

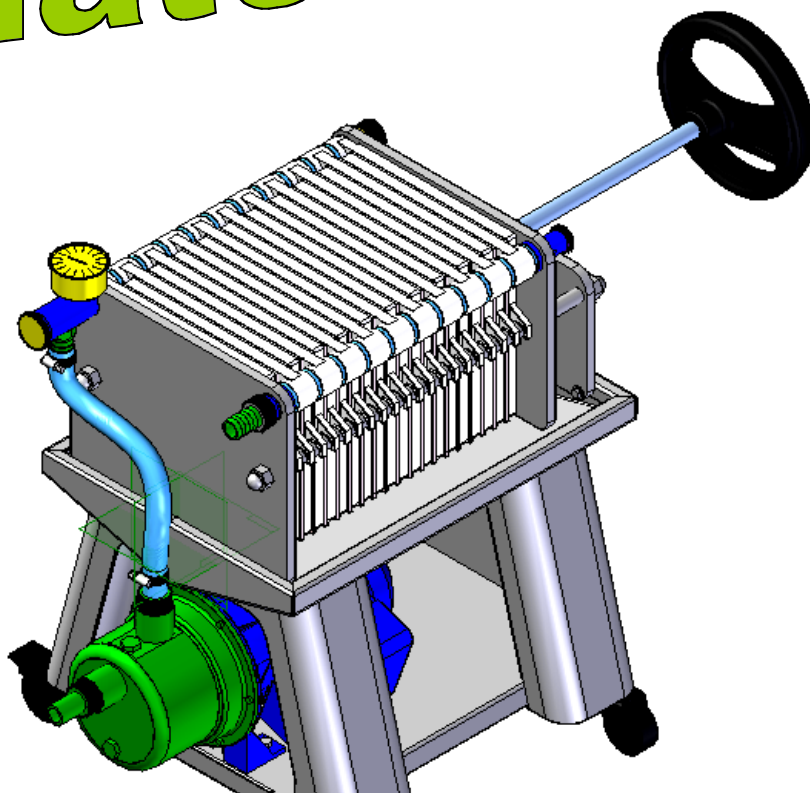
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## USE AND MAINTENANCE MANUAL



# Plate filters



## **CONTENTS**

This manual sets out all the information necessary for the installation, operation and maintenance of the plate filters.



### **WARNING**

Before proceeding with the installation, operation and maintenance the manual should be carefully read in its entirety.

In particular we advise a scrupulous regard for all the safety regulations contained herein.

# SUMMARY

|                  |   |                  |
|------------------|---|------------------|
| <b><u>1.</u></b> | <b><u>SAFETY INSTRUCTIONS</u></b>                         | <b><u>3</u></b>  |
| 1.1              | <u>GENERAL</u>  | <u>3</u>         |
| 1.2              | <u>OPERATION</u>  | <u>3</u>         |
| 1.3              | <u>ELECTRICAL SYSTEM AND MOTOR</u>                        | <u>4</u>         |
| 1.4              | <u>CLEANING AND MAINTENANCE</u>                           | <u>4</u>         |
| 1.5              | <u>PLATE</u>  | <u>5</u>         |
| 1.6              | <u>REGULATIONS FOR THE DISPOSAL OF WASTE</u>              | <u>5</u>         |
| <b><u>2.</u></b> | <b><u>DESCRIPTION</u></b>                                 | <b><u>6</u></b>  |
| 2.1              | <u>PUMP WITH BY-PASS</u>                                  | <u>6</u>         |
| <b><u>3.</u></b> | <b><u>TECHNICAL SPECIFICATIONS</u></b>                    | <b><u>8</u></b>  |
| 3.1              | <u>VOLUME AND WEIGHT</u>                                  | <u>8</u>         |
| 3.2              | <u>LIFTING AND POSITIONING</u>                            | <u>8</u>         |
| 3.3              | <u>CONDITIONS FOR CORRECT RUNNING</u>                     | <u>9</u>         |
| <b><u>4.</u></b> | <b><u>USE OF THE FILTER</u></b>                           | <b><u>10</u></b> |
| 4.1              | <u>CHOICE OF FILTER SHEETS</u>                            | <u>10</u>        |
| 4.2              | <u>INSERTION OF FILTER SHEETS</u>                         | <u>11</u>        |
| 4.3              | <u>ILLUSTRATION FOR MOUNTING DOUBLE FILTRATION PLATES</u> | <u>12</u>        |
| 4.4              | <u>CONNECTING THE FILTER</u>                              | <u>12</u>        |
| 4.5              | <u>STARTING</u>   | <u>13</u>        |
| 4.6              | <u>STOPPING</u>   | <u>13</u>        |
| 4.7              | <u>SUBSTITUTION OF PLATES, WASHER SEALS, AND FILTERS</u>  | <u>13</u>        |
| 4.8              | <u>REGULAR MAINTENANCE OF THE MACHINE</u>                 | <u>15</u>        |
| <b><u>5.</u></b> | <b><u>MAINTENANCE OF THE PUMP</u></b>                     | <b><u>16</u></b> |
| 5.1              | <u>CLEANING THE SELF-PRIMING ELECTRIC PUMP</u>            | <u>16</u>        |
| 5.2              | <u>CLEANING THE COAXIAL ELECTRIC PUMP</u>                 | <u>17</u>        |
| <b><u>6.</u></b> | <b><u>WHAT TO DO IF...</u></b>                            | <b><u>18</u></b> |
| <b><u>7.</u></b> | <b><u>GUARANTEE</u></b>                                   | <b><u>19</u></b> |
| <b><u>8.</u></b> | <b><u>ORDERING SPARE PARTS</u></b>                        | <b><u>20</u></b> |
| <b><u>9.</u></b> | <b><u>DECLARATION OF CONFORMITY</u></b>                   | <b><u>23</u></b> |

## **1. SAFETY INSTRUCTIONS**



**The failure to observe the following rules constitutes danger and puts at risk the safety and correct running of the machine.**

### **1.1 GENERAL**

- Do not proceed with the installation, maintenance, or operation of the machine before reading this manual in its entirety
- Check that all warning markers are perfectly legible
- Start the machine only after making sure that all structural parts, the motor, the pump, connecting pipes and other connections are entirely free of mechanical cracks or signs of corrosion

### **1.2 OPERATION**

- The filter should not be used to process products different from those provided for in this manual
- The filter should not be used in conditions different from those for which it has been designed, and as presented in the original documentation
- The filter should not be started if environmental conditions, or the characteristics of the electrical supply do not correspond with those provided for in this manual
- Do not start the filter if one or more components are missing or incorrectly assembled
- Keep clothing away from moving parts of the machine
- Do not move the machine while running



**Never use the filter for the treatment of INFLAMMABLE PRODUCTS**



**Do not use the machine in INFLAMMABLE ENVIRONMENTS**

### **1.3 ELECTRICAL SYSTEM AND MOTOR**

- Before connecting the electrical supply of the machine make sure that the system conforms with current earthing regulations
  - Check that the network voltage conforms with that on the motor plate
  - Do not operate the electric motor if its protection covers are missing, damaged or incorrectly mounted
- Should the motor not start disconnect the electrical supply immediately
  - Should the motor overheat stop the machine immediately



### **1.4 CLEANING AND MAINTENANCE**

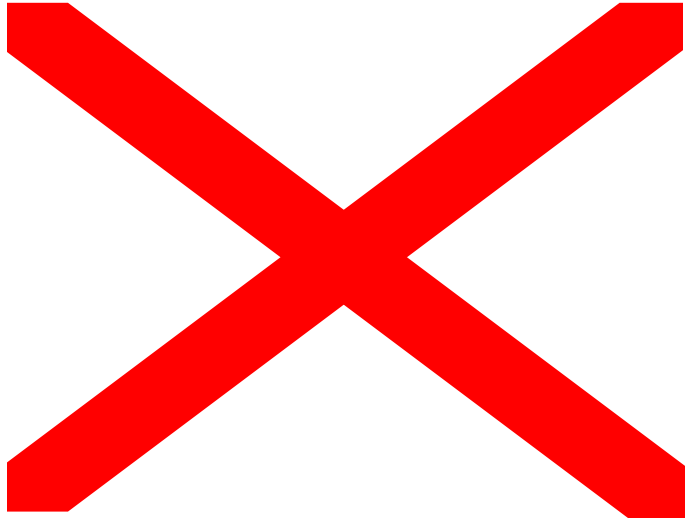
- Before carrying out any type of operation make sure that the machine is switched off and that the electrical supply is disconnected
- Follow exclusively only those operations set out in this manual paying strict attention to the instructions
- Check that all switches function as they should and that all electrical connections are in good repair
- Periodically check that the screws connecting the various parts of the machine are suitably tightened
- During maintenance, using clear signs, indicate that the use of the machine is forbidden
- Do not alter in any way whatsoever the structural parts of the machine
- After each maintenance check, and/or repair, make sure that all parts of the machine are correctly assembled, paying particular attention to the protection
- Use only original spare parts
- Before starting the machine make sure that all tools used during maintenance have been removed
- Do not install auxiliary equipment without the verification and authorisation of the manufacturer of the filter
- **Wash the filter using exclusively non-toxic products suitable for use with foodstuffs**



**During every intervention on the machine safety gloves are to be worn**

## **1.5 PLATE**

On the frame of the machine there is a plate which carries identifying details and the particulars of the electrical supply



## **1.6 REGULATIONS FOR THE DISPOSAL OF WASTE**

You are reminded that the disposal of waste is controlled by National and Community regulations

- Legislative Decree No.22 of 05/02/1997 which includes the directives 91/156/CEE on waste, 91/689/CEE on dangerous waste, and 94/62/CEE on packing materials and their waste
- Directive 75/442/CEE on industrial waste
- Directive 75/439/CEE on waste oil

### **DISPOSAL OF THE MACHINE**

The disposal of the machine at the end of its working life must be carried out according to directive 75/442/CEE on industrial waste and therefore the regulations regarding collection, sorting, transport and treatment, furnished by the directive should be respected

### **DISPOSAL OF LUBRICANTS**

Grease, oil and all those lubricants used during operation or maintenance should be disposed of according to directive 75/439/CEE on waste oil, which also imposes that the relevant authority responsible should be informed of all information relative to the elimination or depositing of waste oil and their residues

**In accordance with DPR No. 691 of 23/08/1982 you are obliged to refer to the proper organisation for waste oils.**

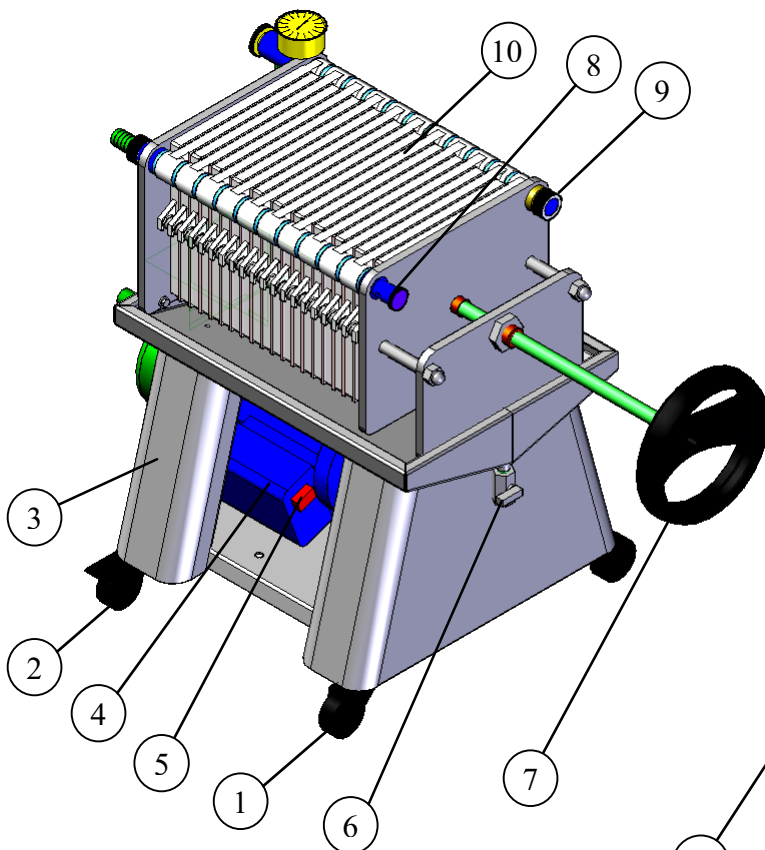
### **DISPOSAL OF PACKING**

## 2. DESCRIPTION

The plate filter has been designed for polishing and sterilising liquids of different kinds, such as wine, olive oil, beer, milk, cosmetics, essences for herbal preparations.

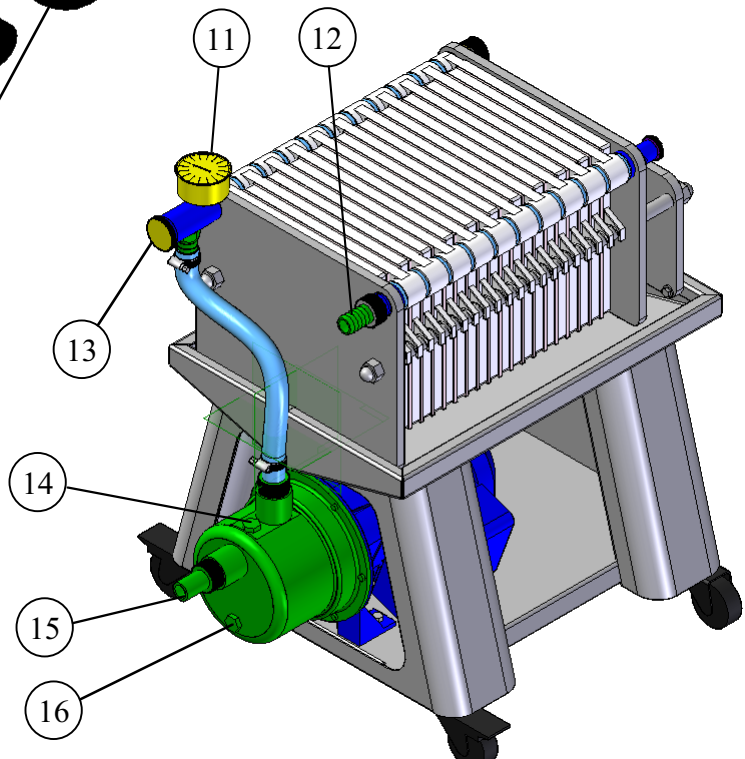
The filter is divided into three functional units:

- ❑ Frame in AISI 304 stainless steel equipped with four pivoting wheels, two of which equipped with brakes
- ❑ Filtration unit with filtering plates in materials suitable for use with foodstuffs
- ❑ Self-priming motor-pump unit. On request a coaxial pump with impeller in non-toxic natural rubber, neoprene, nitrile, EPDM or silicon. The pump can be equipped with a by-pass for a more constant delivery of the product

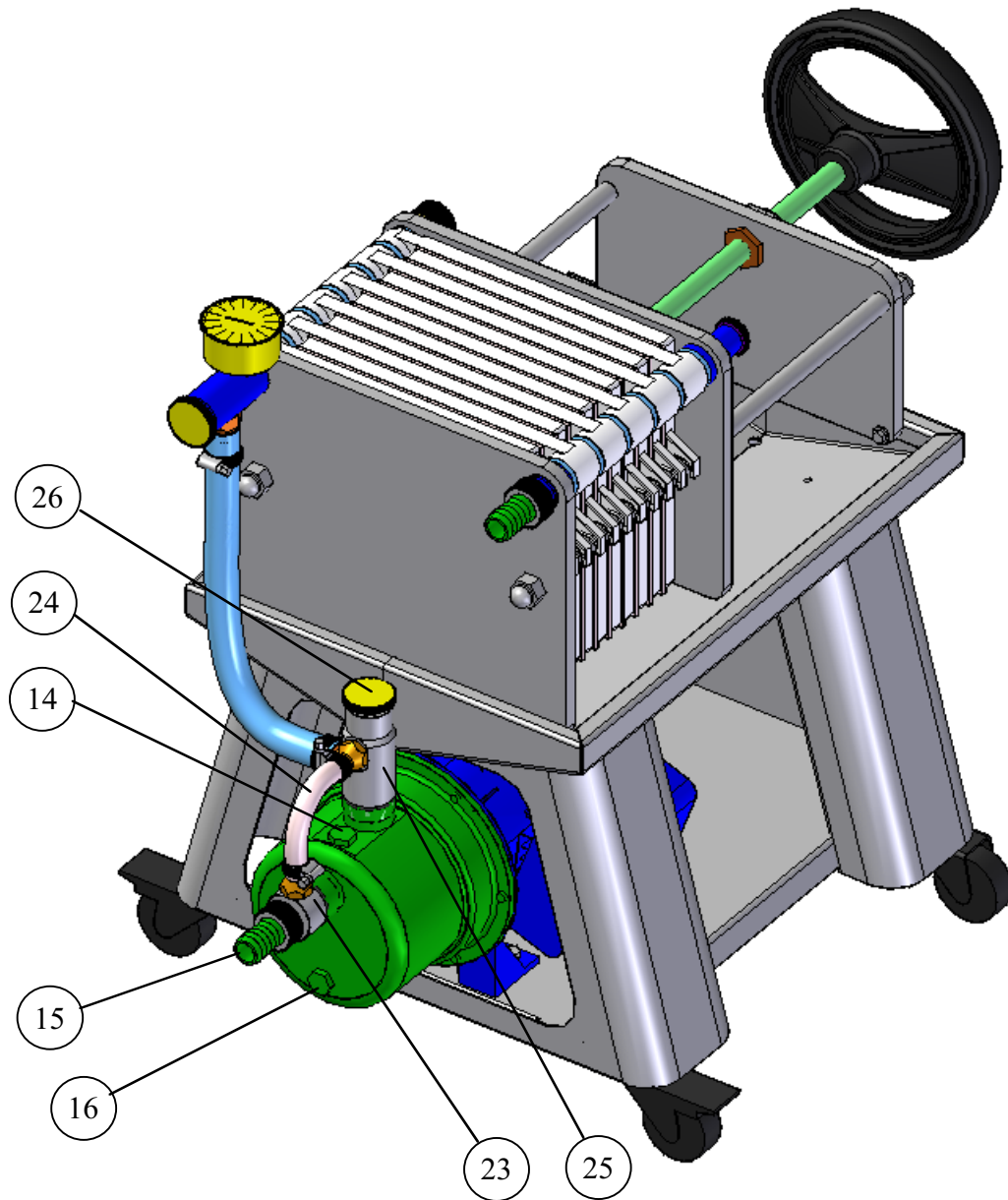


- 1) Swivelling wheel without brake
- 2) Swivelling wheel with brake
- 3) Frame in AISI 304 stainless steel
- 4) Electric motor
- 5) Starting switch
- 6) Tray discharge valve
- 7) Handwheel of threaded shaft
- 8) Suction valve for sample-taking
- 9) Stopper
- 10) Supporting plate of filter sheets

- 11) Pressure gauge
- 12) Connection of delivery pipe
- 13) Pressure regulator
- 14) Cap for filling pump
- 15) Connection of suction tube
- 16) Cap for emptying pump



## **2.1 PUMP WITH BY-PASS**



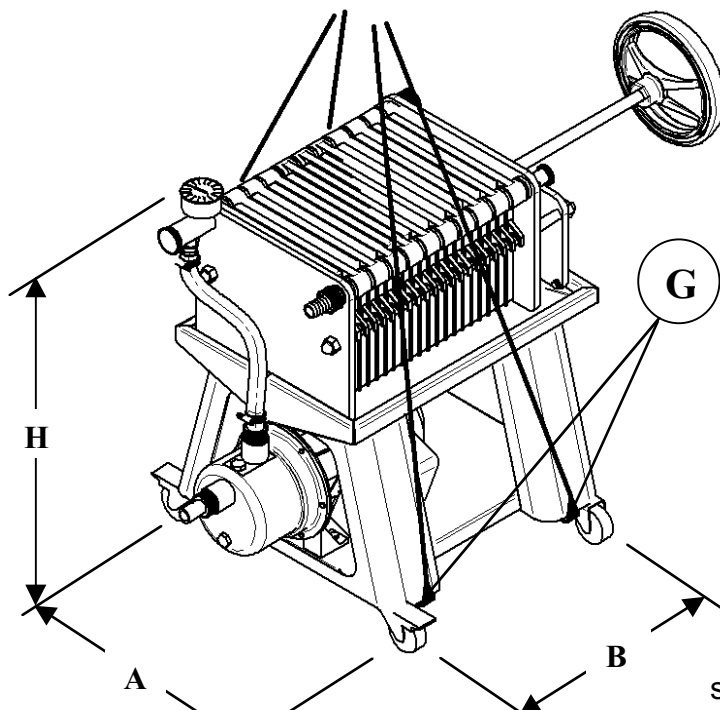
- 14) Cap for filling pump
- 15) Connection of suction tube
- 16) Cap for emptying pump
- 23) Hose of by-pass entry
- 24) By-pass pipe
- 25) Connection of by-pass exit
- 26) Knob for regulating by-pass flow

### 3. TECHNICAL SPECIFICATIONS

| MODEL                               | MINUS 10 | MINUS 20 |     | MINUS 30 |     | MINUS 40 |     |
|-------------------------------------|----------|----------|-----|----------|-----|----------|-----|
|                                     |          | wine     | oil | wine     | oil | wine     | oil |
| Hourly production [litres/hour]     | 300      | 600      | 100 | 900      | 150 | 1200     | 200 |
| Number of plates                    | 11       | 21       |     | 31       |     | 41       |     |
| Number of filter sheets             | 10       | 20       |     | 30       |     | 40       |     |
| Filtering surface [m <sup>2</sup> ] | 0.4      | 0.8      |     | 1.2      |     | 1.6      |     |
| Motor capacity [HP]                 | 0.5      | 0.5      |     | 0.75     |     | 0.75     |     |
| Voltage supply [Volt]               | 220      | 220      |     | 220      |     | 220      |     |
| Network frequency [Hz]              | 50       | 50       |     | 50       |     | 50       |     |
| Weight [kg]                         | 30       | 31       |     | 40       |     | 41       |     |

#### 3.1 VOLUME AND WEIGHT

| MODEL                        | MINUS 10  | MINUS 20  | MINUS 30  | MINUS 40  |
|------------------------------|-----------|-----------|-----------|-----------|
| Dimensions volume A x B [mm] | 400 x 590 | 400 x 590 | 400 x 810 | 400 x 810 |
| Height H [mm]                | 570       | 570       | 570       | 570       |
| Weight [kg]                  | 30        | 31        | 40        | 41        |



#### 3.2 LIFTING AND POSITIONING

Lifting equipment must be adequate for the weight of the machine. We advise using ropes or other harnesses which have end couplings (shown with “G” in the illustration). Such couplings should be secured in the place provided in correspondence with the wheels.

The floor on which the machine will be positioned must be capable of sustaining its weight when fully loaded. During the positioning of the machine be careful to leave sufficient space around it to allow for any supplementary equipment.

### **3.3 CONDITIONS FOR CORRECT RUNNING**

For the correct running of the machine the following logistic and environmental conditions should be respected

- ❑ **Place of installation:** the machine should be positioned in a suitable environment protected from outside atmospheric agents. Considering that the machine is equipped with electrical apparatus we recommend positioning the machine as far as possible from all sources of water and splashing.
- ❑ **Environmental temperature:** the mechanical systems and components which make up the machine are suited to operating in an overall external environmental temperature varying between **+10 °C and +40 °C**. Any fluctuations in the environmental temperature between +5°C and + 45°C are permitted for short periods.  
When **not operating** the machine should never be exposed to temperatures less than **-5 °C** or above **+60 °C**
- ❑ **Temperature of processed fluids:** the temperature of the product being processed should always be **between +5 °C and +60 °C**.

## **USING THE FILTER**

### **4.1 CHOICE OF FILTERING SHEETS**

To choose the type of filters refer to the following table

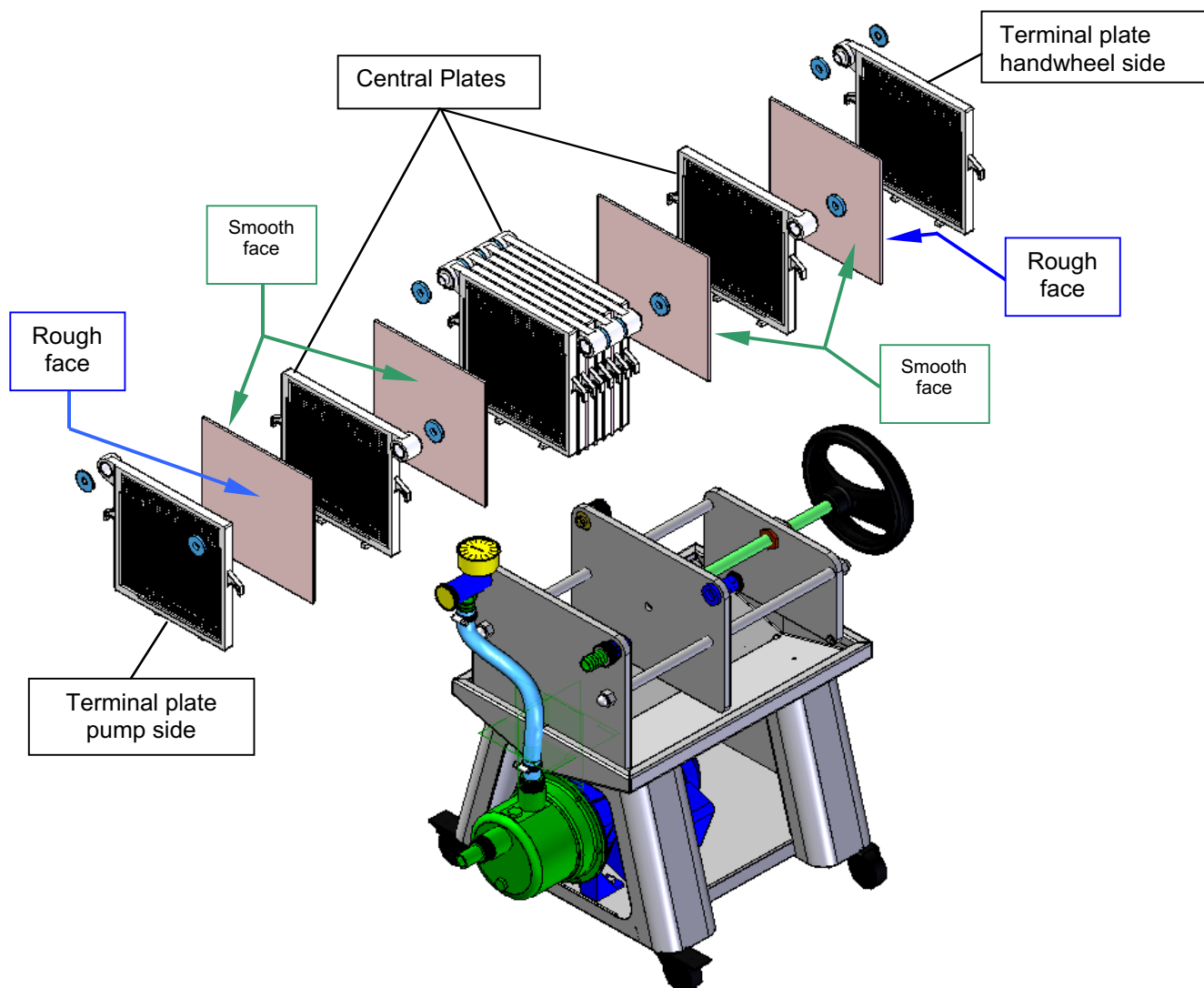
**TABLE OF CHARACTERISTICS OF FILTERING SHEETS**

| <b>TYPE</b>     | <b>USE</b>           | <b>PRESSURE<br/>IN USE<br/>[kg/cm<sup>2</sup>]</b> | <b>CAPACITY<br/>[ lt / h x 10<br/>sheets]</b> | <b>PRODUCT<br/>TYPE</b>  |
|-----------------|----------------------|--|---|--|
| <b>CKP V.0</b>  | WASHABLE             | 4  | 720   | FOR PARTICULARLY CLOUDY<br>YOUNG WINES   |
| <b>CKP V.4</b>  | REFINING             | 3  | 680   |  |
| <b>CKP V.8</b>  | EXTRA REFINING       | 2.5  | 650   |  |
| <b>CKP V.12</b> | MEDIUM<br>POLISHING  | 2.5  | 500   | FOR COMPLETELY FERMENTED<br>WINES  |
| <b>CKP V.16</b> | POLISHING            | 2  | 350   | FOR POLISHING RED WINES  |
| <b>CKP V.18</b> | PRE-STERILISING      | 2  | 300   | FOR POLISHING WHITE WINES  |
| <b>CKP V.20</b> | STERILISING          | 1.5  | 220   | FOR FILTERING POLISHERS –<br>STERILISERS OF WINES WITH<br>UNFERMENTED SUGAR RESIDUES |
| <b>CKP V.24</b> | SUPER<br>STERILISING | 1  | 120   | FOR ALL PURPOSES WHERE THE<br>GUARANTEE OF ABSOLUTE<br>STABILITY IS REQUIRED         |
| <b>E2</b>       | REFINING             | 2.5  | 50  | FOR FILTRATION OF OLIVE OIL  |



**WARNING:** Before inserting the sheets into the filter moisten them with water or with an already polished product. For the filtration of olive oil the sheets should be moistened with oil.

## 4.2 INSERTION OF FILTERING SHEETS



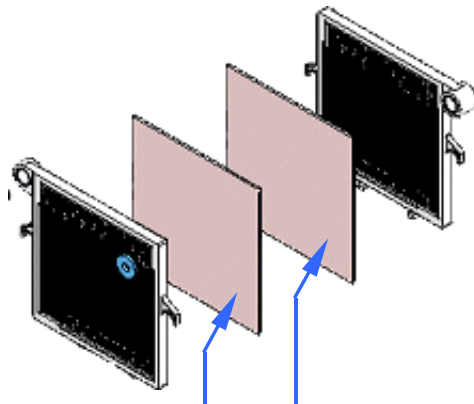
| MODEL                   | MINUS 10 | MINUS 20 | MINUS 30 | MINUS 40 |
|-------------------------|----------|----------|----------|----------|
| Number of filter sheets | 10       | 20       | 30       | 40       |

**GENERAL NOTE:** each sheet should be inserted between each pair of adjacent plates. As shown in the illustration, each rough face should be face on with each smooth face.

**TREATMENT OF OLIVE OIL:** in place of each sheet two sheets should be inserted, (see table for type of sheet) according to the outline shown opposite



After having inserted the sheets and having checked that all the plates are correctly positioned with their respective gaskets in alignment with the connecting system. compress

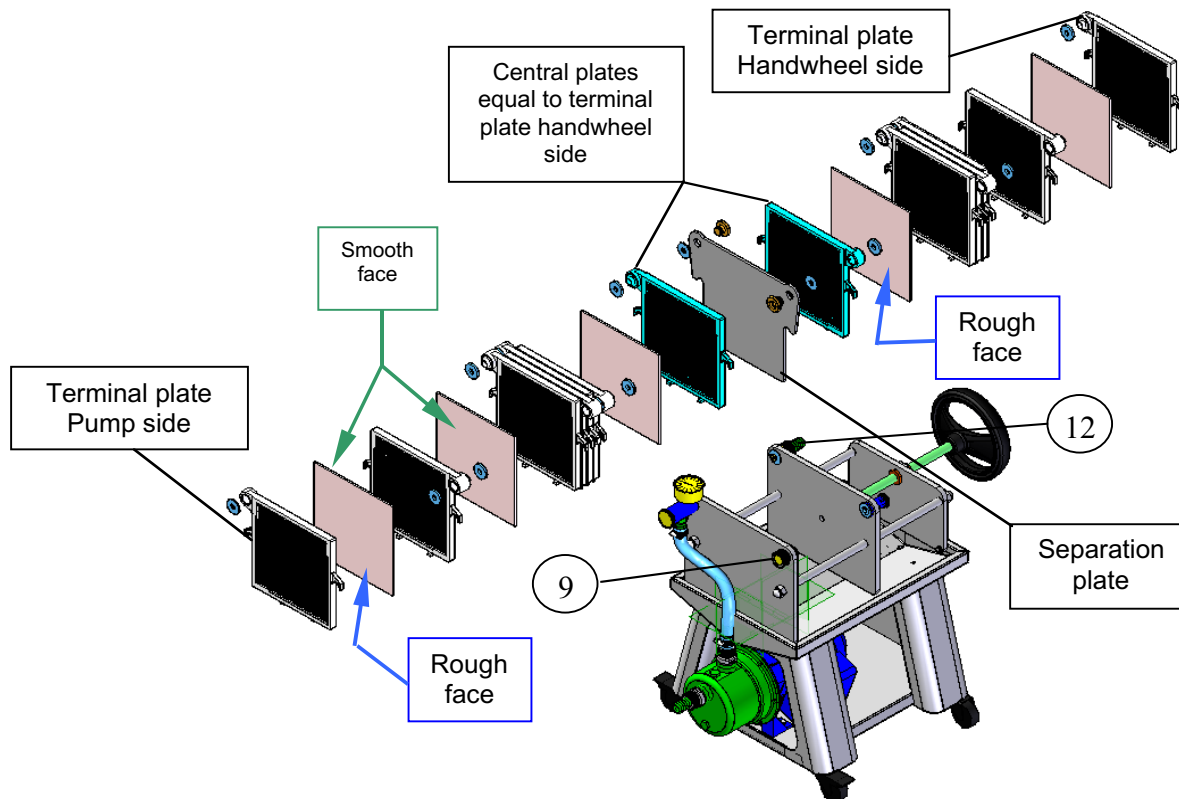


### 4.3 DIAGRAM FOR MOUNTING DOUBLE FILTRATION PLATES

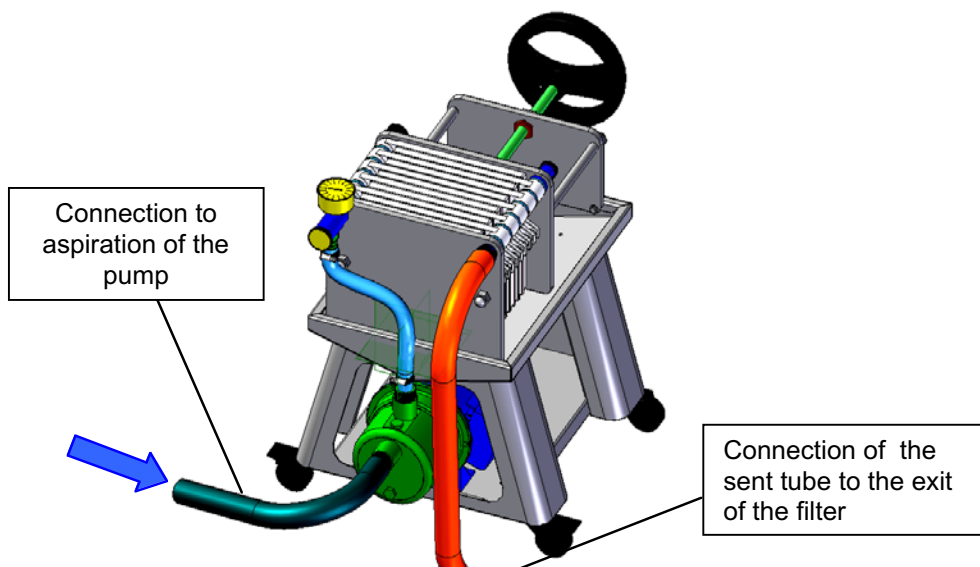
Using the double filtration plate it is possible to insert two different types of filter sheets; one for each of the two sectors into which the filter is divided.



**The stopper (9) and the connection of the delivery pipe (12) should be assembled as shown in the figure below**



### 4.4 CONNECTION OF FILTER



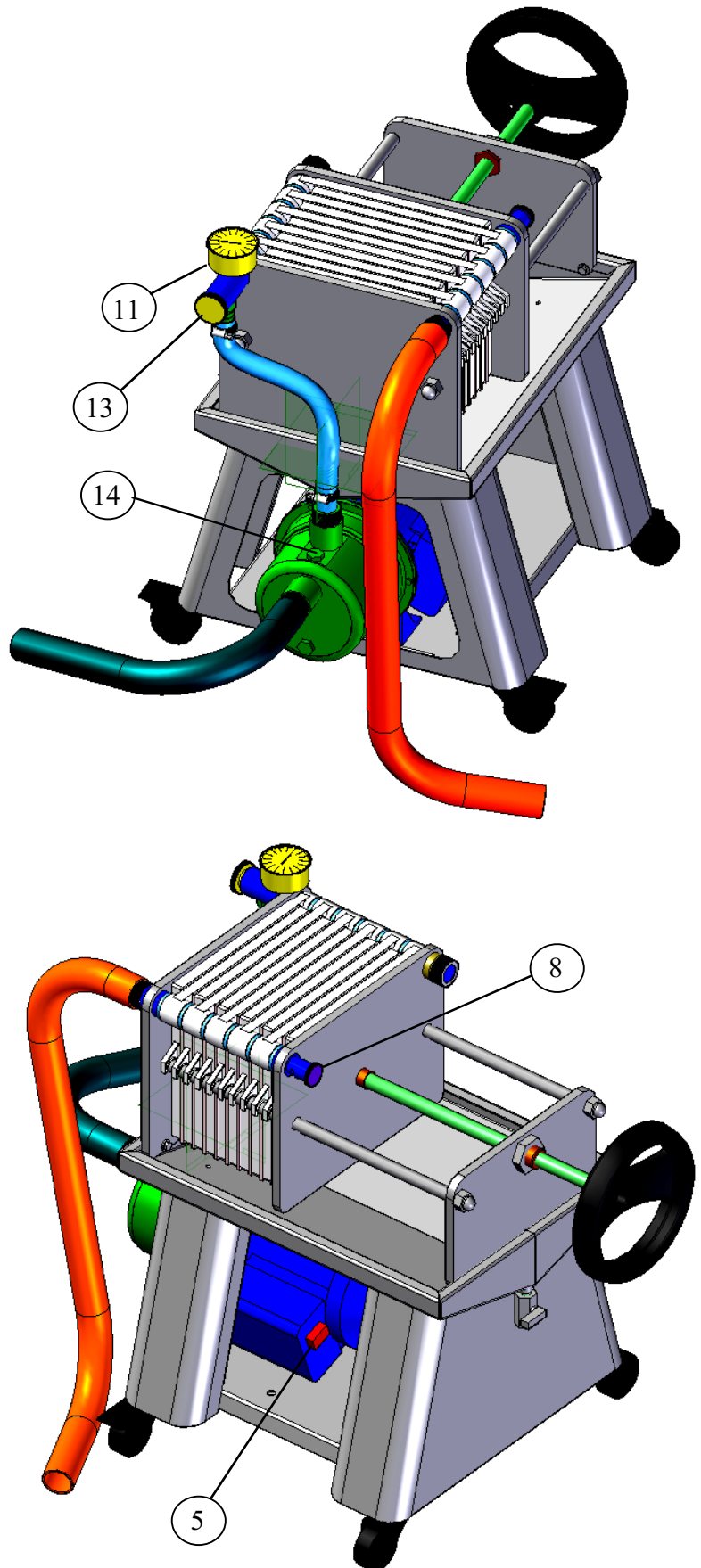
## 4.5 STARTING

After having proceeded with the insertion of the sheets and the connection of both the suction tubes and delivery pipes, proceed as follows:

- 1) Remove the cap for filling the pump (14) and fill the casing with the product
- 2) Insert and tighten once more the cap (14)
- 3) Close the pressure regulator (13) about half way
- 4) Turn the motor switch (5) to "ON" and check that the indicator light is on
- 5) Release the knob of the suction valve (8) and wait until all the air has been expelled from the filter. Tighten the knob (8) once more only when no more air is discharged
- 6) Operating with the pressure regulator (13) take the pressure to 0.3 bar and maintain it for some seconds. Then, regulate the pressure to that shown on the table of characteristics of the filter sheets, according to the type of sheet installed
- 7) During operation, check, using the pressure gauge (11), that there are no pressure variations with respect to that already established. If necessary, proceed moving the pressure regulator slowly (13).



A few seconds after turning on, **if the product is not dispensed**, check that the suction tube is correctly connected and that there has been no infiltration of air into any part of the circuit.



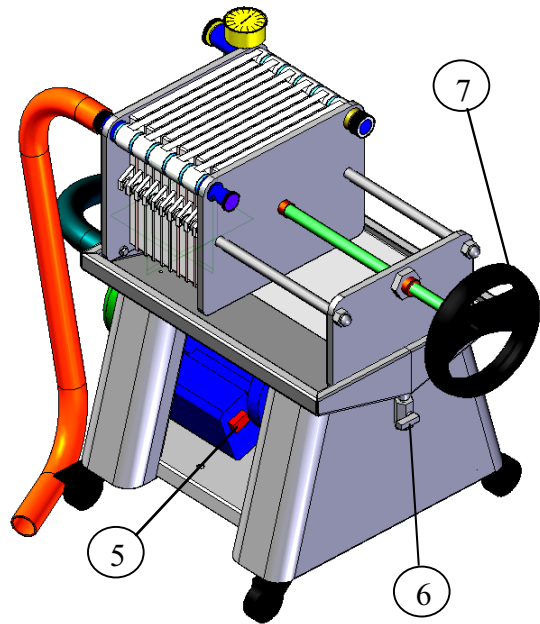
## 4.6 STOPPING

To stop the machine, turn the motor switch (5) to “OFF”, and check that the indicator light is off.



**Wait at least 3 minutes** before slackening the handwheel (7) so as to permit the complete depressurisation of the circuit

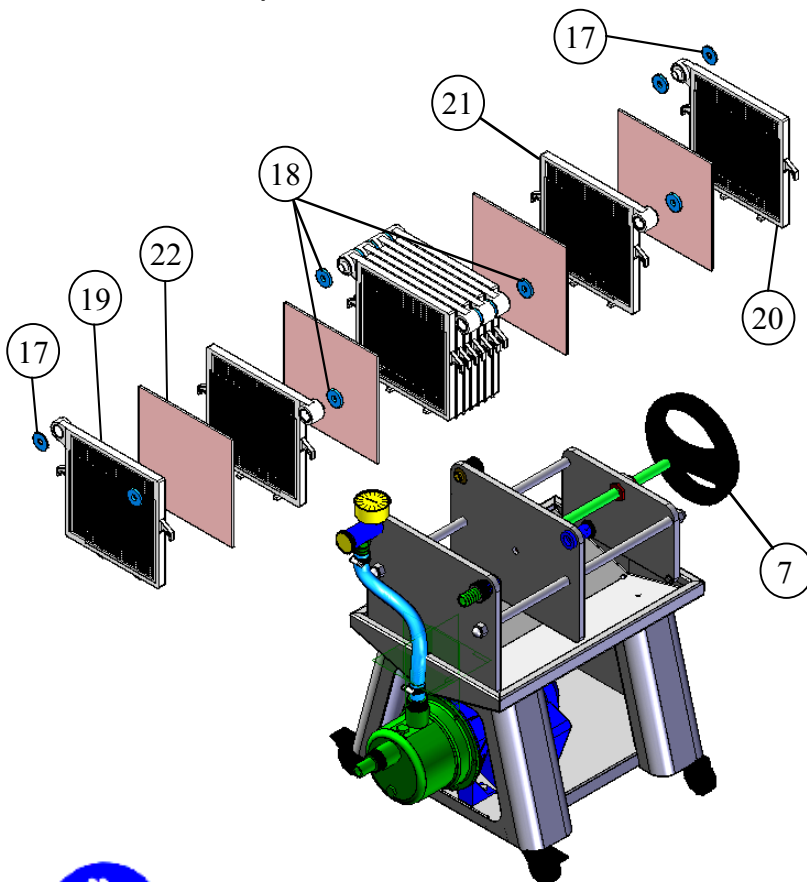
Using the valve (6) proceed with the discharge of the product which collects in the tray underlying the filter plate



## 4.7 SUBSTITUTION OF PLATES, WASHER SEALS AND FILTERS



Before carrying out any type of operation make sure that the machine is switched off, that any heated parts have had time to cool and that the electrical supply is disconnected (the plug should be removed from the socket).



- 1) Slacken the handwheel (7)
- 2) Substitute the terminal plate, pump side (19), the terminal plate, handwheel side (20) and the central plates (21)
- 3) Substitute the end seals (17). In total No.2 seals, thickness 2 mm.
- 4) Substitute the other central seals (18) of a thickness of 4mm and of the number suitable for the type of filter
- 5) Substitute the filter sheets (22) (see Para.4.2)
- 6) After having checked the correct alignment of all the seals with respect to the connecting system between the plates, proceed with their closure using the handwheel (7)



During each intervention on the machine safety gloves are to be worn

## **4.8 REGULAR MAINTENANCE OF THE MACHINE**



During each intervention on the machine safety gloves are to be worn



Before carrying out any type of operation make sure that the machine is switched off, that any heated parts have had time to cool and that the electrical supply is disconnected (the plug should be removed from the socket).



At the end of the operation it is necessary to proceed with the removal of all residues of the processed product. We recommend washing all parts using water or other non-toxic products suitable for use with foodstuffs according to the nature of the substances treated. **You are reminded that the observance of hygiene regulations prevents the development of bacteria which can infect the products which are successively treated.**

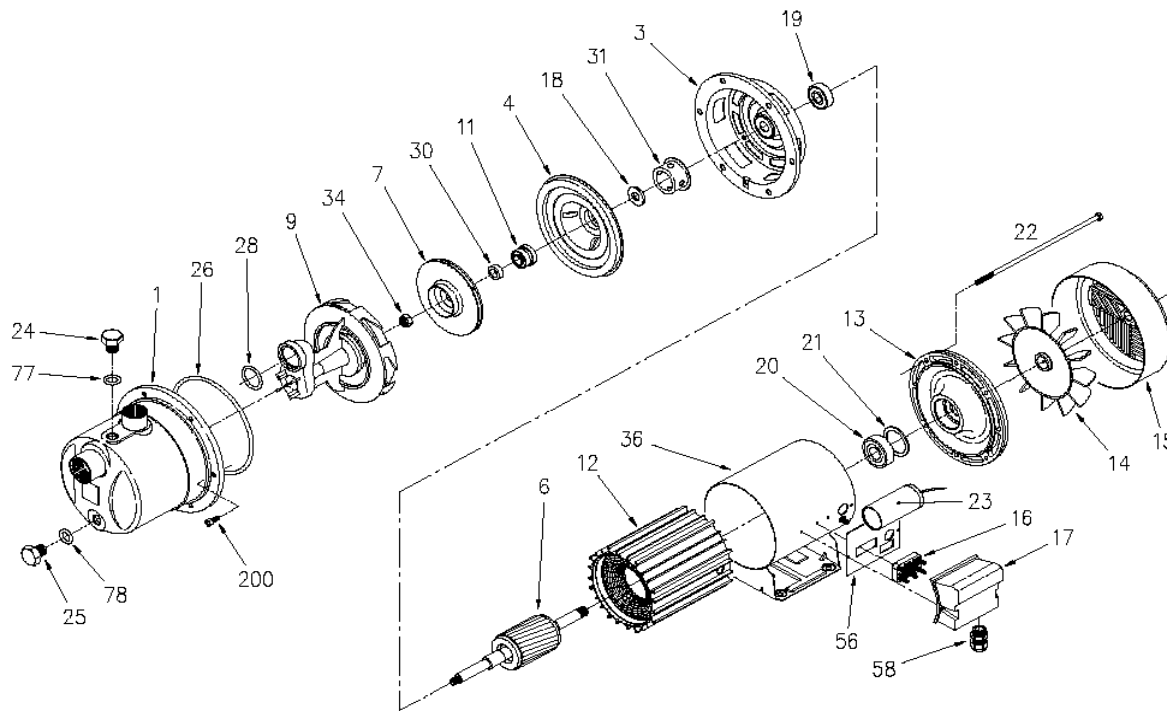


**It is possible to carry out sterilisation with a jet of steam at 120 °C only if the plates are made of NORYL.**

For plates in MOPLEN it is only possible to sterilise cold.

## 5 MAINTENANCE OF PUMP

### 5.1 CLEANING THE SELF-PRIMING ELECTRIC PUMP



Pezzi di ricambio  
elettropompe

Spare parts  
pumps

Pezzi di ricambio  
elettropompe

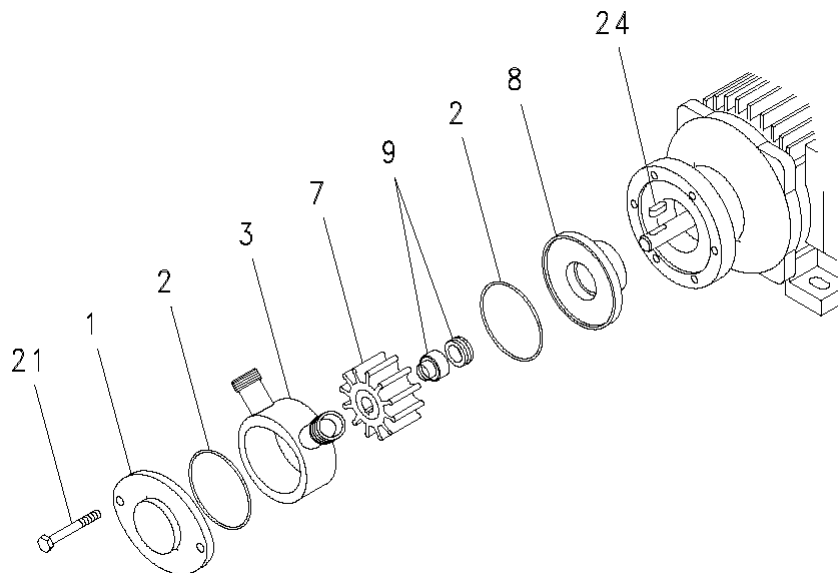
Spare parts  
pumps

| Pos. | Denominazione        | Part name              | Pos. | Denominazione      | Part name             |
|------|----------------------|------------------------|------|--------------------|-----------------------|
| 001  | CORPO POMPA          | Casing                 | 034  | DADO GIRANTE       | Impeller nut          |
| 003  | SUPPORTO MOTORE      | Motor bracket          | 036  | CAMICIA MOTORE     | External motor casing |
| 004  | DISCO P/TENUTA       | Casing cover           | 056  | GUARNIZ.COPRIMORS. | Box gasket            |
| 006  | ALBERO ROTORE        | Shaft with rotor       | 058  | PRESSACAVO         | Cable entry           |
| 007  | GIRANTE              | Impeller               | 077  | ANELLO OR          | "O" ring              |
| 009  | GRUPPO VENTURI+DIFF. | Diffuser+Venturi tube  | 078  | ANELLO OR          | "O" ring              |
| 011  | TENUTA MEC.PARTE ROT | Mechanical seal roll.  | 200  | VITE               | Screw                 |
| 011  | TENUTA MEC.PARTE FIS | Mechanical seal fix.   |      |                    |                       |
| 012  | CASSA MOTORE         | Motor frame            |      |                    |                       |
| 013  | COPERCHIO MOTORE     | Motor cover            |      |                    |                       |
| 014  | VENTOLA              | Fan                    |      |                    |                       |
| 015  | COPRIVENTOLA         | Fan cover              |      |                    |                       |
| 016  | MORSETTIERA          | Terminal box           |      |                    |                       |
| 017  | COPRIMORSETTIERA     | Terminal box cover     |      |                    |                       |
| 018  | RONDELLA PARASPRUZZI | Slash ring             |      |                    |                       |
| 019  | CUSCINETTO           | Bearing                |      |                    |                       |
| 020  | CUSCINETTO           | Bearing                |      |                    |                       |
| 021  | ANELLO COMPENSATORE  | Adjusting ring         |      |                    |                       |
| 022  | TIRANTE              | Tie rod                |      |                    |                       |
| 024  | TAPPO                | Priming plug           |      |                    |                       |
| 025  | TAPPO                | Drain plug             |      |                    |                       |
| 026  | ANELLO OR            | "O" ring               |      |                    |                       |
| 028  | ANELLO OR            | "O" ring               |      |                    |                       |
| 030  | DISTANZ.TENUTA MECC. | Mechanical seal spacer |      |                    |                       |
| 031  | DISTANZ.DISCO/TENUTA | Thrust flange          |      |                    |                       |

- 1) Release the bolts (200) of the casing (1)
- 2) Carry out the cleaning of the impeller (7) and the venturi unit (9) using exclusively non-toxic detergents suitable for use with foodstuffs
- 3) Insert the casing (1) and tighten the bolts (200).

For further information consult the use and maintenance manual of the pump.

## 5.2 CLEANING THE COAXIAL ELECTRIC PUMP



| POS.<br>REF. | DESCRIZIONE<br>DESCRIPTION           | N.<br>NR. |
|--------------|--------------------------------------|-----------|
| 1            | CULATTA ANTERIORE / FRONT COVER      | 1         |
| 2            | OR CULATTA / O RING COVER            | 2         |
| 3            | CORPO POMPA / CASING                 | 1         |
| 4            | GUARNIZIONE / GASKET                 | 2         |
| 5            | MORSETTO / SCREW CLAMP               | 2         |
| 6            | RACCORDO / COUPLING                  | 2         |
| 7            | GIRANTE / IMPELLER (NR)              | 1         |
| 8            | CULATTA POSTERIORE / REAR COVER      | 1         |
| 9            | TENUTA MECCANICA / MECHANICAL GASKET | 1         |
| 11           | RONDELLA / WASHER                    | 2/4       |
| 12           | DADO / NUT                           | 2/4       |
| 21           | VITE / BOLT                          | 2         |
|              | CAVALLOTTO / U BOLT                  | 1         |
| 22           | CAVALLOTTO / U BOLT                  | 1         |
|              | DISTANZIALE / SPACING RING           | 1         |
| 23           | ANELLO SEEGER / SEEGER INOX          | 1         |
| 24           | CHIAVETTA / FLAT KEY                 | 1         |

- 1) Release the bolts (21) of the front cover
- 2) Carry out the cleaning of the impeller (7) and the casing (3) using exclusively non-toxic detergents suitable for use with foodstuffs
- 3) Reassemble the pump and tighten the bolts (21).

For further information consult the use and maintenance manual of the pump.

## 6. WHAT TO DO IF...



Before carrying out any type of operation make sure that the machine is switched off, that any heated parts have had time to cool and that the electrical supply is disconnected (the plug should be removed from the socket).

| PROBLEM   | CAUSE   | ACTION  |
|---|---|---|
| <b>THE PUMP DOES NOT SUCK</b>                                       | The sense of rotation of the pump is inverted ( <b>only for pumps with three-phase motors</b> ) | Invert the phases on the terminal of the motor checking that the sense of rotation of the motor is that indicated by the arrow on the posterior cover of the fan. |
|   | Air has penetrated the suction circuit  | Check that the suction tube is intact and that its free end is submerged. Proceed once more with the filling up of the casing.                                    |
|   | The impeller of the pump is clogged   | Proceed with the cleaning of the pump (Para. 5.1 and 5.2)   |
| <b>THE CIRCUIT IS NOT PRESSURISED</b>                               | Air has penetrated the suction circuit  | Check that the suction tube is intact and that its free end is submerged. Proceed once more with the filling up of the casing.                                    |
|   | The impeller of the pump is clogged   | Proceed with the cleaning of the pump (Para.5.1 and 5.2)  |
| <b>EXCESSIVE DRIPPING FROM THE FILTERS</b>                          | The filtering unit made up of plates and sheets is not closed adequately                        | Close the filtering pack more tightly   |
|   | The filter sheets are not suitable, or the seals are worn                                       | Substitute the filtering sheets or seals (Para.4.7)   |
| <b>THE FILTER DOES NOT REACH THE EXPECTED PRESSURE</b>              | The filter sheets are not suitable for the product being treated                                | Substitute the filtering sheets according to the selection table (Para.5.1)   |
| <b>THE PRESSURE SHOWN ON THE GAUGE IS SUPERIOR TO THAT EXPECTED</b> | The filter sheets are not suitable for the product being treated                                | Substitute the filtering sheets according to the selection table (Para.4.1)   |
| <b>THE PRODUCT IS NOT CORRECTLY FILTERED</b>                        | The filter sheets are damaged   | Substitute the filter sheets (Para.4.2)   |
|   | Air has penetrated the suction circuit  | Check that the suction tube is intact and that its free end is submerged. Proceed once more with the filling up of the casing.                                    |

## **7. GUARANTEE**

The machine comes with a 12 month guarantee valid from the date of consignment (date of issue of the transport document).

The guarantee does not cover:

- parts in glass
- knobs or handles
- lamps
- fuses
- aesthetic parts made from plastic materials
- removable parts made from plastic materials
- micro - switches
- electric valves

The guarantee does not cover:

- parts damaged during transport
- damage caused by incorrect installation or maintenance
- damage caused by inadequate electrical or pneumatic supply
- damage caused by use not in keeping with warnings given in this manual
- damage caused by tampering or intervention not provided for by this manual by persons not connected with F.Ili Marchisio Spa or persons not authorised by them

**The guarantee of F.Ili Marchisio Spa. gives the absolute right to replacement of those components which result as being defective, in the shortest time possible.**



**Compensation for damage, or lack of production is excluded from the guarantee.**

Transport costs to and from our factory in Pieve di Teco (IM), customs duty, importation/exportation expenses, and any other expenses or tax relative to the delivery to our factory of guaranteed parts, and the reconsignment thereof to their destination will be charged to the client.

**F.Ili MARCHISIO S.p.a.  
18026 – Pieve di Teco (IM)  
ITALIA  
Tel: 0183 – 36237  
Fax: 0183 – 36038**

## **8. ORDERING SPARE PARTS**

To order spare parts it is necessary to supply the following information:

- 1) Model number of the machine as shown on the plate 
- 2) Serial number and year of construction as shown on the plate 
- 3) Code number of the item requested (second column of the following list of materials)
- 4) Description of the item (third column of the list of materials)
- 5) Quantity of each item requested

### **NOTE TO USER**

In continuing our efforts to improve our products we would appreciate any recommendations you may have relative to any causes of failure or poor operation. Every suggestion from you as users will be transformed into forming part of a constant growth in the quality of our products.

| POS | CODE                     | DESCRIPTION   |
|-----|--------------------------|---|
| 1   | 005.10.202               | FIXED PLATE   |
| 2   | 005.10.204<br>005.30.209 | DRIP COLLECTING TRAY 10-20<br>DRIP COLLECTING TRAY 30-40              |
| 3   | 005.10.203               | FIXED PLATE HANDWHEEL   |
| 4   | 005.10.101<br>005.30.121 | SUPPORT SHAFT SHORT PLATE (10-20)<br>SUPPORT SHAFT LONG PLATE (30-40) |
| 5   | 005.10.206               | LEG HANDWHEEL SIDE  |
| 6   | 005.10.205               | LEG PUMP SIDE   |
| 7   | 005.10.207<br>005.30.210 | MOTOR SUPPORT PLATE (10-20)<br>MOTOR SUPPORT PLATE (30-40)            |
| 8   | 005.10.201               | MOBILE PLATE  |
| 9   | 005.10.103               | MOBILE BUSH BEARING   |
| 10  | 005.10.104               | PRESSURE REGULATOR BODY   |
| 11  | 005.10.102               | FIXED SOCKET HANDWHEEL  |
| 12  | 005.10.105               | PRESSURE REGULATING KNOB  |
| 13  |                          | WASHER SEAL 3068  |
| 14  | 005.10.106               | HOSE CONNECTION NIPPLE  |
| 15  | 005.10.107               | CAP COUPLING BUSH BEARING   |
| 16  | 005.10.108               | CAP   |
| 17  |                          | WASHER SEAL OR 3056   |
| 18  | 005.10.109               | STOP NUT  |
| 19  | 005.10.110               | SUCTION VALVE BODY  |
| 20  | 005.10.111               | SUCTION VALVE KNOB  |
| 21  | 005.10.112               | SUCTION VALVE CAP   |
| 22  |                          | WASHER SEAL OR 3043   |
| 23  | 005.10.113               | DELIVERY HOSE CONNECTION BUSH BEARING                                 |
| 24  | 005.10.114               | DELIVERY HOSE CONNECTION  |
| 25  |                          | SILICON SEAL h=2 mm   |
| 26  | 005.10.702               | TERMINAL PLATE PUMP SIDE  |
| 27  | 005.10.701               | CENTRAL PLATE   |
| 28  | 005.10.703               | TERMINAL PLATE HANDWHEEL SIDE   |
| 29  |                          | FILTERING SHEET   |
| 30  |                          | SILICON SEAL h=4 mm   |
| 31  |                          | MOTOR   |
| 32  |                          | PUMP JES 5 - INOX<br>PUMP EP-MINI                                     |
| 33  |                          | WHEEL WITH BRAKE  |
| 34  |                          | WHEEL   |
| 35  | 005.10.601<br>005.30.602 | THREADED SHAFT HANDWHEEL L=330<br>THREADED SHAFT HANDWHEEL L=500      |
| 36  |                          | HANDWHEEL D=180, M16  |
| 37  |                          | BLIND NUT M12 - STAINLESS STEEL UNI 5721                              |
| 38  |                          | LOW NUT M24 x 2 - STAINLESS STEEL                                     |
| 39  |                          | WASHER M6 -STAINLESS STEEL UNI 6592                                   |
| 40  |                          | SCREW TE M5 x 20 STAINLESS STEEL                                      |
| 41  |                          | MEDIUM NUT M5 - STAINLESS STEEL                                       |
| 42  |                          | SCREW TE M6 x 20 STAINLESS STEEL                                      |
| 43  |                          | MEDIUM NUT M6 - STAINLESS STEEL                                       |
| 44  |                          | THREADED NIPPLE 1/4" FOR TRAY VALVE                                   |
| 45  |                          | TRAY DISCHARGE VALVE 1/4" GAS   |
| 46  | 005.10.604               | HOSE  |
| 47  |                          | PRESSURE GAUGE 1/4" G (0-6 bar)                                       |
| 48  |                          | CLIP 16/27  |
| 49  |                          | WASHER SEAL OR 2068   |
| 50  | 005.10.116               | NIPPLE  |
| 51  |                          | WASHER SEAL OR 4106   |
| 52  | 005.10.117               | BYPASS EXIT   |
| 53  | 005.10.115               | BYPASS ENTRY  |
| 54  | 005.10.118               | HOSE CONNECTION NIPPLE  |
| 55  | 005.10.603               | BY-PASS PIPE  |
| 56  |                          | WASHER SEAL OR 2050   |
| 57  | 005.10.211               | INTERMEDIATE PLATE  |
| 58  | 005.10.119               | CAP FOR INTERMEDIATE PLATE  |
| 59  | 005.10.120               | PERFORATED CAP FOR INTERMEDIATE PLATE                                 |

## **9. DECLARATION OF CONFORMITY**



The manufacturer declares complete responsibility in that the machine with the mark



**Filler model** **MINUS 20**

**Serial number** **MFM0001**

**Year of construction** **2003**

conforms with the legislative provision which dictates the following directives:

**CEE 89/392 ; CEE 91 / 368 ; CEE 93 / 44 ; CEE 93 / 68 CEE 73 / 23 ; CEE 89 / 336**  
(Also known as Machine Directive)

**CEE 73 / 23** (Low tension Directive)

**CEE 89 / 336** (Directive relative to Electromagnetic Compatability)

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