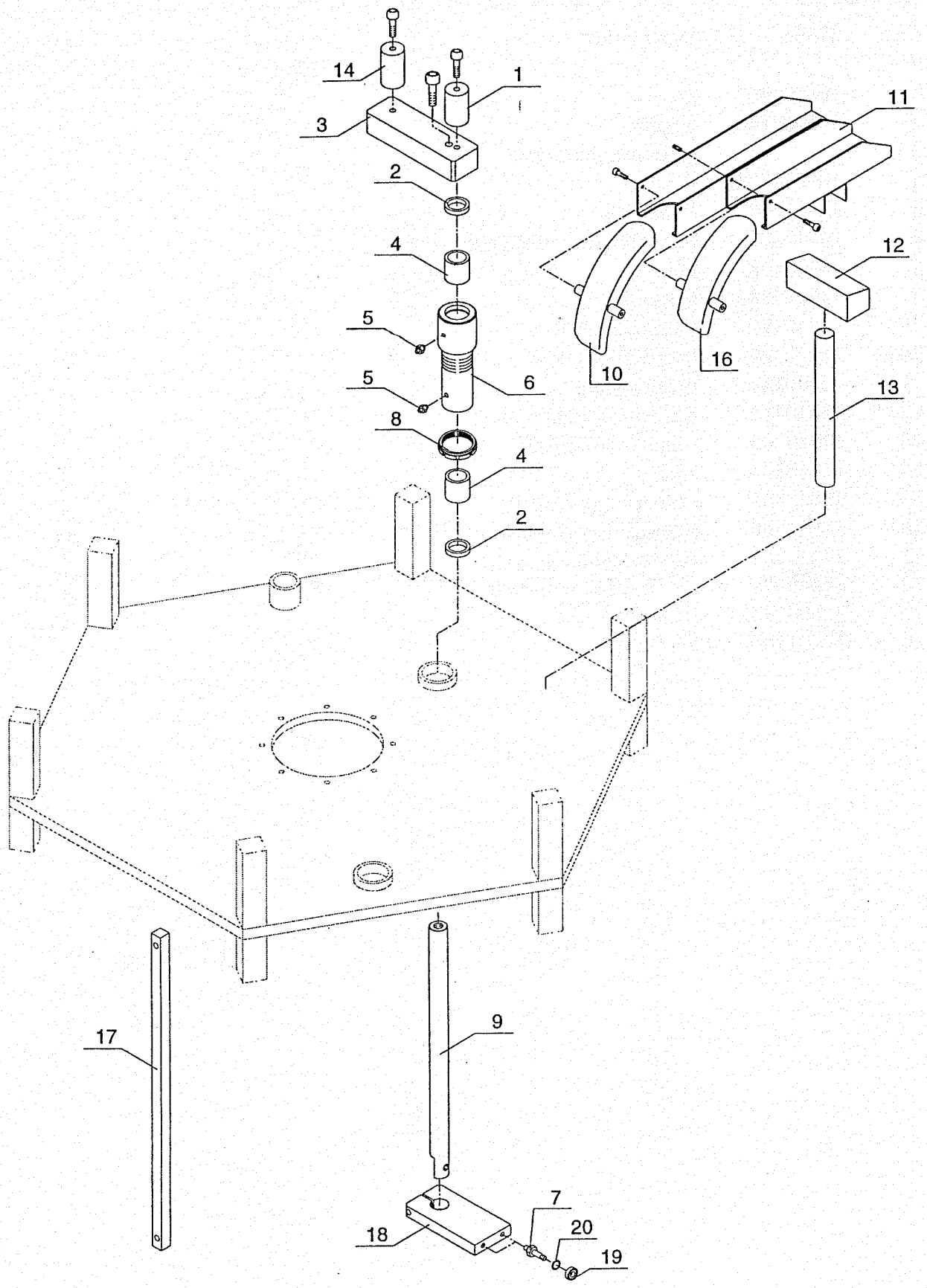

Fig.9.12 - EJECTOR

Bypass - Fig. 9.13

Pos.	Code	Description	Q.ty
1	17000010	Cylinder	1
2	016060218	1½" clamp connection	2
3	018020581	Clamp seal	2
4	12040389	Bypass valve body	1
5	12040390	Bypass valve support	1+1
6	12040391	Bypass nozzle	1
7	12040027	Doser piston connection joint	1
8	336067036	O-ring seal	2
9	12040392	Bypass piston	1
10	12040393	Pneumatic piston connection	1
11	016920222	Hose connection	1
12	016060222	Curve	1
13	3018020575	1" clamp seal	3
14	016060218	1½" clamp	3
15		Y-union	1
16	542320023	Flow regulator and balancer	2
17	336067308	121 O-ring seal	4
18	542320029	Balancer lock nut	2
19	542320022	Balance tap body	2
20	018060961	Stainless steel hose clip	2
21	016070483	Rubber hose	2

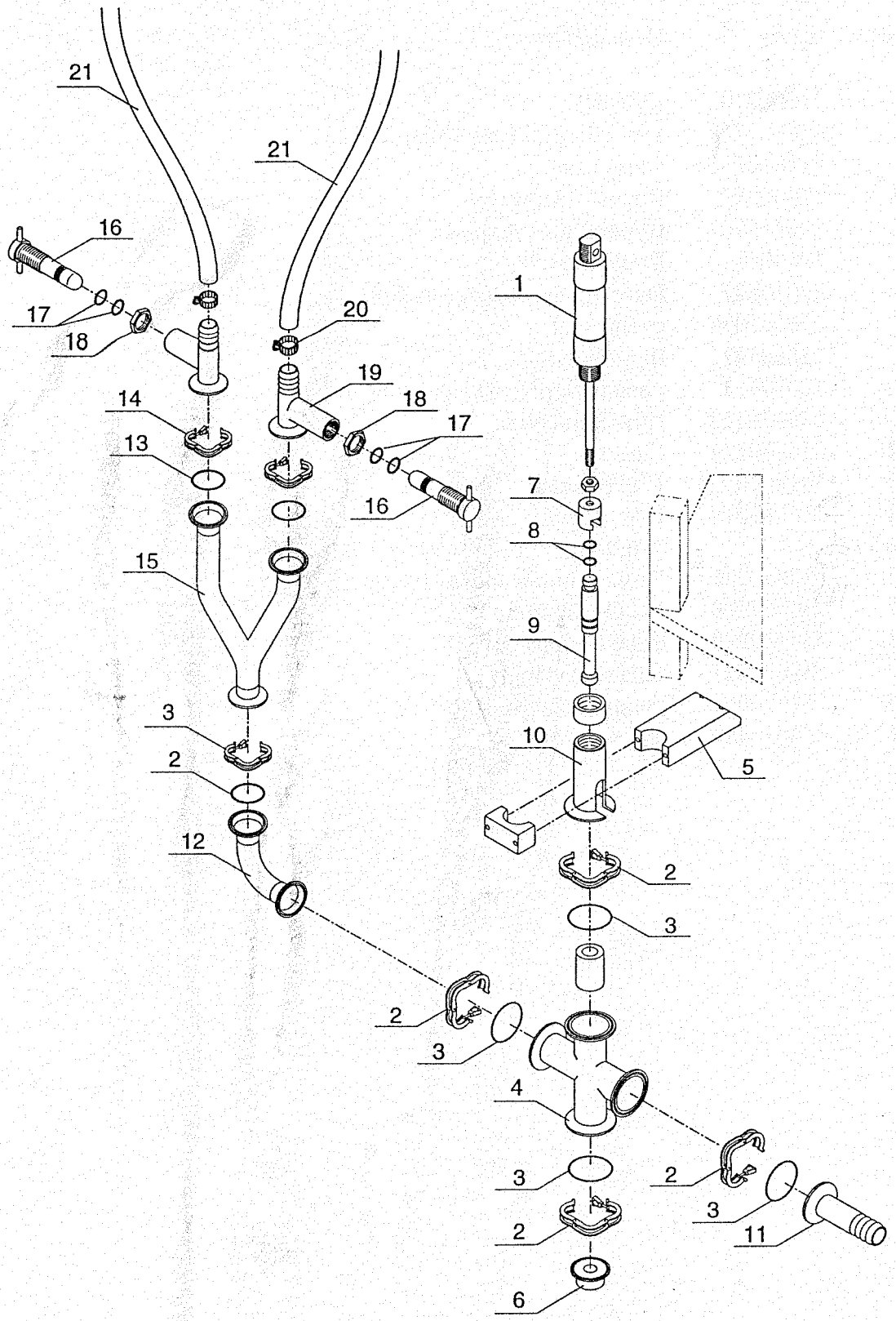

Fig.9.13 - BYPASS