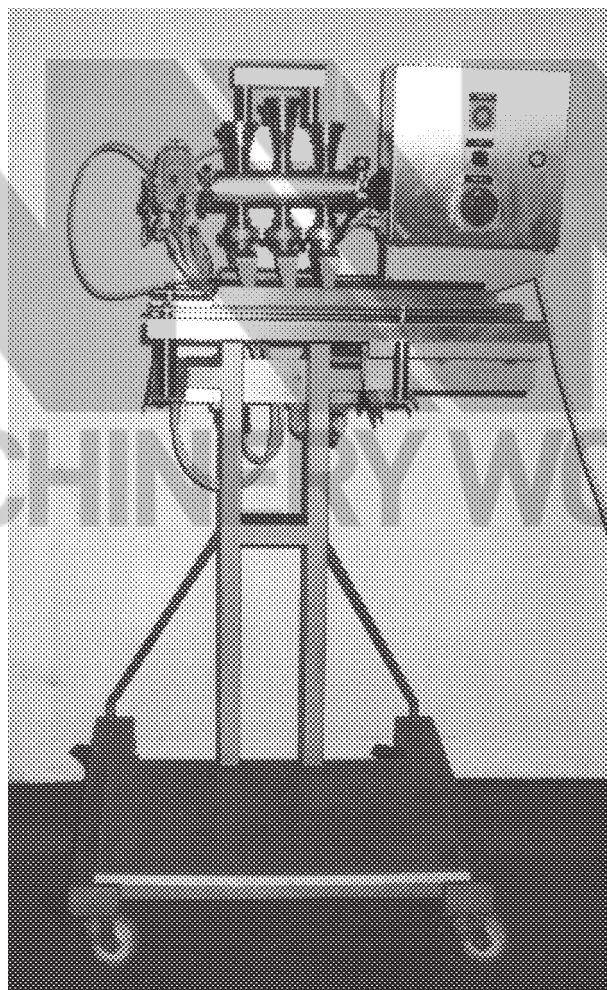


# **FILLER FOR BULK**

## **OPERATION MANUAL AND SPARE PARTS CATALOGUE**



We hope that the information contained in this manual will be of help to you. It is based on concrete data and is correct to the best of our current knowledge.

Read the contents of this manual carefully, including the warnings and recommendations. Also read the sales conditions, including those that govern the warranty.

No part of this manual may be reproduced or transmitted to third parties without prior written permission from Tetra Laval Food Hoyer.

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# CHAPTER 1

## MACHINE IDENTIFICATION DATA

### 1.1 INTRODUCTION

Thank you for choosing a machine manufactured by Tetra Pak S.p.A.

We recommend you read this manual carefully as it is indispensable for the installation, checking and maintenance operations required to keep your machine in perfect working order.

The machine contains tables, drawings and layouts which will help you familiarise yourself with all parts of the machine.


We will be pleased to receive your suggestions should you find that any explanation has been omitted or is not exhaustive. We will take them into the greatest consideration in an effort to improve the manual.


### 1.2 IDENTIFICATION PLATE

For maintenance and overhaul operations not covered by this manual and for all technical problems, our Service Department is at your complete disposal to provide information and to coordinate the necessary action.

When calling our Service Department, please quote the data shown on the identification plate affixed to the machine and shown in Fig. 1.1.

MODEL	
SERIAL N.:	
YEAR OF CONSTRUCTION:	
ELECTRICAL SUPPLY:	V
	kW
	ph Hz
PNEUMATIC SUPPLY:	bar Nlt/min.
REFRIGERANT:	Type Kg.
HEATING GAS:	
THERMAL CAPACITY:	Kcal/h

 Tetra Pak  
Hoyer  
Via Monferrato, 52 - 20098 San Giuliano Milanese  
( MI ) Italia - Tel. 02-982921 - Fax 02-9880171

 Made in Italy

**Fig. 1.1 - Identification Plate**

## 1.3 SERVICE CENTRES

For any need or problem requiring our help, please contact one of the following centres authorised to carry out technical assistance under warranty or maintenance to machines manufactured by Tetra Pak S.p.A.

**Tetra Pak Hoyer A/S**  
Søren Nymarks Vej 13  
DK- 8270 Højbjerg /Århus  
Denmark  
Phone: +45 89 39 39 39  
Fax: +45 86 29 22 00  
Tlx: 6 87 70 alhoy dk

**Danice Services A/S**  
Søren Nymarks Vej 11  
DK - 8270 Højbjerg /Århus  
Denmark  
Phone: +45 86 29 36 33  
Fax: +45 86 29 33 30  
Tlx: 6 86 49 danis dk

**Tetra Pak Hoyer S.p.A.**  
Via Monferrato, 52  
I - 20098 San Giuliano Milanese  
(Milan)  
Italy  
Phone: +39 2 98 2921  
Fax: +39 2 98 80171  
Tlx: 315 127 mark i

**Tetra Pak Hoyer Inc.**  
201 Broad Street  
Lake Geneva, WI 53147  
USA  
Phone: +1 414 248 8950  
Fax: +1 414 248 2883

**Tetra Pak Hoyer Inc.**  
US Packaging Division  
1104 Industrial Blvd.  
Albion, MI 49224  
USA  
Phone: +1 517 629 2163  
Fax: +1 517 629 2166

**Tetra Pak Hoyer Espana**  
Calle Antonio de Cabezón, 27  
P.O. Box 31015  
E- 28080 Madrid  
Spain  
Phone: +34 1 37 90 652  
Fax: +34 1 37 90 692

**Tetra Pak Hoyer U.K.**  
Interchange Park  
GB - Newport Pagnell  
Buckshire MK16 9PS  
United Kingdom  
Phone: +44 908 616 699  
Fax: +44 908 617 990

**Tetra Pak Hoyer Japan**  
c/o Nihon Tetra Pak K.K.  
6-20, Higashi-Kojiya 4-chome  
Ota-ku  
Tokyo 144  
Japan  
Phone: + 81 3 3741 7641  
Fax: +81 3 3741 7241

**Tetra Pak Hoyer Korea**  
c/o Alfa Laval Korea Ltd.  
49-3, Hamman-Dong  
Yongsan-Ku  
Seoul 140-210  
Korea  
Phone: +82 2 749 2291-5  
Fax: +82 2 790 8384-5

**Tetra Pak Hoyer Hong Kong**  
c/o Tetra Pak Ltd.  
1/F, Chung Nam Building  
1 Lockhart Road, Wanchai,  
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Phone: +852 861 1936  
Fax: +852 520 2346

**Tetra Pak Hoyer Beijing**  
c/o Tetra Pak China Ltd.  
Beijing Representative Office  
Room 416, Tian An Building  
Hua Long Street  
Dong Cheng District  
Beijing 100006  
P.R. China  
Phone: +86 1 512 8844 ext. 416  
Fax: +86 1 513 2141

**Tetra Pak Hoyer Shanghai**  
c/o Tetra Pak China Ltd.  
Shanghai Representative Office  
Room 701-702, 7/F, Block 3  
Nanjing Road (W)  
Shanghai 200040  
P.R. China  
Phone: +86 21 247 3812 or 1086  
Fax: +86 21 253 5623

**Tetra Pak Hoyer Philippines**  
Service Centre  
5th Floor, Jaka 1 Bldg.  
6794 Ayala Avenue  
Makati, Metro Manila  
Philippines  
Phone: +63 2 810 1968  
Fax: +63 2 815 6693

**Tetra Pak Hoyer France**  
Z I le Chêne Sorcier  
F - 78340 les Clayes-Sous-Bois  
France  
Phone: +33 1 30 81 81 81  
Fax: +33 1 30 81 81 20

## CHAPTER 2

### GENERAL

#### 2.1 PRELIMINARY OBSERVATIONS



- The illustrations and drawings of the machine are intended purely for general reference and are not necessarily accurate in every detail;
- the machine dimensions and specifications given in this manual are not binding and may be changed without advance warning;
- the drawings and all other documents provided with this machine remain the property of Tetra Pak Hoyer S.p.A. and may not be passed on to third parties without written authorisation from Tetra Pak Hoyer S.p.A.
- The manual includes instructions covering all accessories mounted on the standard machine.
- Please refer to the sections regarding the accessories you have purchased.
- **The machine is covered by warranty as specified in the purchase contract. During the warranty period, any repair work not authorised by Tetra Pak Hoyer will automatically invalidate the warranty.**

#### 2.2 GENERAL SAFETY PRECAUTIONS



- THESE SAFETY PRECAUTIONS HAVE BEEN DRAWN UP IN YOUR INTERESTS. Follow the guidelines strictly in order to reduce the risk of accident both to you and to others.
- Do NOT attempt to move, install or operate the machine without having read and understood this manual. If in doubt, ask your superior;
- ensure that all guards and safety covers are in position BEFORE starting the machine;
- NEVER leave tools, mechanical parts or other extraneous material on or inside the machine;
- press the emergency button in the event of a product blockage.  
NEVER PUT YOUR HANDS INSIDE THE MACHINE WHILE IT IS RUNNING;
- take great care even when the main switch is in the "OFF" position, since the power supply cables are still live;
- turn off the air supply before disconnecting any pneumatic part of the machine;
- make sure that all guards and protective covers are correctly installed BEFORE restarting the production cycle after maintenance or repair operations;
- always work with the greatest care and remember that you are responsible for your own safety and for that of your colleagues;
- when moving or lifting the machine, ensure that relevant standards for these operations are followed.

## 2.3 WARNINGS AND SPECIAL NOTICES



- The personnel operating this machine must be aware of and observe strictly the general safety precautions. Failure to observe the precautions may result in injury to personnel or damage to machine components.
- Maintenance must be carried out with the machine turned off. The main switch must be in the "OFF" position, the air valve must be closed and a "work in progress" notice must be fixed to the machine.
- The user must ensure that all the instructions contained in the manual are followed strictly.
- High (Low) temperatures are reached inside the machine. After turning off the electric power supply, wait for the machine to cool (heat) to room temperature before carrying out work on it.
- Any tampering with the safety system for any reason is at the user's own risk and shall be his responsibility.
- Never attempt to turn off the safety switches or make them inoperative.
- The safety of machines used in conjunction with the machine described in this manual, if not supplied directly by Tetra Pak Hoyer S.p.A., is the customer's responsibility.
- The pressure, speed, temperature and voltage limits as well as all other indications given are indispensable for the correct running of the machine and must always be observed by the customer.
- For the pneumatic components, dehumidified compressed air must be used at the right pressure and in the prescribed quantities, without any trace of oil.
- The environmental conditions of the installation site must also be taken into consideration.
- The national laws which govern the use of these kinds of machine must also be respected.

## 2.4 ENVIRONMENTAL WORKING RESTRICTIONS

The machine is authorized to run within the following environmental restrictions:

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



### NOTE

**Our company declines all responsibility for damage caused by failure to heed the above warnings.**

## CHAPTER 3

### DESCRIPTION - INSTALLATION START UP

#### 3.1 Description

The machine was designed for filling ice cream bulks positioned manually under the extruder.

The machine, which is constructed entirely in stainless steel, is made up of a three flavour extruder, connected to three continuous freezers, a pneumatic actuator, a reducer-filter and a control panel.

#### 3.2 Control panel

- QS Main switch
- QF Automatic switch
- TC Transformer
- SA1 Start up selector
- KT1 Timer for filling time
- KT2 Timer for filling stop

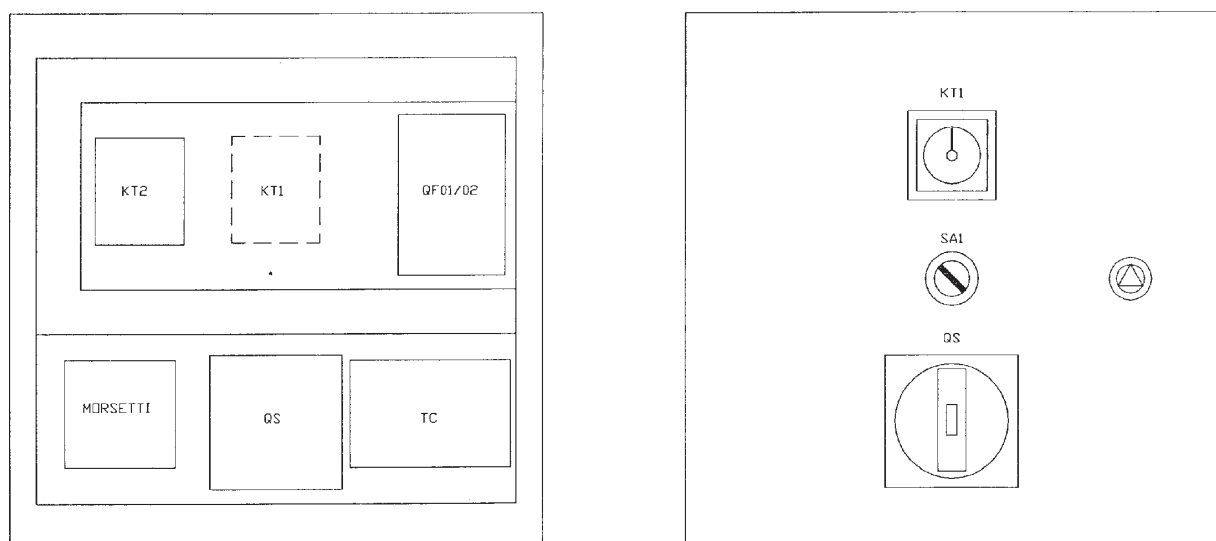


Fig. 3.1



### 3.3 Pneumatic diagram

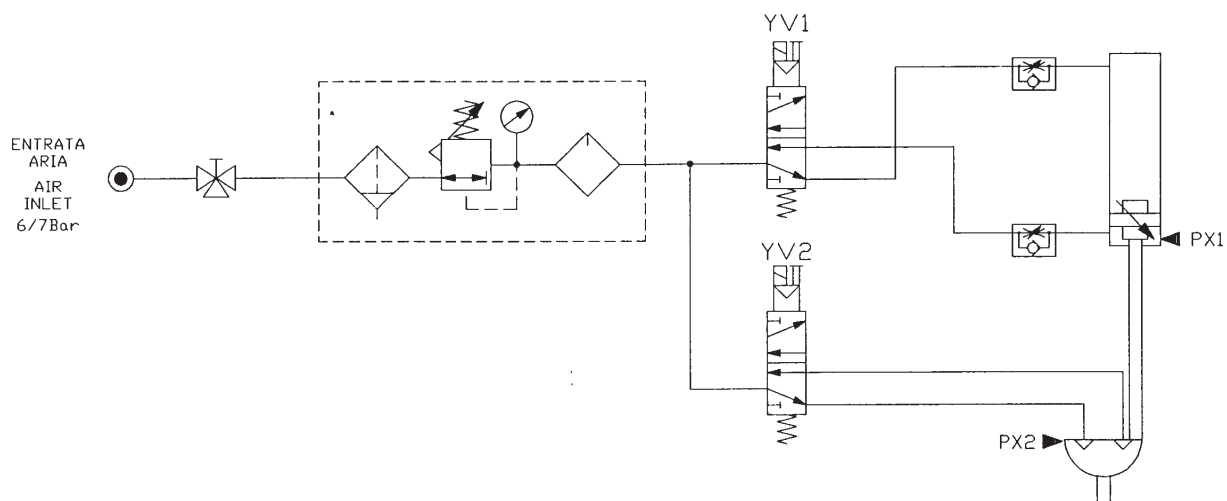


Fig. 3.2

### 3.4 Electric diagram

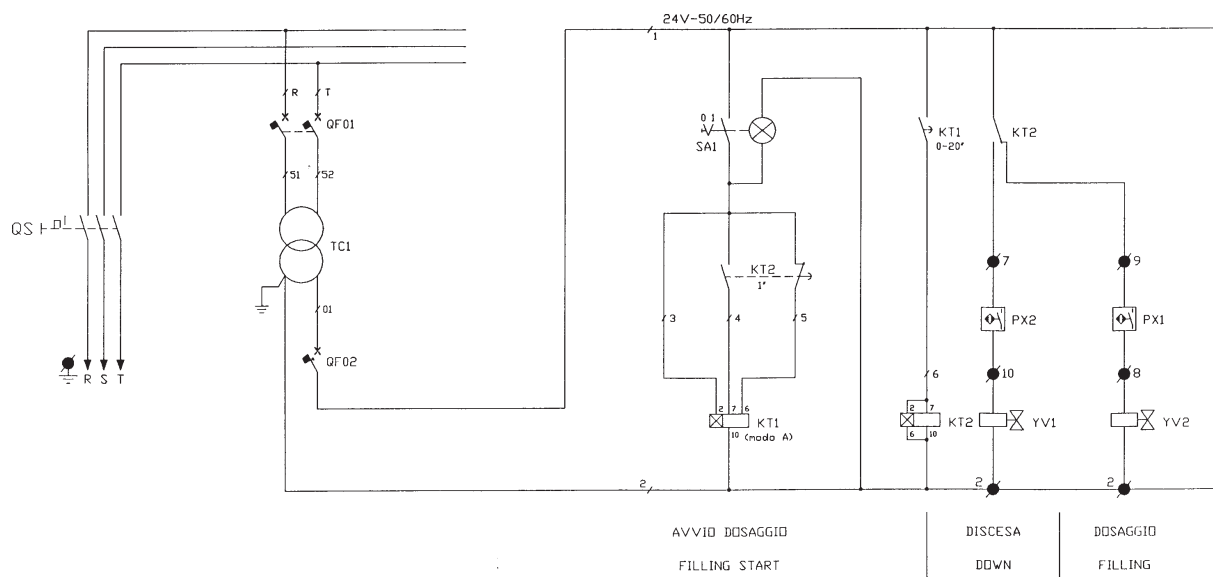


Fig. 3.3

### **3.5 Unpacking**

- Unpack the machine and accessories and check to see if there are any signs of damage caused during shipment. Immediately report any signs of damage to the shipping company.
- Check all the machine components against the packing list to see that all the components ordered are present.
- If any parts or accessories are missing, immediately inform the supplier in writing.
- If you have any doubts as to the condition of the machine or any of its parts, DO NOT use the machine and immediately contact a qualified service representative.
- Check to see that all the covers and panels are correctly attached and that there are no loose parts.
- Before starting to use the machine, remove all packing residues and foreign material and thoroughly clean the machine.
- The packing materials (plastic sheeting, bags, styrofoam, nails, etc.) can be dangerous, so make sure they are properly disposed of and not left within reach of children.

### **3.6 Installation**

- Position the machine in the working area. The machine is movable by means of the wheels easily. After you have positioned the machine near the continuous freezer, make sure you have enough free space around the machine to be able to work easily.
- Make sure the mains voltage shown on the machine data plate is commensurate with the values of the mains network in the place of installation.  
NOTE: the electrical consumption is 100 Watt.
- Connect the three phases to terminals R, S and T and the earth wire to the relative terminals on the control panel.
- Connect the air compressed pipe to the reducer-filter positioned on the rear of machine.  
NOTE: the working pressure is 6 bar.

### 3.7 Start up

Turn main switch on and supply compressed air.

Connect the freezer to the extruder, position a pail under the extruder, start the freezer production.

Wait until the ice cream has reached the required hardness.

Set the dosing time on the timer (Fig.3.1, KT1).

Set the pause dosing time (1 or 2 seconds) on the timer (Fig.3.1, KT2).

Turn the selector (Fig.3.1, SA1). After a few seconds (dosing time) the extruder closes .

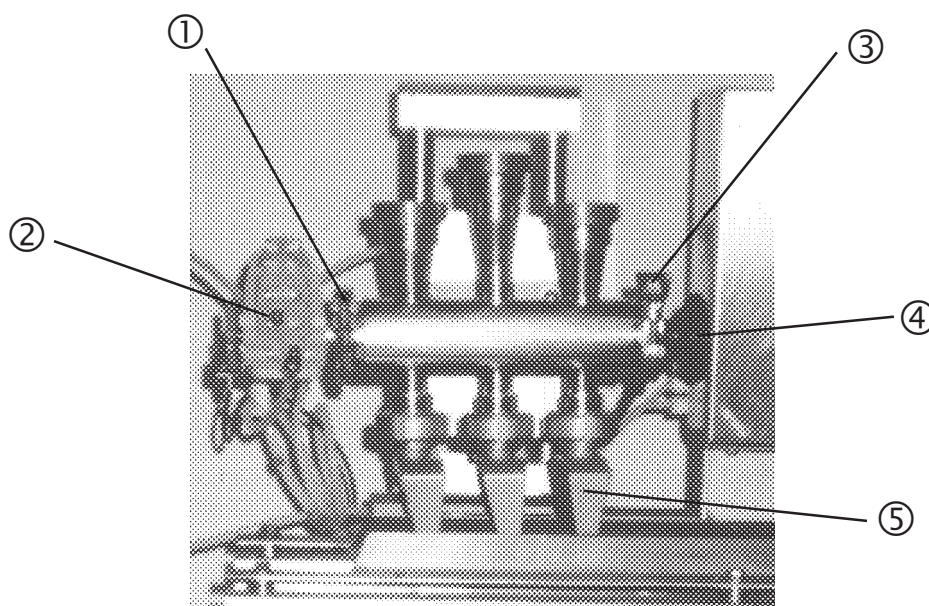
Insert the bulk under the extruder and start the production.

### 3.8 Cleaning procedure

After the machine has been installed, all parts in contact with the product must be cleaned very thoroughly before you start using the machine.

#### 3.8.1 Disassembly of the three flavour extruder

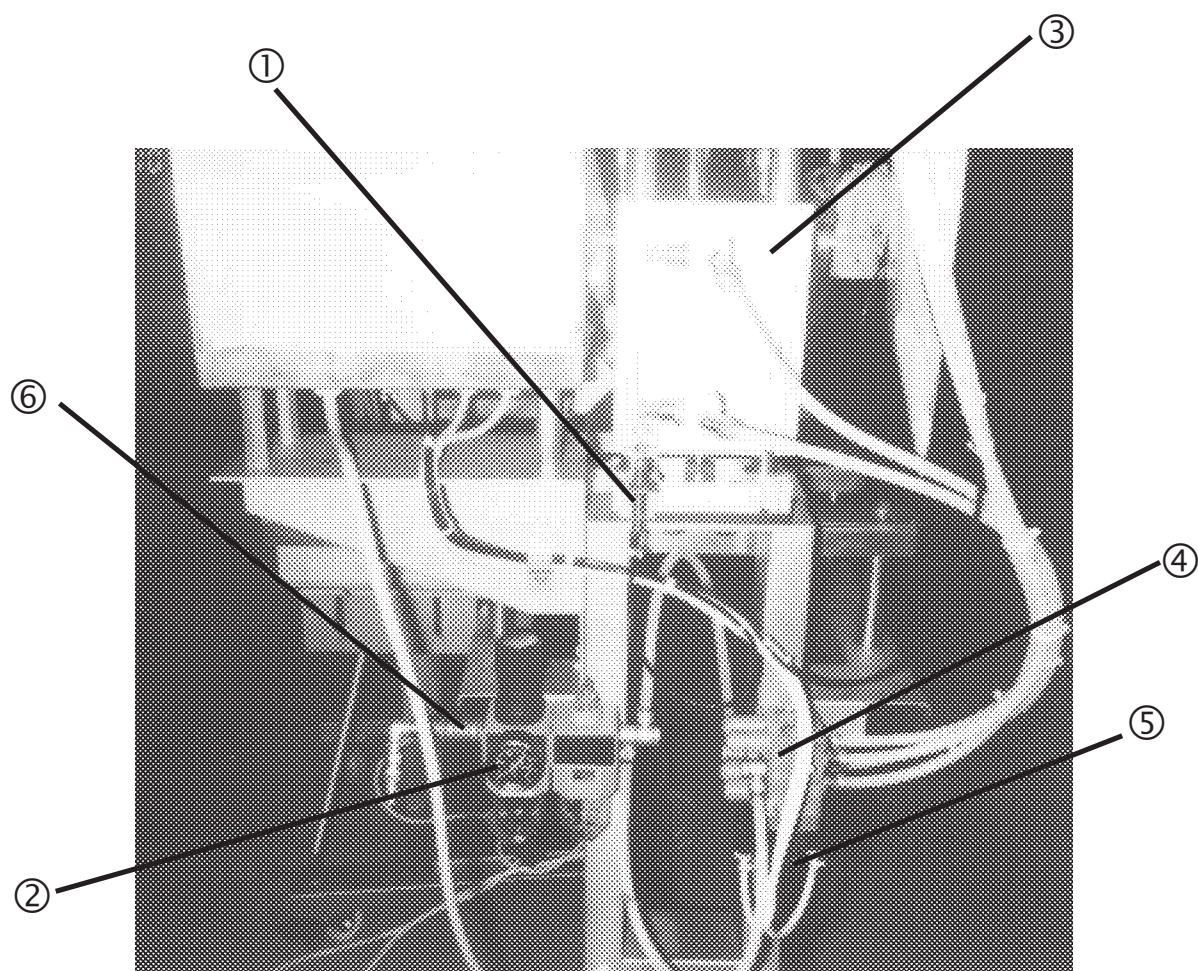
- Remove the clamp (Fig.3.4, 1), remove the pneumatic actuator (Fig.3.4, 2);
- remove the clamp (Fig.3.4, 3);
- by means of the knob (Fig.3.4, 4) carefully remove the cylinder, wash it;
- remove the extruder (Fig.3.4, 5) wash it;
- wash the remaining part of the extruder unit;
- first use lukewarm water and then repeat the operation using a neutral, odourless detergent (the kind used for cleaning food machinery, which is non toxic and does not attack the surfaces with which it comes into contact). Then rinse with lukewarm water;
- lubricate the cylinder with alimentary vaseline, before remount;
- remount all carefully.



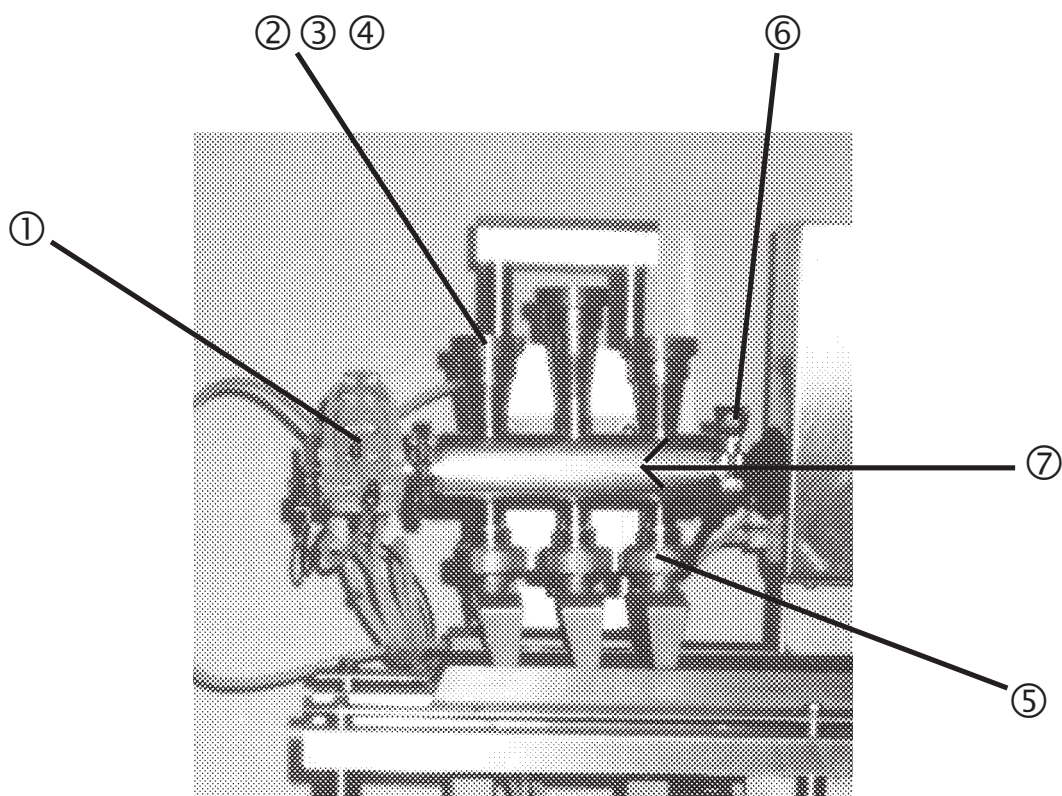
## **CHAPTER 4**

### **SPARE PARTS**

N°	CODE	DESCRIPTION	QT
1	017035925	PROXIMITY	2
2	333012290	REDUCER-FILTER	1
3	336059009	SLIDE	1
4	333004117	SOLENOID VALVE	2
5	333004093	COIL	2
6	333004044	VALVE	1



N°	CODE	DESCRIPTION	QT
1	333004900	PNEUMATIC ACTUATOR	1
2	016060592	RING NUT DN40	3
3	016060813	HOSE HOLDER DN40	3
4	018020540	GASKET DN40	3
5	018020533	GASKET DN25	3
6	016060219	CLAMP	2
7	336067091	CYLINDER GASKET	1



N°	CODE	DESCRIPTION	QT
QS	017036021	THREE-POLE SWITCH	1
QF01	017035321	DOUBLE-POLE SWITCH	1
QF02	017035302	SINGLE-POLE SWITCH	1
KT2	017085630	TIMER	1
KT1	017085634	TIMER	1
SA1	017060491	ILLUMINATED SELECTOR	1
	017040915	LAMP 30v	1
TC	017090092	TRANSFORMER 30va	1

