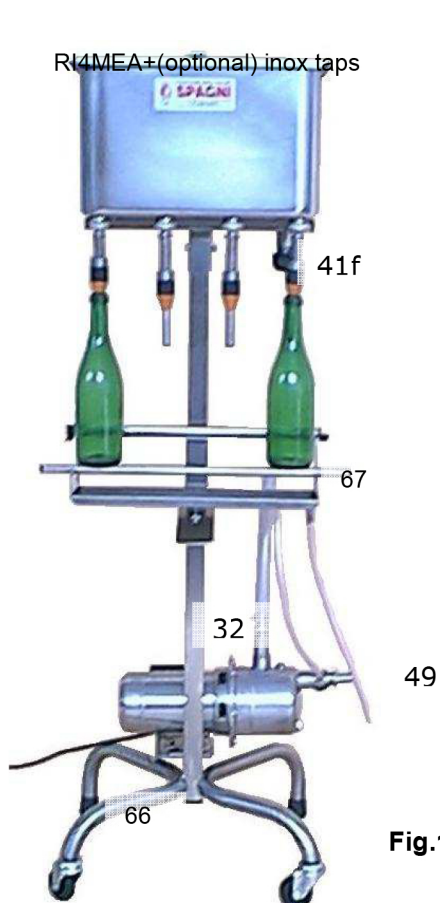




1,12-11,2 \*\*3,10-9,4 \*\*\*5,8-7,6

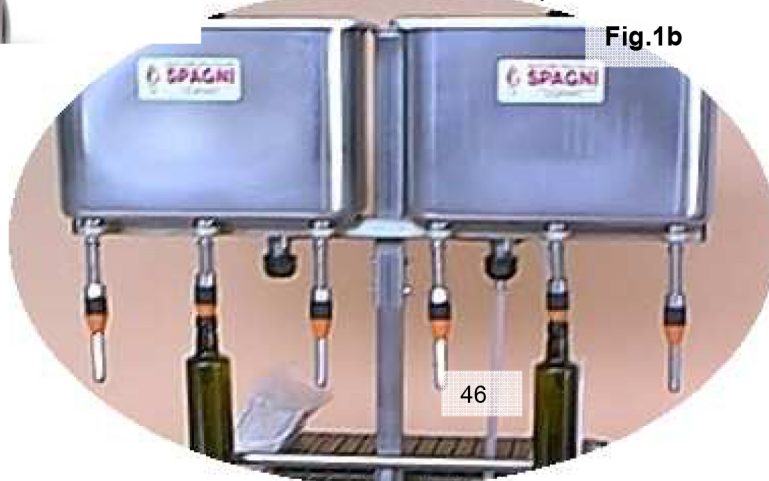
## LINEAR GRAVITY FILLING MACHINEVELLO **RI2-3-4-6-8MEA** USE and MAINTENANCE BOOKLET

**IMPORTANT**  
**READ THIS HANDBOOK CAREFULLY BEFORE THE COMPLETE OPENING OF THE PACKAGE**  
KEEP IT WITH THE MACHINE FOR FURTHER REFERENCE



n.	Table.4a Description
66	Group foot-engine support
67	Group Support-drip
68	Group bowl
68a	Dust cover

RI6MEA a due vaschette 6 erogatori standard



Chap.	description	Pag.	Chap.	description	Pag.
	MACHINE INTRODUCING SCHEDULE	1	5	PLACE OF WORK – BOTTLES – CLOTHING	4
	STATEMENT OF CONFORMITY	1	6	SETTING UP: GENERAL RULES	4-5-6
	PREARRANGED SIGNS	2	7	Functioning	7
	TECHNICAL TABLE accessories - surcharges	2	8	CLEANING AND MAINTENANCE	8-9
1	DESCRIPTION of the MACHINE	2		Filter connection scheme	9
2	GENERAL SAFETY WARNING	3	9	INCONVENIENCES – REMEDIES	10
3	ADMITTED AND NON-ADMITTED USE	3		LIST of SPARE PARTS of Electric pump	11
4	HANDLING – UNPACKAGING	3		LIST of SPARE PARTS of HEAD NOZZLE and By-pass	11

### INTRODUCING SCHEDULE

ART.	10306-4	RI 4 MEA /112 RIEMPITRICE 230V 4 EROGATORI	REGISTER N.	S	0	2	0	2	YEAR	2016
------	---------	--	-------------	---	---	---	---	---	------	------

### STATEMENT of CONFORMITY

SPAGNI snc DECLARES UNDER HIS OWN RESPONSIBILITY THAT THE ABOVE IDENTIFIED MACHINE SUITS THE ESSENTIAL SAFETY REQUIREMENTS IN ACCORDANCE TO EEC DIRECTIVES 89/392 91/368,93/68, 94/768 WHEN USED IN COMPLIANCE WITH THE REGULATIONS IN FORCE MENTIONED IN THIS BOOKLET

## PREARRANGED SIGNS



GENERAL DANGER: personal injury



Electrical voltage danger : personal injury



MOVING DANGER : personal injury



DANGER: serious damage to the machine

IF THIS MACHINE IS USED IMPROPERLY OR THESE OPERATING INSTRUCTIONS ARE NOT FOLLOWED, THE MANUFACTURER DECLINES ANY AND ALL LIABILITY FOR INJURY TO PERSONS OR DAMAGE TO PROPERTY  
THIS HANDBOOK CAN BE UPDATED OR CHANGED ACCORDING TO OUR REQUIREMENTS

## TECHNICAL TABLE CEE 89/392 p1.1.2 e 1.7.2; EN292 2p.5

TECHNICAL TABLE SEE CROSS PRICE LIST, EN202.pdf

Art	MODEL.	E.PUMP 220V 50HZ RPM2800 capacity 1h 2400 decant Protection IP54 cl F Thermal protection automatic relay		FILLER		Weights and sizes in cm					
		KW	Amp	Nozzles D14mm	Output	Complete machine				BOTTLE Hole diameter Minimum 1,8cm Max 2.7cm	
				Nr	L/H	Kg.	length	width	height	D Max	AMx Height
10306-2	RI2MEA	0.37	2.1	2	260	25	50	45	155	15.5	40
10306-3	RI3MEA			3	390	26	50	45	155	15.5	
10306-4	RI4MEA			4	520	28	50	45	155	10.5	
10306-6	RI6MEA			6	780	35	55	97	160	15.5	
10306-8	RI8MEA			8	520	39	55	97	160	10.5	
Option list (sacchetto entro vaschetta 68)											
	description									note	
80212	Kit cut thicknesses 25mm montato					Pos 61-62-63-64-65mounted				1 x nozzle	
80220	Kit gaskets and seals					Pos.59(2pz) +57+55+52				1 x nozzle	

\* FILLING MACHINE: HOURLY PRODUCTION IS APPROX. AND REFERRED TO WINE OR WATER

### Surcharges compulsory for food liquids

90313	Stainless steel fitting for RI2-3-4MEA
90314	Stainless steel fitting for RI6-8 MEA
90330	Stainless steel floating ball in place of the plastic one (N.1pc. for 2-3-4) (N.2 pcs. for 6-8)

### SURCHARGES

35506	Three-phase switch with lock
90340	Trasf. from bottles to demijohn 5lt (d200mm) for RI 2-3-4 head valves
90341	Trasf. from bottles to 4 demijohn 5lt (d200mm) for RI 6-8 head valves
90326	Extra head valve d12mm central air discharge for long bottle necks minimum hole d 14mm
90335	Set up of the level through electronic device 24 v
90343	Extra accomodation for PET bottles and plastica tanks (send sample) n. 1 pc.
90345	Equipment for filling liquid satin 1pc
90352	Three phase engine 440V

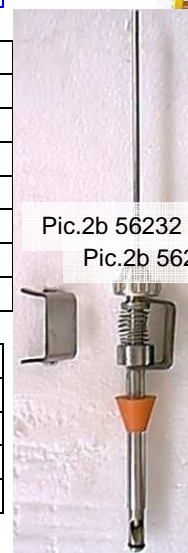
### On request: Accessories and spares for filler

80208	Head filling valve d12 for bottles having hole 14.5mm (capacity 1h 80 ref water)
80200	Head filling valve d16 for bottles having hole 21 mm (capacity 1h400 ref. water)
33818	Rubber cone shaped head replacement d40mm for tanks having hole 29 to 38mm
80151	Silicon cone (Pic.2.c)
56232	Clamping clip head valve open 1pc

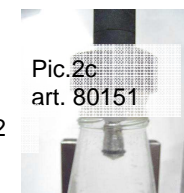
\*Surcharges and extra versions to be applied only at first purchase  
Further extras available under request



Pic.2a  
art. 35506



Pic.2b 56232  
Pic.2b 56232



Pic.2c  
art. 80151



Pic.2d  
SATIN FILLING  
art. 35506

## CHAPTER 1:

## DESCRIPTION OF THE MACHINE

Thank you for choosing our **GRAVITY FILLING MACHINE**

Simple and suitable, our machine will allow you, **BY FOLLOWING CAREFULLY THE INSTRUCTIONS**, to fill in **at fixed level, or decanting by means of the centrifugal pump and filter with 20x20 sheets (carton)** all liquids having low or medium density (To fill dense liquids like extra vergine olive oil or balsamic winegar, we suggest you RIVAC models operating vacuum or volumetric models VOLVAC)

## CHAPTER 2

## GENERAL SAFETY WARNINGS

The manufacturer cannot be held responsible for injuries or damages caused by improper use of the machine (this leads to the non-validity of the guarantee) or by failure to strictly adhere, partially or in total, to the safety regulations and intervention procedures in general and as laid down in this INSTRUCTIONS.

Before using the machine, the user must be able to carry out all operations described in this booklet in a proper and safe way.

## 2.1 User protection warnings

The user has to strictly follow the current accident prevention rules of the law in force in his country.



Disconnect plug from socket before starting any repairs/maintenance of the motor

Do not move the machine when electrical connections are alive. Do not drag the machine by pulling the electric cable

Make sure that the electric cable does not lay on wet floor (due to broken bottles, etc.)

Check often the perfect integrity of the cable, the plug and the lighting switch. Replace immediately the damaged pieces exclusively using genuine spare parts. Do not wash the motor with direct spout (insulation class IP54).

The machine is equipped with a connecting cable 4-5 metres long. Make sure that socket is located in this distance

avoid using extensions and branch cables. Have connections made by a qualified electrician, making sure that the net voltage corresponds to that of the motor (see technical data and marks outside the machine) and that the electric set is built according to the safety rules of the law in force. Check that the electric set is supplied with proper grounding plant

Do not execute on your own interferences not admitted and not mentioned in this booklet. Should you have any doubt, please contact our technician

## 2.2 Protections and warnings



The filter, filler and especially the pump, have been designed to assure protection, by means of casings, from the moving parts.

The tampering of the protection devices during machine alive or working is strictly prohibited

## CHAPTER 3:

## ADMITTED & NON ADMITTED USE



### MACHINE FOR PROFESSIONAL USE DO NOT ALLOW CHILDREN TO OPERATE THE MACHINE

Designed for:

**1)transfer** by means of the pump **2) filter** by means of the 20x20 sheet filter, with or without pump **3)fill in**, with liquids at fixed level, glass, PET etc., bottles, tanks etc.(different materials only under our authorization)

ADMITTED LIQUIDS

the std. version allows to filter and fill in all liquids suitable to get in contact with: stainless steel AISI304 (18/10),- chromium plated brass (fitting) a plastic (floating ball):

**WATER, PERFUMES, HAIR LOTIONS, FUNGICIDAL and PETROLIFEROUS products.**

In the extra version (see TECHNICAL TABLE: **Compulsory surcharges for filling of food liquids**) the machine is suitable to fill in:

**WINES, WINEGAR, BEER, sweet SPIRITS, dry LIQUEURS (max 30% alcool) GRAPE and FRUIT JUICES (without pulp), HERBAL products**

**Under request other products, unless authorized**



**MIN./MAX OPERATING TEMPERATURES -10+60°C** Low temperatures can lead to increase in density involving some kind of liquids; this can cause problems in the correct functioning of the machine

**DO NOT USE WITH LIQUIDS DANGEROUS for CONTACT AND/OR INHALATION**

**DO NOT USE THE MACHINE IN EXPLOSIVE PLACES AND ATMOSPHERE**

**DO NOT USE WITH FLAMMABLE LIQUIDS**

## NOTE

**THE MACHINE IS UNSUITABLE FOR SPARKLING AND FIZZY LIQUIDS**

## CHAPTER 4:

## HANDLING & UNPACKAGING OPERATIONS

The standard machine version is supplied wrapped into a plastic bag, introduced into a carton box, and properly fixed.

SHOULD YOU NOTE EVIDENT DAMAGES ON THE PACKAGE, DUE TO IMPACT WHEN UNLOADING IT, PLEASE WRITE IT DOWN ON THE

DOCUMENT FOLLOWING THE MACHINE, AND NOTIFY ONE COPY OF YOUR DECLARATIONS TO THE FORWARDER

THE MANUFACTURER IS NOT RESPONSIBLE FOR DAMAGES OCCURRED IN TRANSIT

Make sure that the further DETACHED PIECES (see TABLE1i) are included in the standard dotation

The machine, thanks to its low weight, can be easily transported, by means of a trolley equipped with two wheels, to the final area where it will be located

## NOTE



**FOLLOW THE INDICATIONS ALTO FRAGILE AND NOT OVERTURN**

**THE SURROUNDING WORKING AREA AND THE ELECTRIC BOARD HAVE TO RESPECT THE LAW DIRECTIVES REGULATING THE KIND OF PRODUCT HANDLED**

THE WASTE PACKING MATERIAL WILL BE SELECTED AND QUICKLY DISPOSED IN DUMPING ACCORDING TO THE LAW IN FORCE

## CHAPTER 5:

## PLACE OF WORK-BOTTLES-CLOTHING

### 5.1 PLACE OF WORK

The machine should be installed in a bright place, the surrounding area should be kept free from obstacles

Make sure that the support surface under the two wheels of the machine is flat and stable

When operating as a filler, the user has to provide empty bottles continuously (reminder: the production of each filling valve is about 130 litres/hour). It is suggested to prepare a proper quantity of empty bottles upstream, and a large table or other suitable surface being high and wide enough to enable the operator not to move often, to avoid wasting time

It is likely to set up a belt to transfer the bottles till the area where they will be closed

The machine has been designed for operating with one person carrying on filling and filter. Other operators will provide empty bottles and take the filled ones onto the support surface for further corking-labelling

### 5.2 SUITABLE BOTTLES AND TANKS TO FILL

## NOTE

It is important to have a round filling mouth, free from defects, not indented, in order not to allow the air to enter through  
Hole bottle diameters: see table 2

The bottles have to be divided according to the height

Please not that it is not possible to fill at the same time bottles having different height

### 5.3 CLOTHING & CASINGS



The clothing of the operator will include gloves, long hard smock and shoes with anti-slip soles, to prevent him from fallings or breakings of bottles. When getting in contact with the filtering sheets, it is necessary to use a dust mask type p2

## CHAPTER 6: SETTING UP: GENERAL RULES

### 6.1 FEEDING PIPE : (not included with standard dotation)

Resistant up to 2,5 bar compression, pvc wired type or equipped with plastic or stainless steel spring.

Material built in accordance to the liquid to fill

Internal diameter of the pipe:19mm

Length of the delivery pipe max 2,5 mt in case the liquid is located in the bottom. 10 metres if the liquid comes for gravity

Max sash liquid to fill: 4 metres referred to the floor

### 6.2 DELIVERY PIPE : (not included with standard dotation)

**In case the machine is simply used to pour off or filter liquids**

It is possible to require the spare piece art.82536 (see pump accessories) as connection to accomodate a pipe having proper length to reach the decanting or storing tank (max 10 metres). The delivery pipe must have same characteristics of the feeding one.

**6.3 FILLING PUMP** : It is an important operation to do always before starting the pump. A few seconds of rotation of the engine , can cause seizure of the impeller7 with the tube Venturi 9 (pic.7)

**IN CASE OF DAMAGE, PIECES ARE NOT COVERED BY ANY GUARANTEE.**

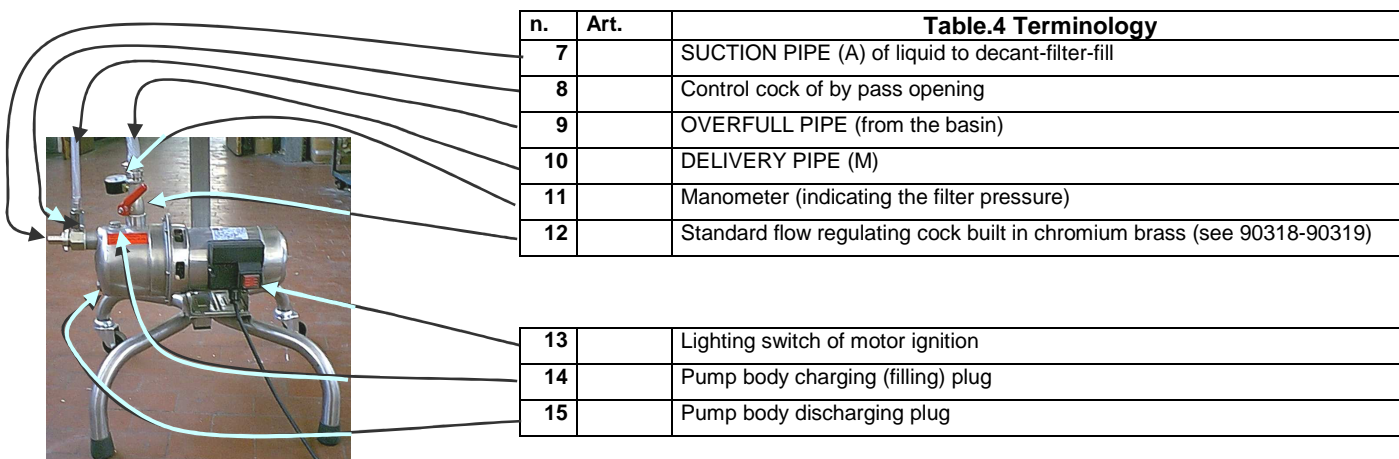
**6.3a** Filling operation must be done with off engine.

**6.3b** Filling operation must be done putting the liquid to be bottled, with funnel or directly in the suction pipe pos48.

Fill completely the pump body. Try to maintain full suction tube.

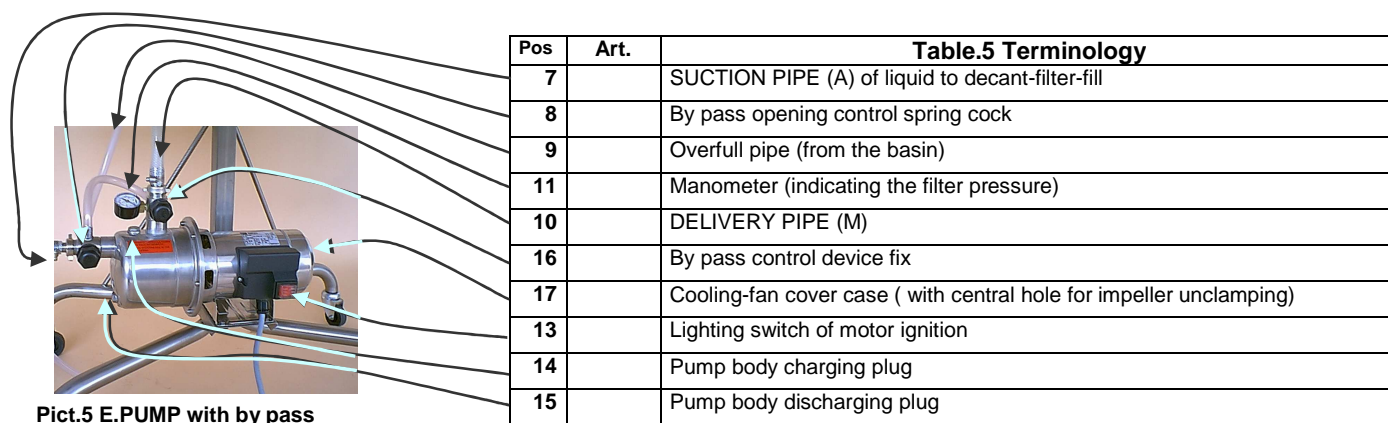
### 6.4 CHECKING THE PIPES ARRANGEMENT ACCORDING TO THE KIND OF PUMP SET UP

Table.4 STANDARD E.PUMP with FLOW REGULATING COCK



Pict.4 Standard e.pump

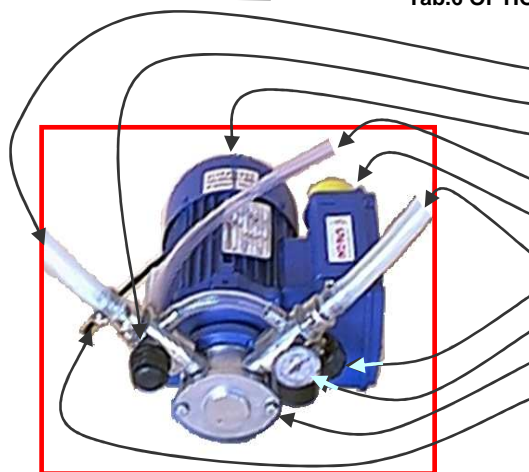
Tab.5 OPTION E.PUMP equipped with/by pass and st.steel cock



Pict.5 E.PUMP with by pass



Tab.6 OPTION art 90344-90350 VOLUMETRIC E.PUMP with RUBBER IMPELLER, by pass and st. steel cock

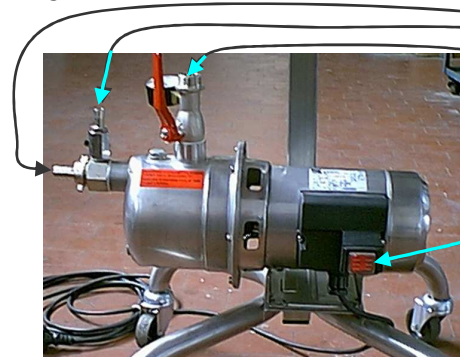


Pos		Table 6 Terminology
18		SUCTION PIPE (A)
19		By pass opening control spring cock
20		Cooling-fan cover receiver (central hole to unclamp the impeller)
9		Overfull pipe (coming from the basin)
21		Switch of pump motor ignition
10		DELIVERY PIPE (M)
22		By pass control device fix
11		Manometer (indicating the filter pressure)
23		Pump body GL SE opening screws
24		Electric cable

Pict.6 E.PUMP VOLUMETRIC with by pass

## CHAPTER 7

## E.PUMP FUNCTIONING (See pict.3 max capacity 2400l/h decant only)



pos.	Art.	Table.7 . Pipes arrangement E.Pump ONLY DECANT version
7		PIPE A Suction of liquid to pump in
8		Closed cock (do not use it)
10		PIPE M Delivery to the tank to fill
13		Lighting switch of pump motor ignition

Pict.7 standard version

Connect the pipes as indicat. above, tighten strongly with wrappers. Fill in the pump body  
 See chapt. 7a. Push the switch 13 to transfer from one tank to another  
**DO NOT PUMP LIQUIDS CONTAINING ABRASIVE PARTICLES**  
**DO NOT PUMP LIQUIDS CONTAINING IMPURITIES SUPERIOR TO 3 MM OF DIAMETER**  
**DO NOT PUMP GRAPE MUSTS CONTAINING PEELS AND GRAPE SEEDS**

**NOTE**

Should you have any doubts that the liquid contains impurities superior to 3mm, it is compulsory to pass it through a strainer or a net with light max 3x3 mm.

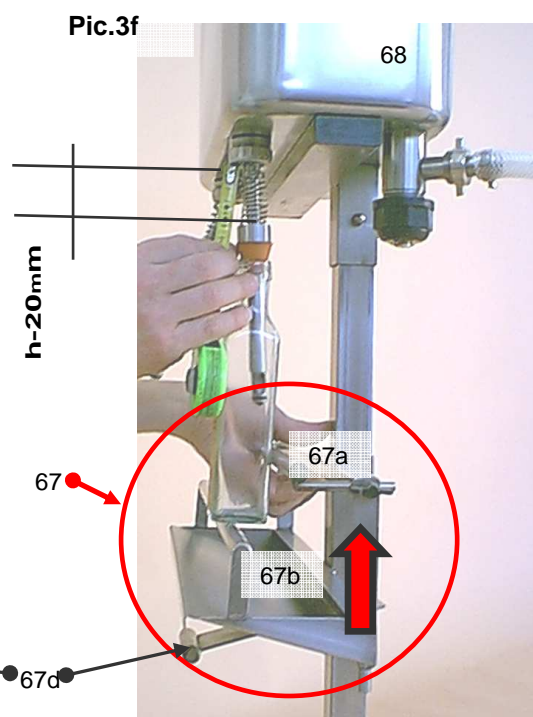
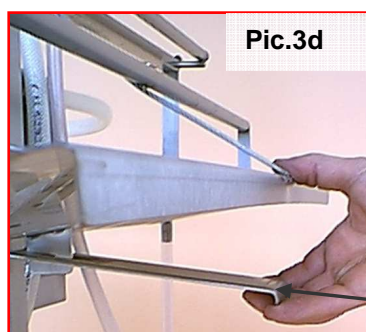
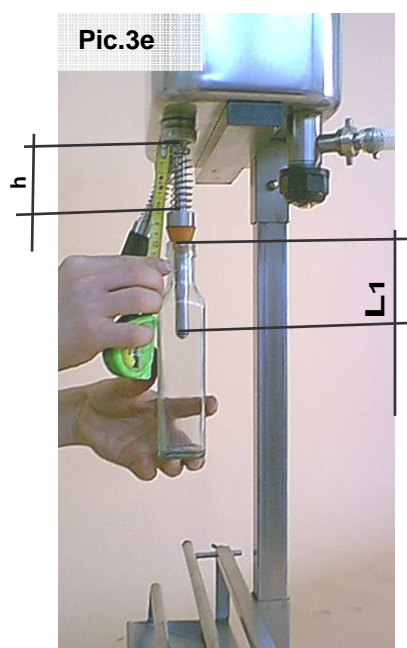
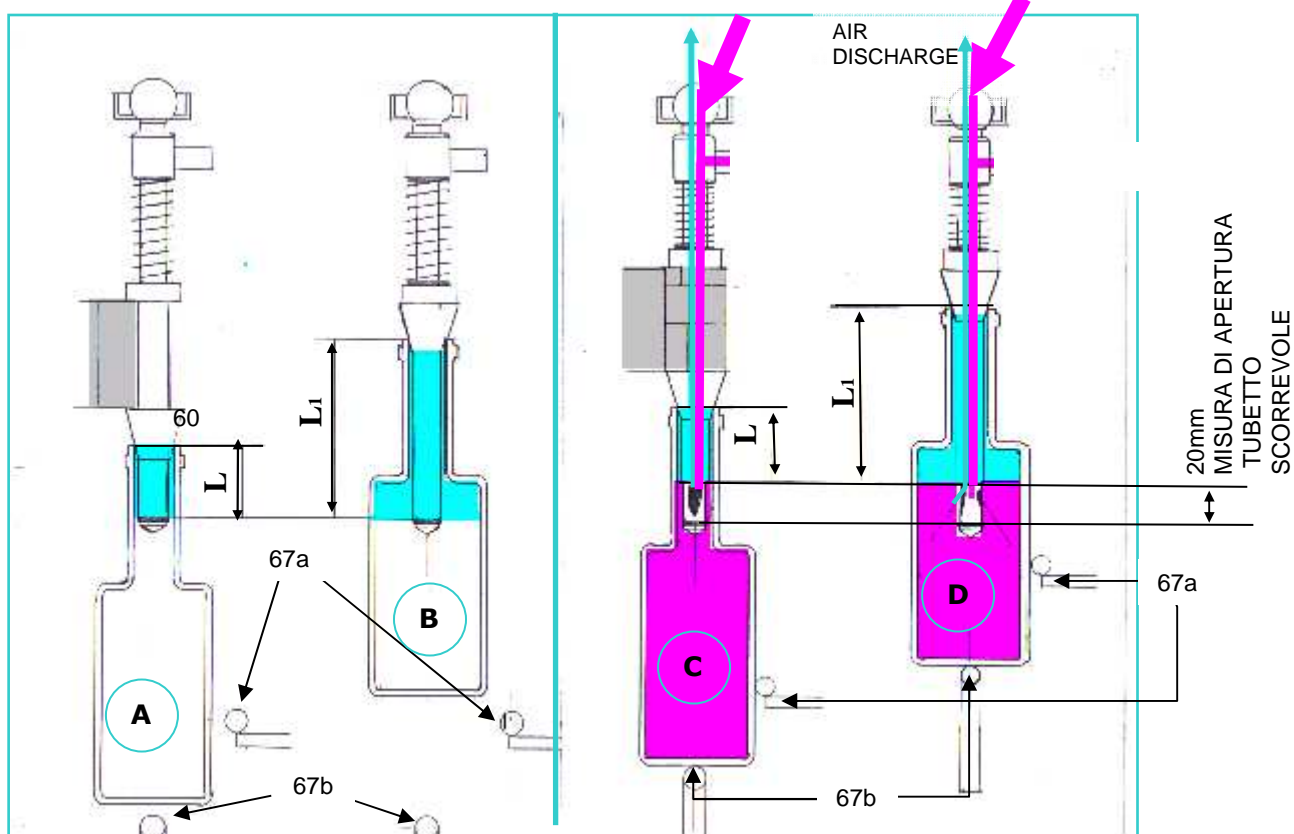
It is suggested, not to use a net filter on the suction pipe, since it can block up and cause problems to the proper running of the pump.

The pump is centrifugal and selfpriming, so it is possible (without any damages) to regulate the outlet flow rate, by moving the red lever posxx from vertical all open to horizontal all closed position (for example in case of little bottles filling).

# ADJUSTMENT SCHEME OF FILLING LEVEL

Pic.3a LEVEL PREDISPOSITION

Pic.3b FILLING LEVEL



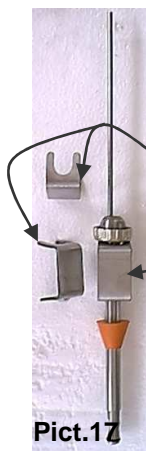
## CHAPTER 8

## CLEANING AND MAINTENANCE

 **DO NOT WASH THE MACHINE WITH WATER JET OR HYDROCLEANING MACHINERIES USE A WET CLOTH DISCONNECT THE CURRENT PLUG**

## 8.1 BEFORE USE (new machine)

- 8.1a Prepare a tank containing ca 18-20 litres of hot water at 50-60°C with washing-up detergent, not foamy, in conformity to food liquids. Let the machine working, e.pump-filler, ( both filter and plates can be easily washed aside ), when the upper basin is filled with water-detergent introduce an empty bottle in each nozzle, until the basin is empty. Rinse with hot water Empty completely the pump body, by unscrewing the plugxx pict. Keep open in order to dry In order to obtain a perfect rinsing and drying of the internal nozzle pipes, it is suggested to require the clamping clips for head nozzles (see pict.17).



N	Art.	Table.16 Terminology
81	56232	Clamping clip for head nozzle. (2 sights)
82		Setting up of the clamping clip

Pict.17

- 8.1b The machine equipped with the clips for clamping head nozzle can be steam sterilized at 120°C

- 8.2 DAILY CLEANING After finishing operating, it is necessary to wash the machine by using detergents in accordance to the product to be filled (follow indications as described in chapt 14.1a).

## 8.3 PERIODIC CLEANING AND MAINTENANCE

- 14.3a **Washing of the nozzle:** Take off (see pict.14-17): 1) Unscrew the thread 58 Pict 14. 2) Immerse the all in detergent solution, pushing upwards the sliding tube 51(it is suggested to require the clamping clip 81), move strongly 3) Wait a while to allow the removal of encrustations 4) Rinse a lot with water 5) Let the components dry 6) Set up again the parts


## 8.3b Repairing of the head nozzle in case of liquid losses:

How to operate in order to replace the damaged pieces after use see pict.14  
 1)Keep the head nozzle set up to the basin 2)Push upwards the sliding tube 51.  
 3) By means of a little screw-driver, take off the Oring of tip 59. 4) Take out the sliding tube51+mouth gasket 52 +thread53 +spring54. 5) Replace the defective piece, usually the mouth gasket 52. 6) Set up again the spring. 7) The new gasket 52 has to be previously moistened with oil or vaseline grease and placed, with mouth turned downwards, into the appropriate seat of the sliding tube, in the centre of the tube with ball 56. 8) Push very slowly and only upwards, at the same time rotate the sliding tube with gasket crossing over the cutting sectors, Oring seat and oval inlet hole.

**NOTE**

**DO NOT PULL DOWNWARDS THE SLIDING TUBE WITH THE GASKET ON THE NEW ONE COULD IMMEDIATELY SUFFER DAMAGE**

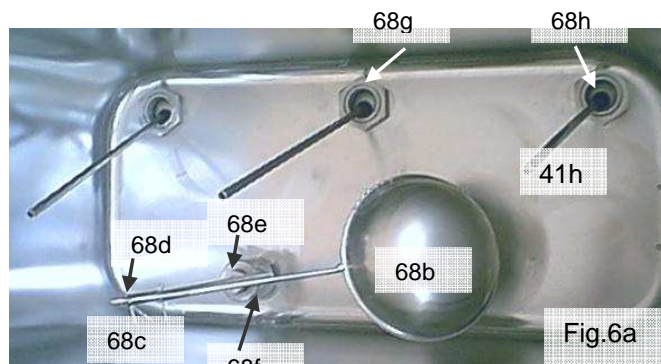
## 8.3c Disassembling of the e.pump in case of "stop up" : see pict.16 table.15

- How to operate in order to set the pump free see pict.16 1) Unscrew, by using a 4mm spanner, the 6 screws 80 Pict.16 Table.15  
 2) Clean the sectors as indicated  3) Set up again the components

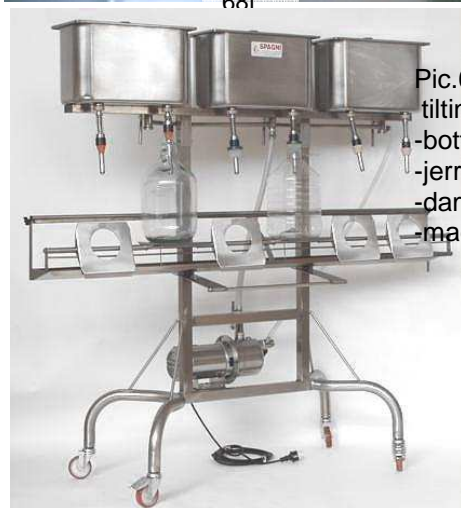
## 8.3d Disassembling of the e.pump to replace Venturi pipe -diffusor-impeller-mechanical seal: see pict.16 table.15

- 1)Unscrew, by using a 4mm spanner, the 6 screws 80 Pict.16 Table.15 2) Take out the damaged Venturi pipe 78, by using a screw-driver (in case of seizing-up, the metal ring in the centre has visible parts of fused plastic material, coming from imp76)  
 3) Clean perfectly, removing the impurities, the internal part of the pump body, making sure, not to lose the Venturi pipe sealing Oring 79 4) Set up the new Venturi pipe with the new diffusor 77 ( pieces sold in couple art.22171)  
 5) To unscrew the impeller 76 from the driving shaft, be helped by another operator to lock the shaft 72 by using a screw.driver introduced into the cut part on the cooling-fan shaft side. Unscrew anticlockwise the impeller 76 6) Set up the new impeller 76 7) Assemble all components again 8) When experiencing a loss of liquid between the pump body and the motor, replace the mechanical seal 74, in this case see as above described at points 1(opening of pump body) and-5 (taking off the impeller) 9) Take out the spacer 75 10) Take out the graphit mobile part with spring of the mechanical seal 11) By using two screw-drivers, push on the edge of the stainless steel plate flange, in order to take out the ceramic fixed part of the mechanical seal 12) Assemble the new seal, moistening with little quantity of grease or vaseline oil





Pos	6° 6b Description
68b	Stainless steel floating ball with rod
68c	n.2 Cotter pins mm2x16
68d	Rod with stainless steel ball
68e	Dado guida asta hole6
68f	Fitting total discharge
68g	Locknut portasfera
47a	Tubo alimentazione al filtro (oppure del cliente)
47b	Tubo alimentazione alla riempitrice



Pic.6b RI8MEA special  
tilting support for  
-bottles PET  
-jerrycans PET  
-dame 5lt glass  
-magnum 3-5lt glass

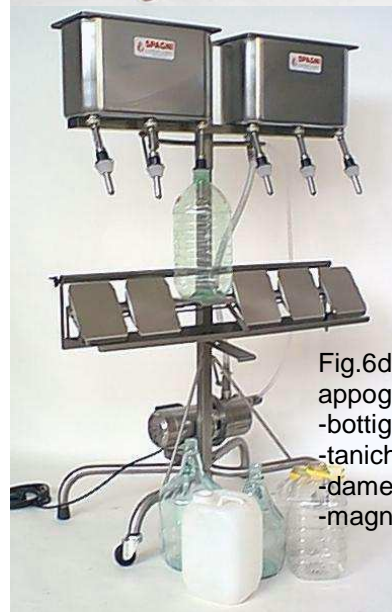
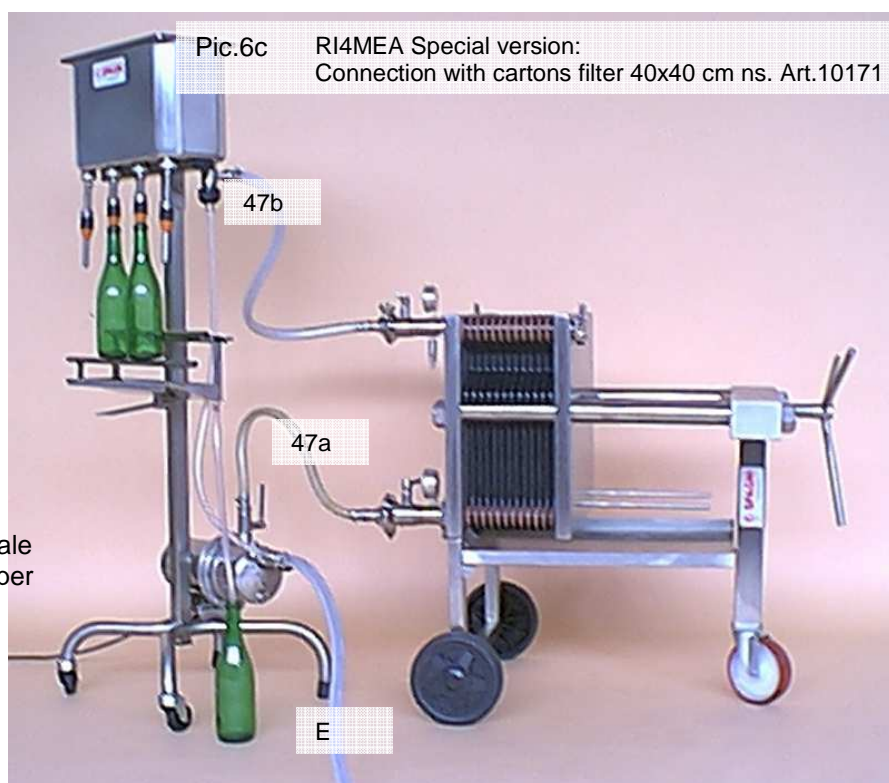


Fig.6d RI6MEA speciale  
appoggio Basculante per  
-bottiglie PET  
-taniche PET  
-dame 5lt vetro  
-magnum 3-5lt vetro



Pic.6c RI4MEA Special version:  
Connection with cartons filter 40x40 cm ns. Art.10171



## CHAPTER 9

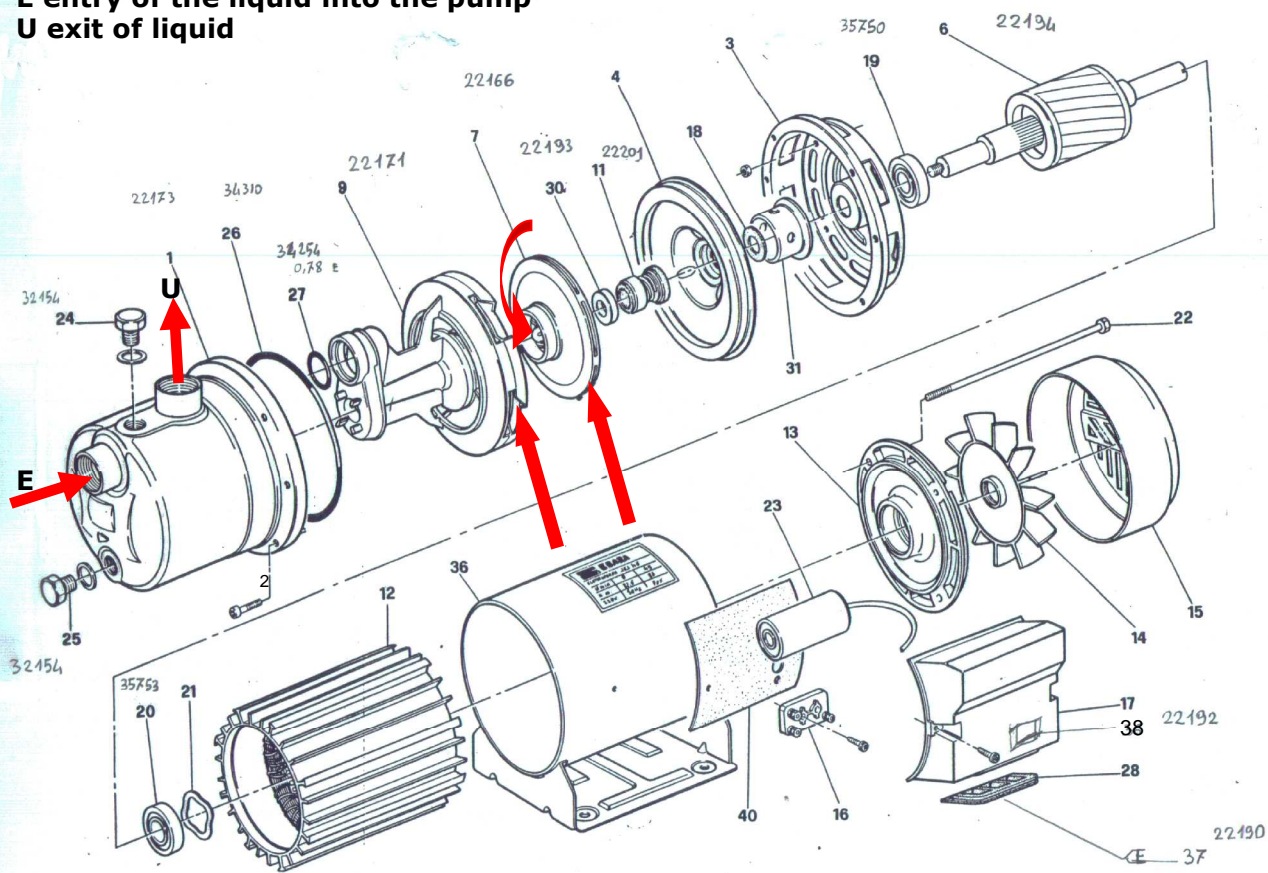
## INCONVENIENCES-REMEDIES

FILL IN THE PUMP BODY WITH LIQUID BEFORE STARTING THE MOTOR				
Nr	FAILURE	REASON	REMEDY	
<b>e.pump</b>				
1	On pushing the switch 48 the warning light keeps off	Current missing	-Check line upstream the switch: main switch, cable, plug	
2	On pushing the switch 48 the warning light is on, the motor vibrates but does not start	Impeller clamped Seizing-up, probably due to "dry" running	-Take the switch in off pos-disconnect the current plug-open the pump body, replace the Venturi group –diffusor and impeller	
3	The motor is running, suction pipe is connected –the pump does not intake any liquid	Loss of tightness on suction pipe	Check that joints are sealing properly Replace the damaged pieces	
4	The motor is running, suction pipe tight properly, loss of liquid between the motor and the pump;the pump does not intake any liquid	Damaged mechanical seal	Open the pump body. Replace the mechanical seal see 13.3c	
6	The motor is running, suction pipe tight properly the pump is not working strongly. Foam on the delivery pipe.	Internal pump connections are stopped up	Open the pump body. Clean the sectors as indicated by the arrows	
<b>Filter</b>				
	The filter works properly for some minutes esce prodotto sporco, pressione 1-1,8 bar	Flow rate is too high	Close immediately the cock 12 Open again very slowly, keep 0,1-0,2 bar Follow as described at chapt.10.3	
	On following the instructions, the filter is working, but the output is not satisfactory	Wine or liquid too rough and dirty respect to the kind of sheet in use	Set up sheets more wide, Refining type	
<b>Nozze filler</b>				
	Too much foam inside the filling basin	E.pump stopped up, or not completely filled before starting	See chapt 14.3c See chapt 7.3	
	The return pipe from the basin to the pump "comes out of the rubber hose adapters"	Too much pressure inside the pipe	Open immediately the cock 8, by pass opening control. Then, close the flow regulating cock 12, open again very slowly then keep 0,1-02bar.	
	The filling level into the bottles is not constant	Bottles of different heights	Divide the bottles according to height	
	The filling inside the bottle does not stop	Liquid inlet hole is broken	Remove the defective bottle	
	The filling inside the bottle does not stop	Sealing cone shaped piece damaged	Replace the sealing cone piece 60	

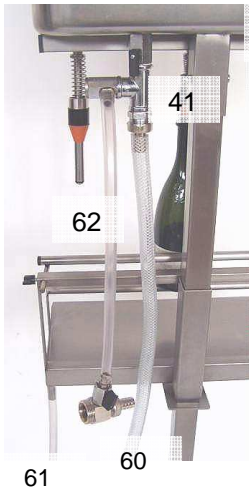
# **PIC.7ELECTRIC PUMP JESM5 (standard equipment) coding and naming of DETAILS**

**E entry of the liquid into the pump**

**U exit of liquid**



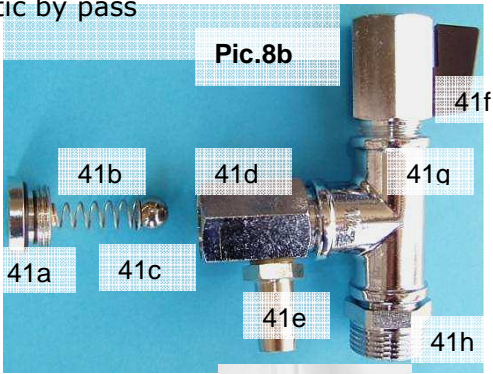
N	Art.	Description			
1	22173	Pump JEM5	19	35750	Cuscinetto lato pompa girante
2		n.6 viti brugola ch4	20	35753	Cuscinetto lato ventola
3		Supporto porta motore	21		Anello di compensazione
4		Disco porta tenuta	22		N.4 tiranti
5			23		Condensatore (solo monofase)
6	22194	Albero motore-rotore	24	32154	Tappo riempimento G1/4
7	22166	Girante noryl D104 mm	25	32154	Tappo scarico G1/4 plastica c/Or
9	22171	Tubo Venturi - diffusore	26	34310	Guarnizione Oring
10			27		
11	22201	Tenuta mecc composta di 2pz	28	34254	Guarnizione Oring
12		Cassa motore c/statore avvolto	29		
13		Coperchio motore	30	22193	Distanziale tenuta mecc
14		Ventola raffreddamento	31		Distanziale disco porta tenuta
15		Carter copriventola	32		
16		Morsettiera	33		
17		Coprimorsettiera	34		
18		Rondella paraspruzzi	35		
			36		Camicia motore c/flangia fiss.
			37		Cavo e spina suko
			38	22190	Interruttore luminoso
			39		
			40		Guarnizione coprimorsettiera



**Pic.8**

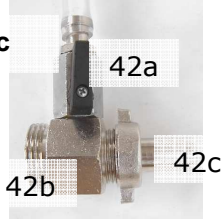
pos	Art.	Descrizione
41a	34952	Tappo G1/2 M c/oring
41b	57611	Molla apertura
41c	54048	Sfera D11,113
41d	35015	Corpo G1/2MF
41e	34910	Portagomma G1/4M 12mm
41f	35014	Minivalvola G1/2 MF
41g	39180	Raccordo T G1/2FFF
41h	39110	NR G1/2M - G3/4M
42		BY pass parte pompa
42a		Minivalvola G1/4 M 12mm
42b		Nipplo OTT crom G1"M-G3/4M
42c		Portagomma d15 c/girello G3/4"
60		Tubo entrata liquido in vaschetta
61		Tubo scarico salvagocce
62		Tubo by pass ritorno alla pompa

**41 Group automatic by pass**



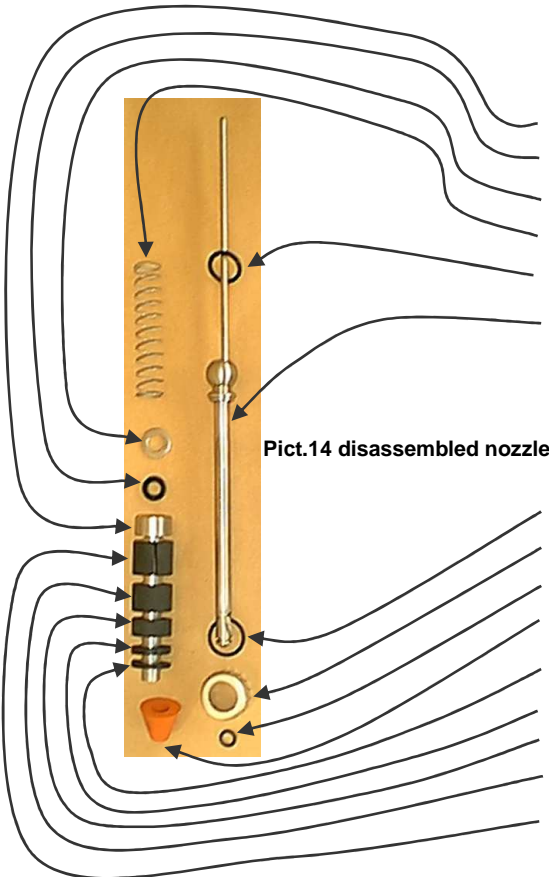
**Pic.8b**

**Pic.8c**



**42 Group automatic by pass  
Electric pump part**

### LIST of SPARE PARTS of HEAD NOZZLE



**Pict.14 disassembled nozzle**

pos.		Table.14 HEAD NOZZLE particulars
51		SLIDING TUBE
52	34383	MOUTH GASKET DI 043
53	54210	STAINLESS STEEL THREAD
54	57605	SPRING s1,5 L100
55	34248	SUPERIOR BALL SEALING OR 2,62x20,24
56		TUBE with BALL Parte esterna alla vaschetta



**Pict.15 assembled nozzle**

57	34265	ORing 3.53x20,22
58	35080	CHROMIUM THREAD G1" BALL CLAMPING
59	34239	Oring 2,62 - 7,3 standard tip
60	33819	STANDARD CLOSING CONE SHAPED RUBBER 30 f14
61	33823	RUBBER SHIM mm 3
62	33824	RUBBER SHIM mm 5
63	33825	RUBBER SHIM mm12,5
64	33826	RUBBER SHIM mm 20
65	33827	RUBBER SHIM mm 25