



# spadoni

## "EC" CONFORMITY DECLARATION

Manufacturer:

**MECCANICA SPADONI S.r.l.**

Headquarter:

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tel. 0039.0763.316181 -telefax 0039.0763.316384

**The Manufacturer, hereby states that the machinery:**

SERIES IDENTIFICATION : *KAPPA*  
MODEL : *KAPPA/4*  
SERIAL NUMBER : *OSTPX 0186*  
YEAR OF MANUFACTURING : *2005*

**Is in compliance with the following legislation criteria :**

- Norms 98/37/CE and subsequent amendments on safety of machinery
- Norms 89/336/CEE and subsequent amendments on electromagnetic compatibility
- Norms 73/23/CEE and subsequent amendments on safety of electrical material for low tension

**The Manufacturer declares that all the following norms have been accomplished and applied :**

EN 292-1:1991 Safety of machinery  
- Fundamental concepts and general principals of design  
- Terminology, basic methodology

EN 292-2:1991 Safety of machinery  
- Fundamental concepts and general principals of design  
- Specification and technical principles

EN 294:1992 Safety of machinery  
- Safety distances to avoid contact with lower limbs in dangerous areas  
- Fundamentals concepts and general principals of design

EN 349:1993 Safety of machinery  
- Minimum spaces to avoid body's parts crushing

EN 60204-1-1992 Safety of machinery. Electric equipment of machinery  
- Part 1 : general norms

ORVIETO *02/05/05*

MECCANICA SPADONI SRL  
SERGIO SPADONI  
President

## 2 ) HOW TO USE AND CARE FOR THE INSTRUCTION MANUAL.

This chapter contains information about how to use the instruction manual and the limitations to its use.

### 2.1 - *For whom is the instruction manual.*

This Instruction Manual has been compiled for the following persons:

- persons in charge of transporting, loading and unloading the machine
- operators
- installers
- maintenance staff

### 2.2 - *Aim of the informations contained in the I.M.*

The purpose of the manual is to inform readers about how to use the machine in the correct way. It also gives the technical specifications of the machine, instructions about how to handle, install, regulate, use and service the machine and how to order spare parts in the correct way.

### 2.3 - *Limitations of the I.M.*

Remember that the manual can never substitute the operators' adequate experience. It can only act as a reminder of the main operations required.

Also remember that the Instruction Manual reflects the state-of-the-art at the time the machine is purchased and that the manufacturer reserves the right to update the Instruction Manual and equipment without being obliged to adapt previous Instruction Manuals and productions, unless in exceptional cases.

### 2.4 - *How to reserve the I.M.*

The user should keep the manual with care so that it lasts as long as the machine.

This is why the manual is supplied in a special case which will safeguard it against wear and deterioration.

The section on "handling the machine" is also supplied in duplicate (to allow the haulage contractor and the persons who unload the machine to consult the text without having to use the main manual).

If the manual is lost or destroyed, another copy can be obtained by making a specific request to your area dealer or the manufacturer. Always specify the type of machine, the model and the year of manufacture when ordering copies of the manual.

## 2.5 - *General warnings*

### **IMPORTANT !**

**never carry out any operation or manoeuvre unless you are absolutely certain that it is correct.**

**contact the manufacturer or your area dealer if you are in doubt.**

**The manufacturer relieves themselves from any responsibility for damages incurred to the machine, operating personnel or to the product itself in the case of:**

- operation of the machine by unexperienced personnel**
- incorrect installation**
- improper feeding or operating of the machine**
- lack of maintenance**
- forced interventions or modification**
- use of non-original spare parts**
- lack of total observation of operating instructions**
- exceptional events**

### 3 ) MOVING OF THE MACHINE

This chapter contains instructions about how to correctly carry out the loading - unloading and machine handling operations.

#### 3.1 - *Transport packaging.*

The machine is supplied packed and palletized.

#### **IMPORTANT!**

**BEFORE UNPACKING THE MACHINE IT IS ADVISABLE TO CHECK WHETHER IT HAS BEEN DAMAGED DURING TRANSPORTATION. IN CASE OF DAMAGES:**

- A) CONTACT OUR SALES REP. OR OUR MAIN OFFICE IMMEDIATELY;**
- B) ISSUE A WRITTEN REPORT;**
- C) COPIES OF THIS WRITTEN REPORT SHOULD BE MAILED TO:**
  - TRANSPORTATION COMPANY**
  - INSURANCE COMPANY**
  - SELES AGENT OR MANUFACTURER**

#### 3.2 - *Handling operator.*

The persons who handle the machine need not possess any particular requisites. However, the operations should always be carried out by persons who habitually use lifting means, so we suggest the use of experienced personnel in order to move the unit.

#### 3.3 - *Means necessary to the move the machine.*

The machine can be lifted with a lift truck, bridge crane or other suitable means (with a carrying capacity shown in the TABLE 1)

Tables **D.1** enclosed with this manual contain a dimensional diagram of the machine indicating its weight and overall dimensions.

#### 3.4 - *Instructions to lift the machine.*

New machines are all packed.

The overall weight of the machine and its packaging is clearly indicated and this information is also easy to read on the outside of the pack.

The pallet can be harnessed and lifted with a bridge crane or forked by a lift truck.

#### **Important .**

**Although the lifting operations are very simple, always remember to make sure that the load is well balanced before commencing.**

### 3.5 *Instructions to lift uncrated machine using a forklift.*

Make sure that the lift truck forks are correctly positioned to prevent the machine from being damaged when lifted.

If you intend to use a fork lift to move the unit, be sure that the fork lift is positioned to avoid any damages to the machine. Follow the scheme indicated in Table D.2.

#### **Important**

**To prevent damage, make sure that the metal part of the forks is unable to come into direct contact with the framework of the machine.**

**Do not sling the machine with a metal cable or with metal chains.**

### 3.6 *Instructions to lift uncrated machine using a overhead crane.*

Accessories :	belts in textile fiber.
minimum carrying capacity:	see TABLE 1
length:	see TABLE 1

The harnessing diagram is given in table D.2 enclosed with this chapter.

#### **Important**

**Do not use metal ropes or chains for harnessing purposes as they could damage the machine.**

### 3.7 - *Moving instructions*

The machine is mounted on four wheels and can therefore be moved by hand or, better still, with a driven truck.

Particular precautions must be taken if the floor surface is not level.

#### **Important**

**Do not move the machine by hand on a non-uniformed or uneven surface.**

**In such a case, position the machine on its frame and move it by means of a fork lift or an overhead crane taking special care not to damage the unit.**

**If the unit experiences any type of shock, immediately control if any damage has been incurred and if necessary immediately contact either the manufacturer or the sales agent.**

### 3.8 - *Stationary precautions*

The machine has been designed to work on a flat surface.  
In these conditions, it will not need to be locked in place in any way.

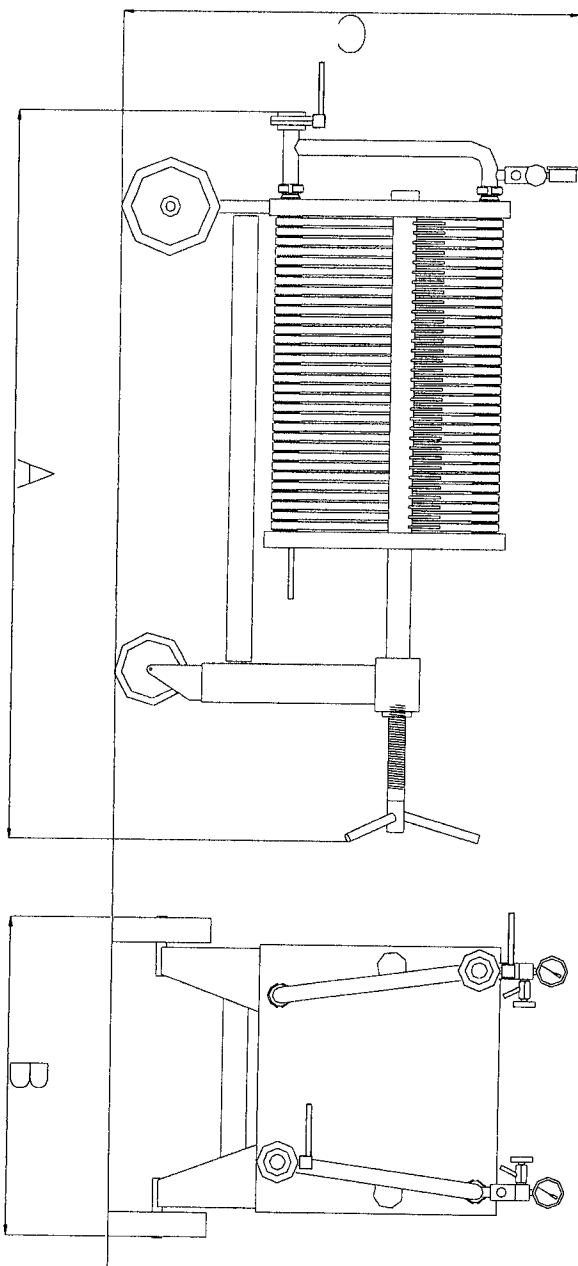
#### **Important**

**If the machine has to work on an uneven surface, secure the fixed wheels with the provided stops and position the brakes on the two free wheels**

**It is not suggested to keep the machine on a slope greater than 2%.**

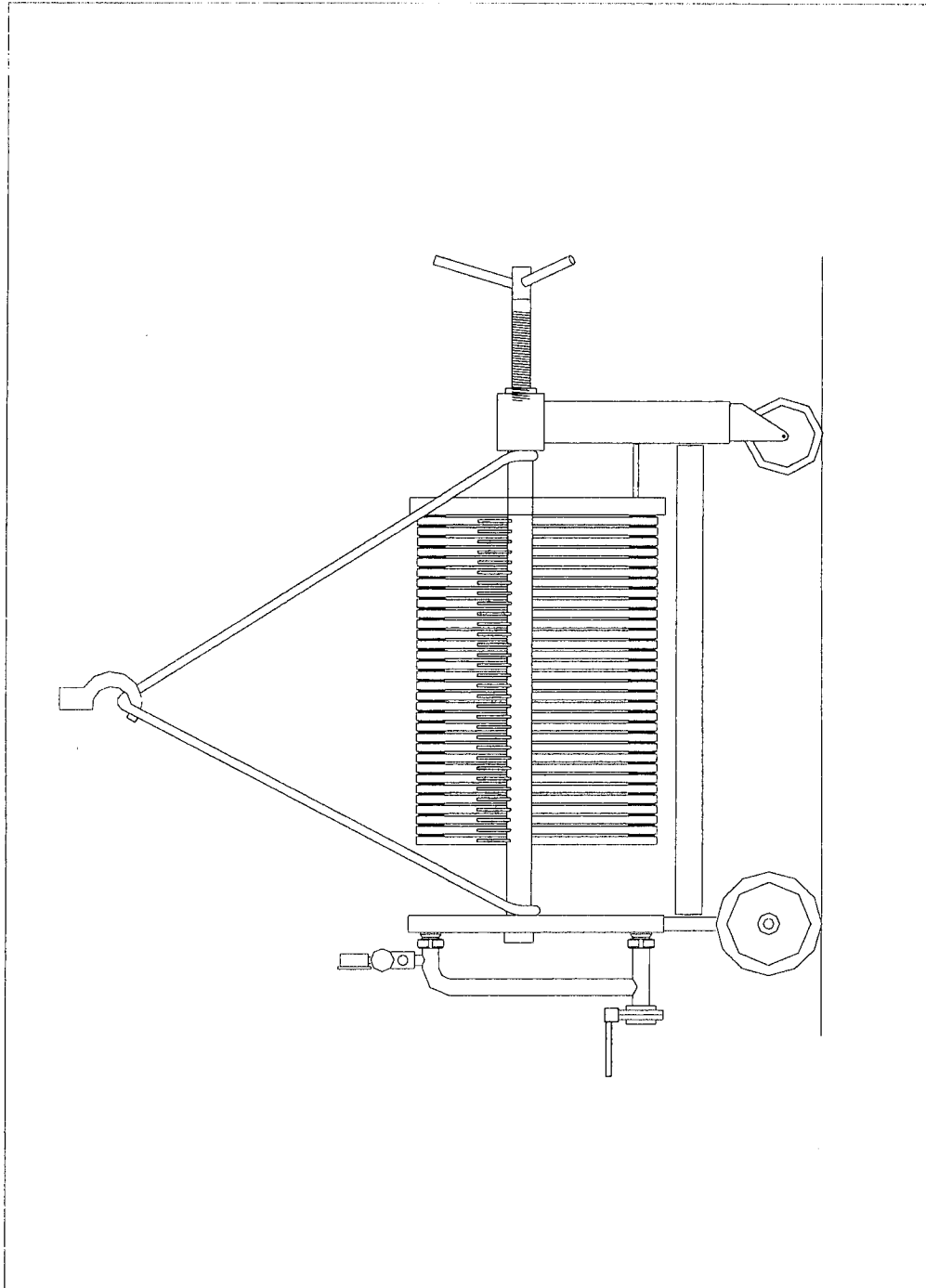
**It is inadvisable to leave the machine standing on slopes with a gradient of more than 5% even when it is blocked.**

MODEL	3	4	5	6	7	8	9	10
A (mm)	1240	1240	1560	1560	2065	2065	2495	2835
B (mm)	685	685	685	685	685	685	685	800
C (mm)	940	940	940	940	1000	1000	1095	1235

TAV. D.1  
DIMENSIONAL DIAGRAM

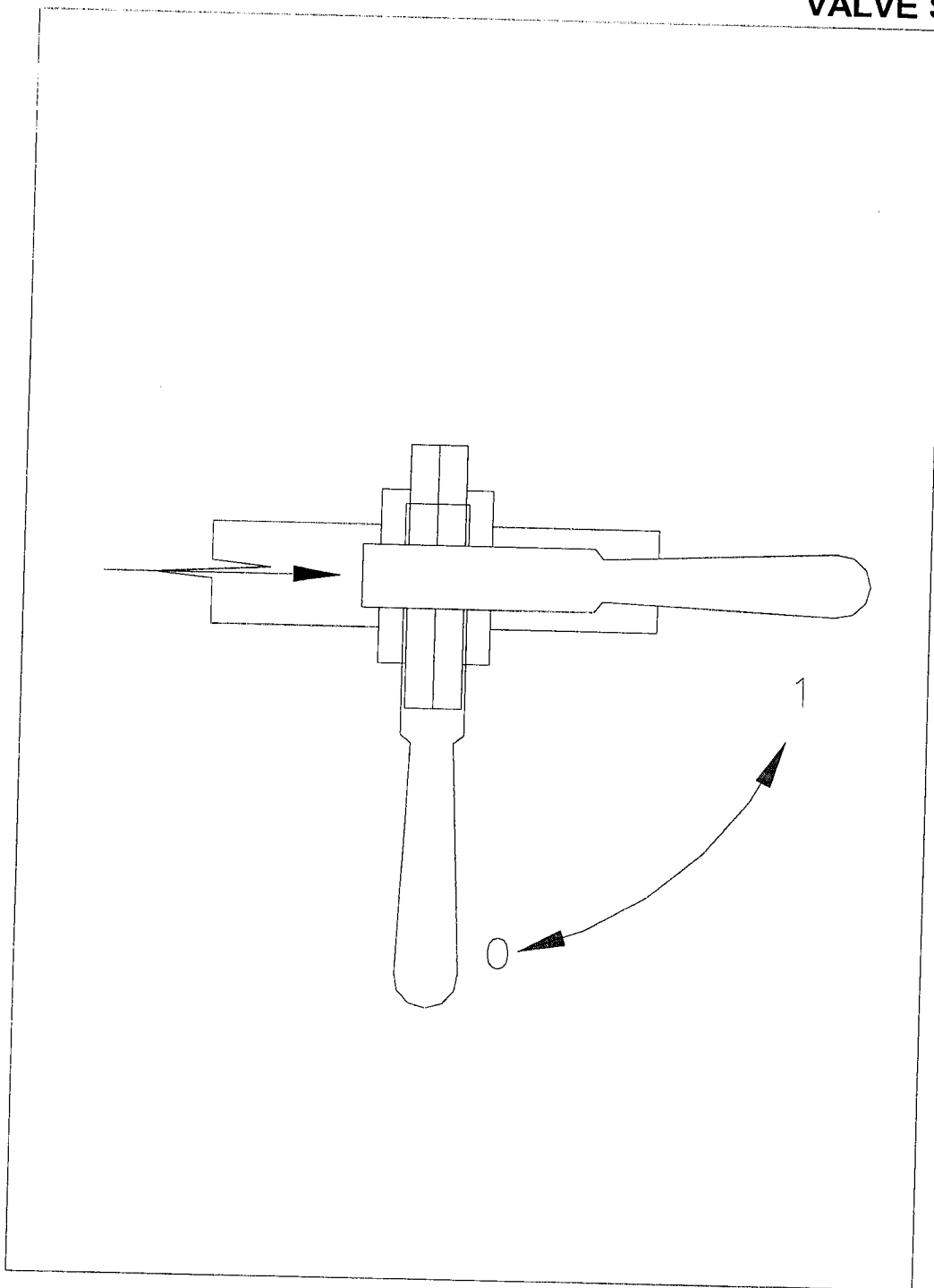
TAV.D.2

MOVING OF THE MACHINE





**TAV.D.5**  
**VALVE SCHEME**



0	CLOSED
1	OPEN

## 7 ) DESCRIPTION OF THE MACHINE.

### 7.1 *Parts that compose the filter.*

The filter is composed of a bearing frame (10 TAV.100).

The filter set is composed of various plates (Noryl), and the closing mobile plate (12 TAV.100).

Various valves for the filtration and for eventual steam sterilization complete with warning lights and pressure gauges (5/6/7/8 TAV.100).

The filter is also composed of a closure screw (14 TAV.100) with cross bar (15 TAV.100) and of a drip collecting tray (9 TAV.100).

### 7.2 *Operations to execute before starting.*

Before starting, and sometimes during operation check that the tie rod closing nuts (1) are tightly closed. Lubricate the closure screw with grease. At the same time move the screw both forwards and backwards being sure to lubricate entire rod. Once completed, remove excess grease.

#### 7.2.1 *Sanitizing:*

The machine, once connected to the feeding line, is ready to start.

#### **IMPORTANT**

**Before starting the machine ensure the following :**

**Initial start : a sanitizing wash has been completed**

**After an inactive period : a sanitizing wash has been completed.**

**Sanitizing solution:** prepare a solution of water and citric acid of 3% at a temperature of 45 degrees C.

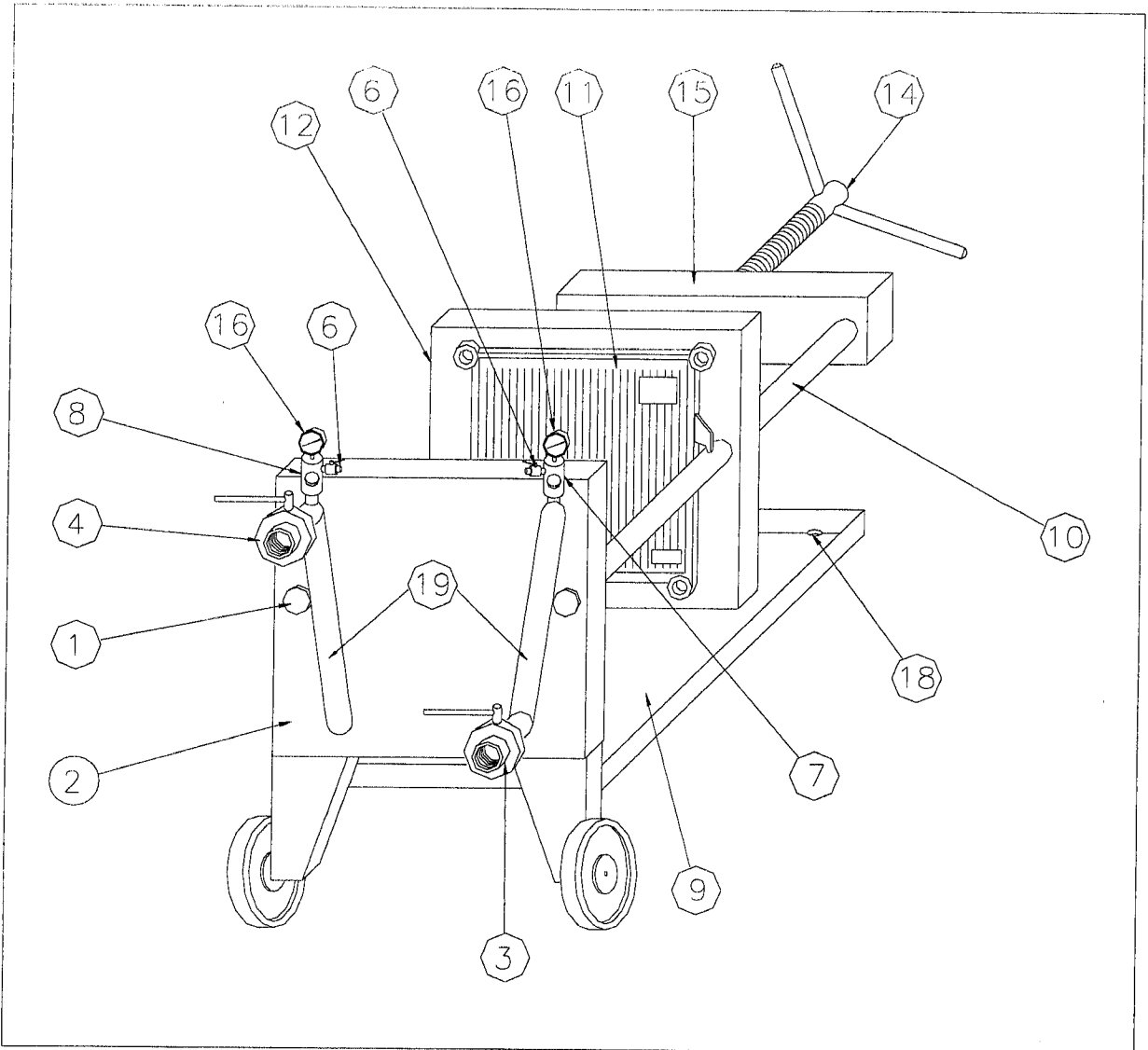
- a) Prepare the sanitizing solution. (approx. 300 Lt)
- b) Prepare the valves 3, 4 e 6 opened.
- c) Begin to fill the filtering vessel with the sanitizing solution
- d) Turn on the pump utilized
- e) Let it circulate for 15-20 minutes.
- f) Completely empty the filter, turning off the pumps and opening the valves.
- g) Repeat this operation at least twice with potable water.

### 7.3 *Filtration that you desire to execute.*

According to your needs, this unit will allow you to achieve various kinds of filtration. From rough filtration to sterilization. That type of filtration is achieved through the use of different filtering sheets (**TAB D.150**).

### 7.4 *Working principles of the filter.*

The contaminated or dirty product is pushed through the filtering sheets where the required filtration is achieved according to chosen cardboards, i.e. the associated micron level of the cardboards (**TAV.D.110**).



<b>1</b>	<b>Tie rod closing unit</b>
<b>2</b>	<b>Closing head plate</b>
<b>3</b>	<b>Inlet valve</b>
<b>4</b>	<b>Outlet valve</b>
<b>5</b>	<b>Sampling valve (optional)</b>
<b>6</b>	<b>Air discharge valve</b>
<b>7</b>	<b>Inlet sight gauge</b>
<b>8</b>	<b>Outlet sight gauge</b>
<b>9</b>	<b>Drip collecting tray</b>
<b>10</b>	<b>Bearing frame</b>
<b>11</b>	<b>Filtering element</b>
<b>12</b>	<b>Closing mobile plate</b>
<b>14</b>	<b>Closure screw</b>
<b>15</b>	<b>Cross bar</b>
<b>16</b>	<b>Pressure gauge</b>
<b>18</b>	<b>Discharge plug</b>
<b>19</b>	<b>Pipe</b>

## 7.5 *Cardboards (Filter Sheets) Inserting*

First of all, each cardboard has a directional flow which allows the product to pass through. The cardboards have both a smooth and a porous side. The product must go in from the porous side and must exit from the smooth. Therefore, the smooth side must always be mounted on the clean side of the filter plate. (For easy following please find explanatory drawing on previous page).

Basically, the first cardboard (the one between the head plate and the 2nd plate) must have the smooth side turned toward the pressure gauges. Every odd card board, that is the 3rd, 5th, 7th, and so on (**TAV.D.110**), must have the smooth side turned toward the pressure gauge. Consequently, all even number cardboards must have the porous side turned toward the pressure gauges.

## 7.6 *Working pressure.*

You must not exceed a pressure of 2-2.5 **2/2.5 Atm.** . If you have a counter pressure on the outlet pressure guage, do not exceed a **2 Atm.** difference between the inlet and outlet pressure gauges.

## 7.7 *Operating.*

Connect the filter to the feeding pump, restricting the by-pass to a max pressure of **2.5 Atm.** Open the inlet valve (**3**) and open air discharge valves (**6**). When the product begins to exit via the air discharge valves (**6**), close valves and open the product outlet valve (**4**). The outlet sight gauge (**8**) allows you to control product filtration level. If out coming product is not sufficiently filtered, you may have to change your filter pads accordingly to a more porous filtering sheet.

If the product becomes dirty during filtration, it is possible that one of the cardboards have broken. Open filter and control if this is the situation. This may occur at **2-2.5 Atm.** Periodically, during filtration allows air to escape from the air discharge valves (**6**). If you are getting a high pressure too quickly, you need to utilize a tighter (less porous) filtering sheet.

## 7.8 *Drip collecting tray.*

The filter is equipped with a drip collecting tray (**9**). The loss of drops from the cardboards during filtration is to be considered normal. This loss increases with the increasing of filtration pressure. The tray is complete with a small discharge for easy removal of liquid.

## 7.9 *Washing With Water (Excepted Models For Oil)*

Tightly close the filter element. Connect the inlet valve to the water line and slightly open the water. While flooding the filter with water, open all other valves to allow an escape of air, therefore, avoiding any back pressure on the inlet pressure gauge.

### 7.10 *Production level of the filter.*

The filter must be connected to a pump complete with by-pass with a max. capacity suited for your filter. In the case of dense products a gear pump with a by-pass should be used in place of a centrifugal pump. **The production of the filter does depend on the pump's capacity**, but rather on: the cardboards used, the characteristics of the product, and on the level of contaminates present in the product. The production level can be regulated by recognizing the pump's characteristics, and with proper use of the by-pass in respect to the pressure indicated by the pressure gauge.

### 7.11 *Stainless steel plates (on request).*

Stainless steel plates can be provided on request.

The drainage side of these plates are designed utilizing specialized perforated steel. In the case of breakage within the filter sheets, which may cause small particle to lodge under the net, wash immediately with a high pressure hose or air jet. These particles may spoil the successive filtration.

### 7.12 *Removing the sheets from the filter.*

When removing the filter plates, remember that the assembly must be reinserted in the same order so to uniform the exact format of the filtration.

**NB:** The head plate is that which is reinforced and the middle plates are indicated by even numbers.

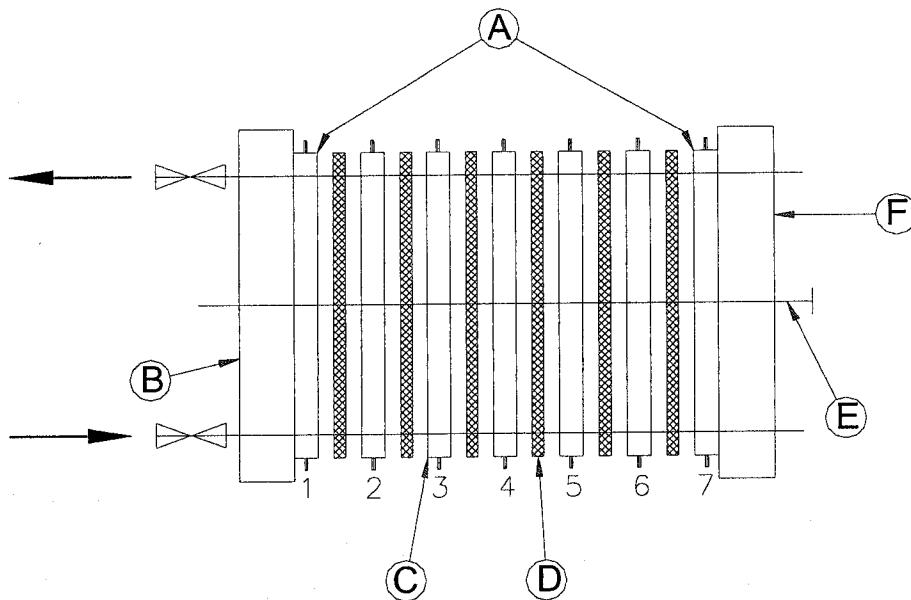
### 7.13 *Filter with inversion plate.*

An inversion plate is used to achieve double filtration, by utilizing two different types of filter sheets. The inversion plate is inserted at any point of the filter assembly. Remember to insert inversion plate at the position of a clean plate.

In the case of those filters utilizing an inversion plate, the outlet will be from the mobile head plate and the inlet will be positioned at the fixed head plate (see drawing).

When you insert this plate you must keep in mind the filtration capacity of the filtering cardboards being used. Allow for a greater number of plates on the side utilizing the finer (less porous) cardboards.

**WORKING PRINCIPLES**



A	HEAD PLATE	E	CLOSING SCREW
B	S/STEEL PLATE	F	SLIDING S/STEEL PLATE
C	PLATE	1-3-5-7	CLEAN PLATES
D	SHEET	2-4-6	DIRTY PLATES

## 7.14 Filter element

The filtration capacity of the card boards 40 x 40, according to the manufacturer is:

- filtration with clarifying cardboards 80 lt/h each
- filtration with sterilizing cardboards 50 lt/h each

When using sterilizing cardboard filter sheets do not exceed 1-1.5 bars of pressure. This will avoid damaging the cardboard pores.

## 7.15 Closing the unit By means of the hydraulic pump (OPTIONAL).

SEE TAB H.1

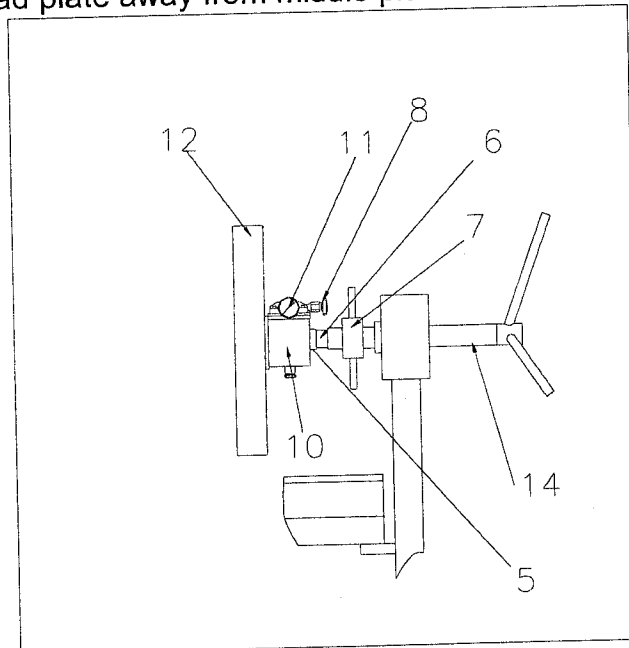
Approach the mobil head plate (12) by means of the threaded rod (14). By means of the hydraulic pump (10), with the piston, reach a blocking pressure of 150 ATE (verify on pressure gauge (11)). Block the plates by means of ring (7), this will position the piston for closing. Once the plates are blocked and the ring (7) is set, you must release the pressure by opening the plug on the pump. (ref. table 8).

At the end of filtration act on the hydraulic pump until pressure is of 150 ATE again.

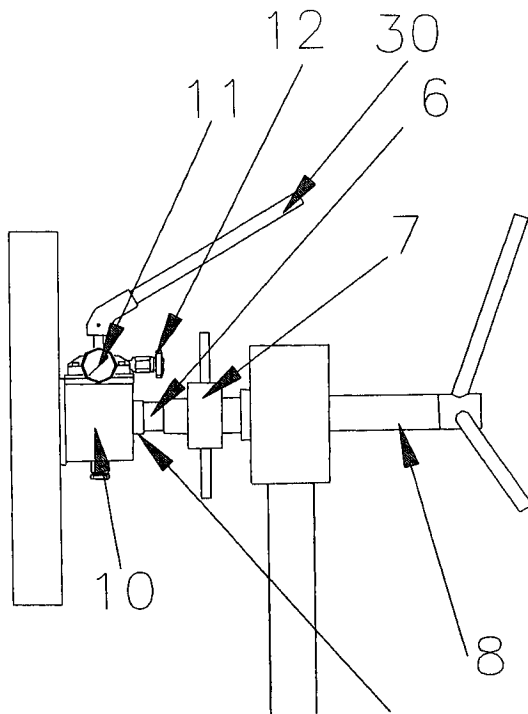
Open ring (7), which must be unscrewed until it can be removed from the cylinder of the hydraulic closure (5).

Open the regulator (8) and unscrew rod (14)

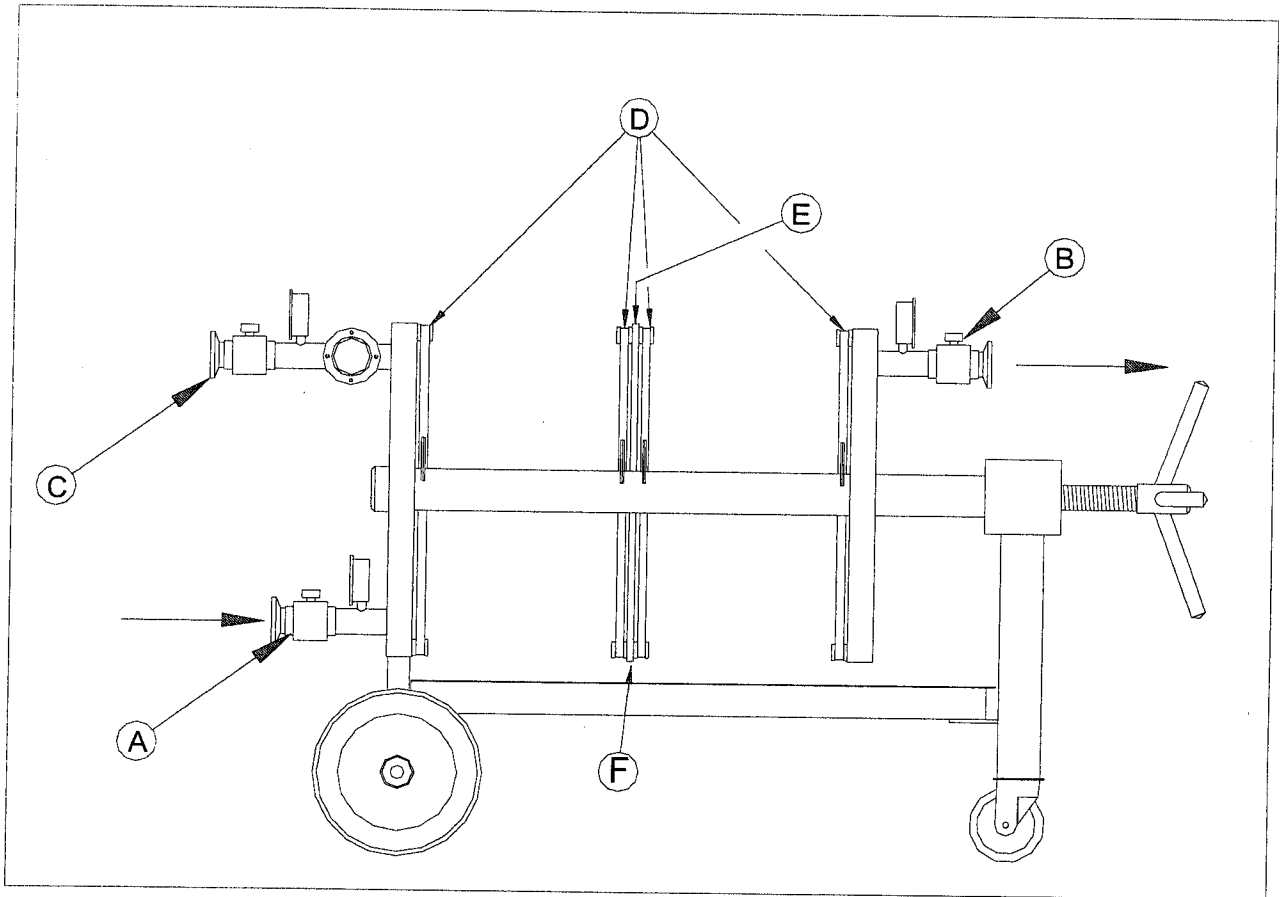
Release the mobile head plate away from middle plates.





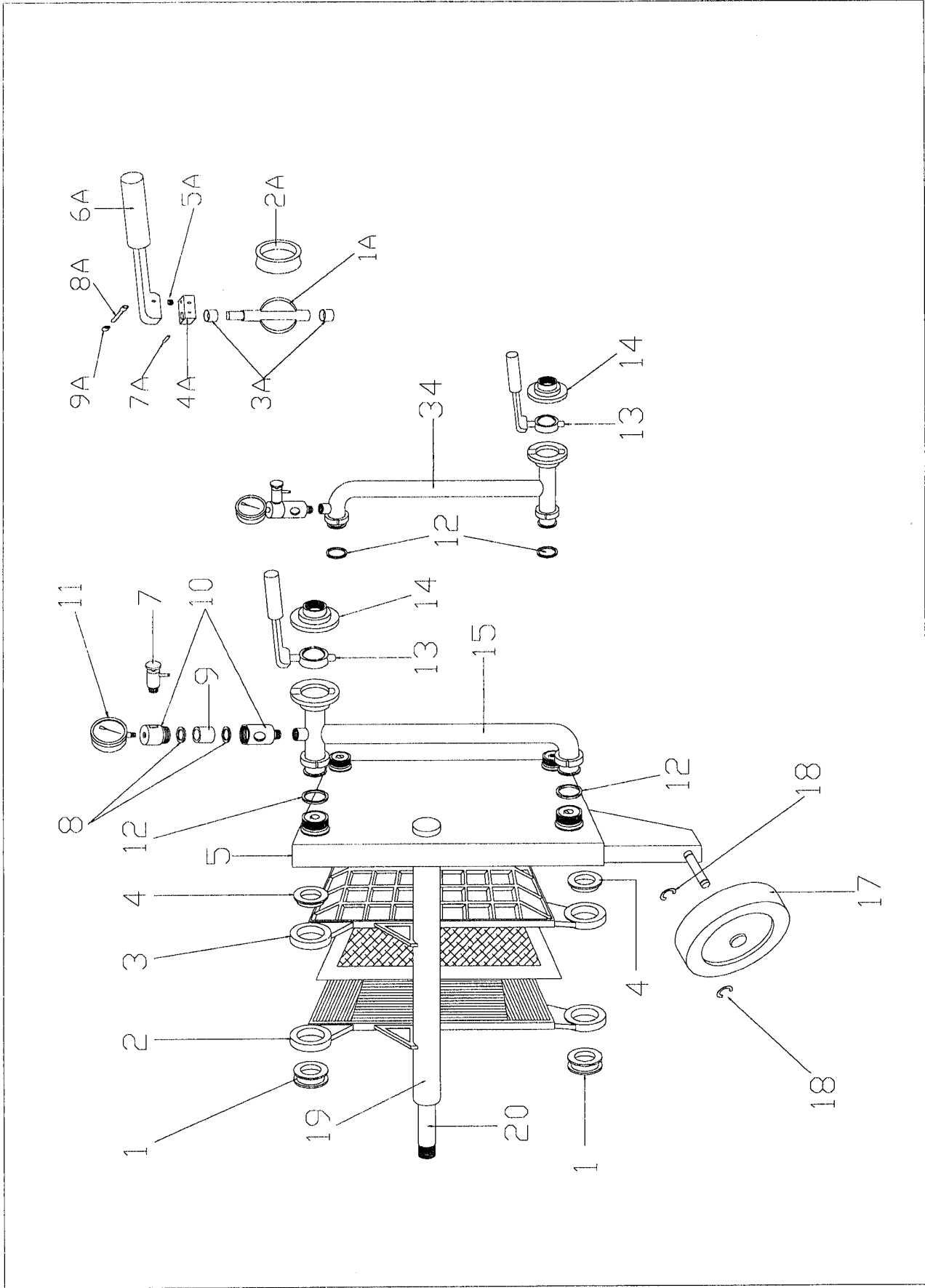


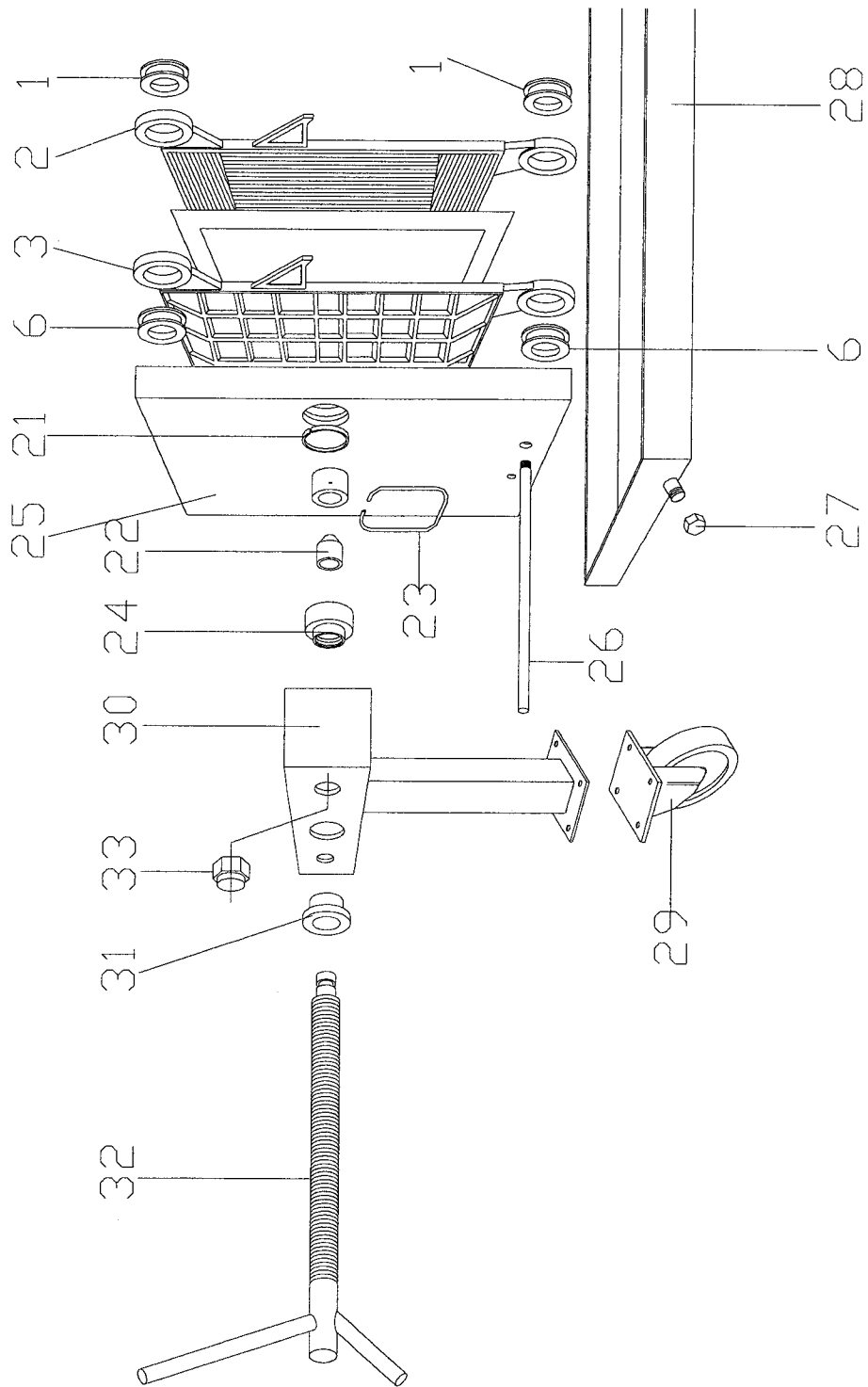
**RECONVERSION PLATE (OPTIONAL)**



A	INLER	D	CENTRAL HEAD PLATE
B	OUTLET	E	INOX PLATE
C	CLOSED VALVE	F	RECONVERSION PLATE GROUP (3 PICES)

KIND OF TREATING	KIND OF PLATE							
	BECO	CARLSON	CARTIERA	FILTROX	P.DE BESOS	SCHEN	SEITZ	
MOST	K1	XE 20	CKL-V12	AF 15	SA - 050	AF 6000	K 800	
YUNG WINE, PARTICULARLY DIRTY FOR FILTRATION THAT DOES NOT PRECEED BOTTLING	KD3	XE 90	CKP V8	AF 30	SA - 390	AF 4000	K 700	
COMPLETELY FERMENTED WINES THAT NEED POLISHING	KD7	XE150	CKP V12	AF 70	SA - 070	AF 1600	K 150	
FILTRATION OF PERFECT POLISHING FOR WINES WITH LOW BACTERICAL CHARGE	KDS15	X E 400	CKP V 16	AF 100	SA - 890	AFS 800	KS 80	
STERILIZING FILTRATION OF WINES WITH NOT FERMENTED SUGAR RESIDUAL	STERIL 140	X E 675	CKP V 20	AF STERIL 110	SA - 950	AFS 400	EK	
EVERY APPLICATION WICH IS REQUESTED AN ABSOLUTE STABILITY	S.S. 100	XE 2000	CKP V 24	AF STERIL 140	SA - 990	AFS 100	EKS	

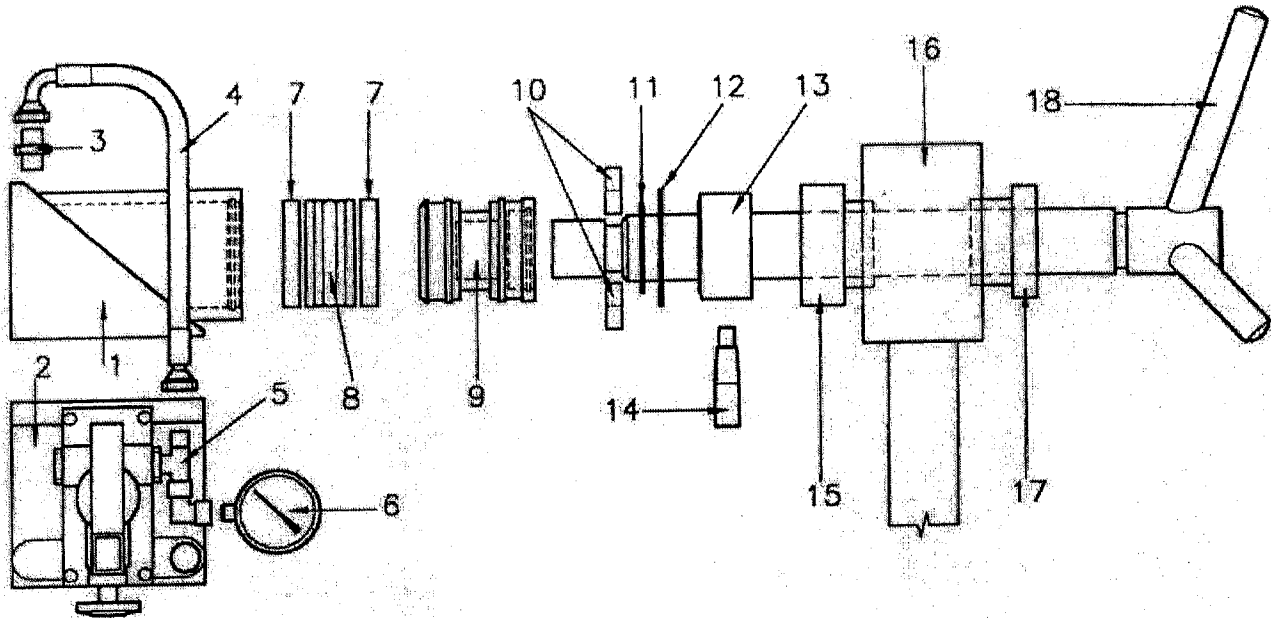




RIF.	DESCRIPTION	DESCRIZIONE
1	PLATE GASKET	GUARNIZIONE PIASTRA
2	PLATE STANDARD	PIASTRA INTERMEDIA
3	HEAD PLAT	PIASTRA DI TESTA
4	END PLATE GASKET	GUARNIZIONE PIASTRA DI TESTA
5	CLOSING HEAD PLATE	TESTATA FISSA
6	PLATE GASKET	GUARNIZIONE PIASTRA
7	AIR DISCHARGE VALVE	RUBINETTO SPURGO
8	GASKET	GUARNIZIONE
9	GLASS TUBE	TUBO VETRO
10	KAPPA SIGHT GLASS	SPECOLA
11	PRESSURE GAUGE	MANOMETRO
12	RING GASKET	GUARNIZIONE
13	COMPLETE HANDLE	MANIGLIA COMPLETA
14	BATTERFLY VALVE FLANGE WITH CONNECTION	FLANGIA VALVOLA FARFALLA CON RACCORDO
15	INLET PIPING	TUBAZIONE INGRESSO
17	RUBBER WHEEL	RUOTA GOMMA
18	BENZING RING	ANELLO BENZIF
19	SPACER PIPE	TUBO DISTANZIALE
20	TIE ROD	TIRANTE
21	SLIDING BUSHING	BOCCOLA SCORRIMENTO
22	BUSHING	BOCCOLA SPINTA VITE
23	PLUG	SPINA INDIETREGGIO VITE
24	NUT SCREW	MADREVITE
25	CLOSING MOBILE PLATE	TESTATA MOBILE
26	SHEET ROD	ASTA CARTONI
27	PLUG	TAPPO
28	BASIN	BACINELLA
29	TURNING WHEEL	RUOTA GIREVOLE
30	BACK BRIDGE	PONTE POSTERIORE
31	BUSHING	BOCCOLA
32	SCREW	VITE
1A	BUTTERFLY	FARFALLA
2A	GASKET	GUARNIZIONE
3A	BUSHING	BOCCOLE
4A	HANDLE VALVE BLOCK	BLOCCHETTO
5A	SPRING	MOLLA
6A	HANDLE	MANIGLIA
7A	PLUG	SPINA
8A	TIE ROD	TIRANTE
9A	BLOCK NUT	DADO BLOC.

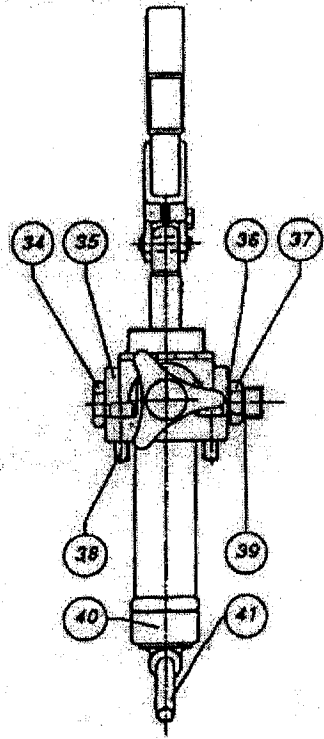
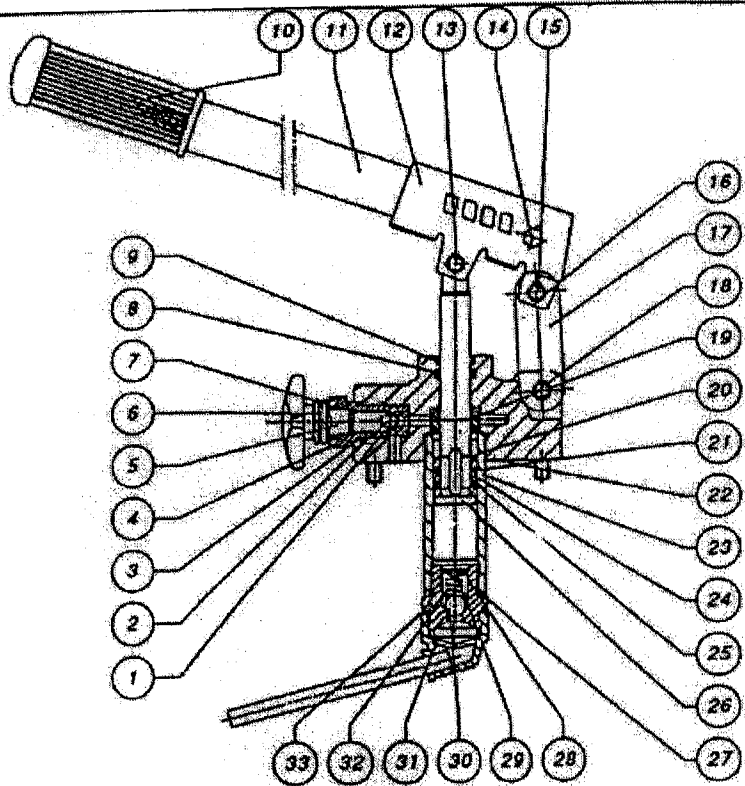
## APPENDIX A (OPTIONAL)

## TAB. 111



REF:	DESCRIPTION	DESCRIZIONE
1	CYLINDER WITH PUMP POSITIONING	CILINDRO CON PIAZZATURA POMPA
2	PUMP + LEVER	POMPA+LEVA
3	NIPPLE.	NIPPLE
4	TUBE	TUBO
5	CONNECTOR	RACCORDO
6	MANOMETER	MANOMETRO
7	GUIDE RING	ANELLO GUIDA
8	GASKET	GUARNIZIONE
9	HYDRAULIC CLOSURE PISTON	PISTONE CHIUSURA IDRAULICA
10	LOCK WASHER	RONDELLA DI BLOCCAGGIO
11	SEEGER	SEEGER
12	SEEGER	SEEGER
13	METAL RING HYDRAULIC PISTON STOPPING	GHIERA ARRESTO PISTONE IDRAULICO
14	HANDLE	IMPUGNATURA
15	MOTHERSCREW	MADREVITE
16	BLOCK	BLOCCHETTO
17	BUSHING DREG BRIDGE	BOCCOLA PONTE
18	SCREW WITH HANDLE	VITE CON MANICI

# TAB.100 SPARE PARTS SCHEME FOR HAND WITHOUT TANK PMSS





## SPARE PARTS SCHEME FOR HAND WITHOUT TANK PMSS

POS.	CODE	N°	DENOMINATION
1	506.0.589	1	"O" RING 4X1
2	543.4.32	1	TIGHT TAPERED PISTON
3	506.2.130	1	"O" RING 123
4	540.5.162	1	CUP FOR WHEEL
5	500.1.99	1	DRAIN COCK
6	506.0.595	1	BELLOWS GASKET
7	506.2.87	1	"O" RING 3056 (118)
8	506.0.507	1	ROD SEAL FOR PMSS 12
	506.0.276	1	ROD SEAL FOR PMSS 25
	506.0.285	1	ROD SEAL PMSS 45
9	506.0.874	1	Ø14 SPECIAL SEAL FOR PMSS 12
	506.0.614	1	Ø17 SPECIAL SEAL FOR PMSS 25
	506.0.730	1	Ø 22 SPECIAL SEAL FOR PMSS 45
10	509.2.72	1	LEVER GRIP HANDLE
11	539.4.77	1	LEVER 600-LONG
12	539.1.212	1	HAND PUMP LEVER
13	526.1.86	1	GUDGEON PIN Ø8X30 LONG
14	502.2.12	1	SCREW HITENSILE HEX HD M6X10
15	526.1.95	1	GUDGEON PIN Ø8X26 LONG
16	501.15.28	6	CIRCLIP RS6
17	538.1.18	2	25X81X5 INT=57 CONNECTING LINK 5
18	526.1.13	1	GUDGEON PIN Ø6X41 LONG
19	530.5.65	1	H=13 14,5X22 SPACER FOR PMSS 12
	530.5.10	1	H=12 22,5X31 SPACER FOR PMSS 25
	530.5.29	1	H=12 22,5X30 SPACER FOR PMSS 45
20	501.11.86	1	CIRCLIP EXTERNAL AV-14 E FOR PMSS 12
	501.11.111	1	CIRCLIP EXTERNAL AV-17 E FOR PMSS 25
	501.11.148	1	CIRCLIP EXTERNAL AV-22 E FOR PMSS 45
21	550.4.46	2	ANTI-EXTRUSION RING FOR PMSS 12
	506.2.158	1	"O" RING 127 FOR PMSS 25
	506.2.229	1	"O" RING 3106 FOR PMSS 45
22	507.3.208	1	GASKET-TANKPUMP
23	537.2.37	1	BARREL FOR PMSS 12
	537.2.19	1	BARREL FOR PMSS 25
	537.2.28	1	BARREL FOR PMSS 45
24	506.0.516	2	SPECIAL PISTON SEAL PM 12
	506.0.258	1	SPECIAL PISTON SEAL PM 25
	506.0.267	1	SPECIAL PISTON SEAL PM 45

POS.	CODE	N°	DENOMINATION
25	532.2.82	1	PM 12 PISTON HEAD
	532.2.28	1	PM 25 PISTON HEAD
	532.2.37	1	PM 45 PISTON HEAD
26	535.1.121	1	PISTON ROD 14Ø FOR PM 12
	535.1.69	1	PISTON ROD 17Ø FOR PM 25
	535.1.78	1	PISTON ROD 22Ø FOR PM 45
27	506.2.201	1	"o" RING 132 FOR PMSS 12/25
	506.3.95	1	"O" RING 137 FOR PMSS45
28	501.1.113	1	CIRCLIP INTERNAL 161
29	550.1.101	1	SPRING LOCATOR
30	510.9.116	1	BALL 7/16 Ø
31	550.1.12	1	GAUZER FILTER
32	512.5.689	1	SUCTION VALVE SPRING
33	540.5.19	1	SUCTION VALVE BODY FOR PMSS 12
	540.5.19	1	SUCTION VALVE BODY FOR PMSS 25
	540.3.37	1	SUCTION VALVE BODY FOR PMSS 45
34	540.6.45	1	SCREW PLUG FOR RELIEF VALVE
35	517.1.325	1	PM 12 + VS HAND PUMP BODY
	517.1.343	1	PM 25 + VS HAND PUMP BODY
	517.1.361	1	PM 45 + VS HAND PUMP BODY
36	116.9.309	2	17X23X1,5 (3/8") WASHER
37	116.6.80	1	3/8" 3/8" MALE/MALE ADAPTOR
38	502.3.566	4	SCREW SKT CAP M8X25
39	509.6.201	1	PROTECTION CAP
40	506.0.392	1	SUCTION CAP
41	541.4.36	1	SUCTION CAP

PMSS 12-25-45 SPARE PARTS KIT	
500.3.33	CUP FOR COCK KIT
500.7.11	COCK KIT
500.9.55	STEEL LEVERKIT
500.14.49	PM 12 HAND PUMP KIT
500.14.21	PM 25 HAND PUMP KIT
500.14.30	PM 45 HAND PUMP KIT
106.0.78	L=610mm LEVER