# INSTRUCTIONS BOTTLE FILLER WITHOUT PUMP 

## CHAPTER 1: DESCRIPTION OF THE MACHINE

We thank you for choosing our linear gravity FILLER series RIM. IF YOU FOLLOW THESE INSTRUCTIONS CAREFULLY, PAYING FULL ATTENTION TO ALL PARTS OF THE INSTRUCTIONS, this device will permit you to bottle all so-called "flat", i.e., non-carbonated, liquids, of densities comparable to sweet liqueurs, disposing of liquids specified as follows, placed on a height slightly higher than the float chamber, ON A CONSTANT LEVEL.

## CHAPTER 2 GENERAL SAFETY WARNINGS

Before putting the device into functioning, the user should know how to carry out all the operations described in the present manual, skilfully and with complete safety.

## CHAPTER 3: INTENDED AND UNINTENDED USES - MATERIALS

DEVICE RESTRICTED TO USE BY ONE SINGLE OPERATOR KEEP
OUT OF REACH OF CHILDREN.
3.1 Designed for gravity filling, ON A CONSTANT LEVEL, of bottles and flasks (hereinafter referred to as BT/FL) with ROUND GLASS MOUTHS. Other materials, for example, PET and plastic materials in general, can only be bottled after inspection and experimentation with the recipient provided by the client.
3.2 REFILLABLE LIQUIDS IN THE STANDARD VERSION: all liquids compatible with stainless steel AISI $304(18 / 10)$ may be filled using the float chamber and distributors - the chromed brass of the a and fittings, the moplen with brass insert on the mechanical float 68b, the noryl of the internal part of the e.p. Using standard equipment, it may fill:
WATER, PERFUMES, HAIR LOTIONS, ANTI-CRYPTOGRAM products, PETROLEUM DERIVATIVES.
3.3 FILLABLE LIQUIDS WITH THE FOODSTUFF VERSION (see TECHNICAL TABLE):

WINES-DRY VINEGARS-BEERS-SWEET AND DRY LIQUEURS-OILS, SEMI-GRAPE and FRUIT JUICES 3.4
OTHER LIQUIDS NOT MENTIONED MAY ALSO BE FILLED UPON REQUEST AND WITH OUR WRITTEN
AUTHORISATION.
EXTREME WORKING TEMPERATURES $-20+90^{\circ} \mathrm{C}$.
DO NOT USE THIS DEVICE TO FILL OR TRANSFER FLAMMABLE LIQUIDS.
DO NOT USE THIS MACHINE IN AN EXPLOSIVE ENVIRONMENT.
DO NOT USE THIS MACHINE TO FILL OR TRANSFER LIQUIDS WHICH ARE HAZARDOUS BY CONTACT OR INHALATION.

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## CHAPTER 4: MOVEMENT AND DISASSEMBLY

The standard version device is delivered protected by a plastic sack, wrapped in an undulated cardboard box, completely sealed with a plastic safety strap.
CHECK THE INTEGRITY OF THE PACKING IMMEDIATELY UPON DELIVERY. IF THE PACKING IS DAMAGED, THIS MUST BE REPORTED TO THE SHIPPER WITH AN ANNOTATION ON THE DOCUMENT ACCOMPANYING THE MACHINE. THE BUILDER WILL NOT BE HELD LIABLE FOR DAMAGE CAUSED IN TRANSPORT. Check (see TAB. i) the presence of the EQUIPMENT PARTS inside the wrapping.
The limited weight permits easy movement of the device with an ordinary two-wheeled forklift to the intended area of use.
FOLLOW THE INSTRUCTIONS. HIGHLY FRAGILE. DO NOT TIP
CONTROL THE CORRESPONDENCE BETWEEN OF THE PARTICULAR PARTS LISTED IN TECHNICAL TABLE WITH THE CONTENTS OF THE BAG NORMALLY FOUND INSIDE THE FLOAT CHAMBER 68
ALL PACKAGING WASTE MATERIAL SHOULD BE REMOVED AND DISPOSED OF IMMEDIATELY USING NORMAL WASTE DISPOSAL METHODS.

## CHAPTER 5: Choice of the WORKSITE - BOTTLES - TRIMMINGS

5.1 The working area of the machine should be in compliance with all legislation governing the product involved. In particular, check to ensure that the support surface beneath the feet of the device is level. The environment must be well lit, and the working environment to the front and both sides must be left completely unencumbered for a radius of at least 1.5 metres. It should be noted that the device, when functioning, must be constantly supplied with empty bottles (production of approximately 130 litres hour/distributor). To work comfortably and in safety, we recommend that you arrange an adequate quantity of empty BT/FL upstream from the device, with a broad plane surface support table downstream, so as to avoid long and/or or continual displacements, or that you use a conveyor belt to transfer the BT/FL to the area for corking:

### 5.2 BOTTLES AND RECIPIENTS TO BE FILLED

The recipients should be connected to round-shaped filling mouths without defects and/or cracks, simultaneously permit the passage of a minimum of air. For dimensions, see bottle technical table. The BT/FL to be filled should be sub-divided by height.
It is not possible to fill BT/FL of different height simultaneously.
5.3 TRIMMING

To avoid accidental bottle breakage, the operator trimming must include: gloves, heavy long apron, footwear with anti-slip soles.

## CHAPTER 6: GENERAL STANDARDS OF IMPLEMENTATION

6.1 Hydraulic connection: connect the device to a tube which can also be supplied by ourselves at request, diameter $15-16 \mathrm{~mm}$, if standard, or mm 19 if with stainless steel taps and fittings, attach with clips to the pipe union hose fitting supplied. Use flexible tubes of a plastic or metallic spiral type, maximum tube length: recommended 5 metres.

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6.2 BT/FL filling level regulation see figs. 3a-b-c-d-e-f-
6.4a Loosen the two wing nuts pos 67c to release the rear support, remove it by lowering it from the BT/FL the float chamber drop stop group pos 63. Position any distributor in a vertical position.
6.4b Take a BT/FL to be filled and support it at the sealing cone fig3a, do not press upwards. The measure, L fig3a A or L1 fig3a B, will correspond to the filling level of the BT/FL 6.4 f
Pull the cone 60 downwards if it desired to fill the bottle more.
6.4 g Pull the cone 60 upwards if it is desired to fill the bottle less.
6.4h To prevent the flow upwards of cone 60, combine the filling of the grey space with the thickness of cut rubber (supplied) pos 61-62-63-64-65, respectively by $3-5-12,5-20-25 \mathrm{~mm}$.
$6.4 i$ Pull the B/F upwards approximately 20 mm , until it completely exposes the two BT/FL liquid entry and air outlet holes during filling.
6.4I Close in this position and simultaneously pull the drop stop group upwards, fig.3b CD until
the lower support tube 67b touches the bottle.
6.4 m Allow the drop stop group automatically to block the flow downwards by means of the blocking lever 67d.
6.4 n Position the bottle and distributor vertically, support the rear support bar pos 67a on the bottle, check that it is parallel to the fixed bar, and pull the wing lock screws 67c.
6.40 Proceed to equip the rest of the distributors with the same thicknesses of the first distributor prepared.

## CHAPTER 7 FUNCTIONING

7.1 FILLER FUNCTION (standard version see Figs.4-7-8b). For liquids ready for filling, or already pre-filtered. 7.1a Open the liquid intake, tap pos 41 , originating from the storage container, the liquid begins to exit into the float chamber pos 68 , wait a few moments until the level in the float chamber reaches 100 mm (the sphere of the float must not be closed).
7.1b Insert the empty bottles into the distributors (levels previously established §6.4).
7.1c Remove the full bottles.
7.1d Any possible drops of liquid which may flow down from the outside of the distributors in a closed position, are gathered in the drop stop float chamber 67 of the latter, through the tube pos 67 e and conveyed into the empty bottle previously placed for the purpose.
7.1n The procedure described above permits the user to leave the machine unattended with complete safety, with the liquid enclosed in the float chamber, for the time strictly necessary to solve minor problems, for example: renewing the empty bottle supply, moving tubes from empty recipients to full ones, making phone calls. NEVER LEAVE THE DEVICE UNATTENDED WITH THE INLET TAP pos 41f OPEN IF PARTICULARLY LONG ABSENCES FROM THE FILLING ROOM ARE ANTICIPATED. TURN OFF THE TAP.

## CHAPTER 8 CLEANING AND MAINTENANCE OF THE DEVICE

8.1 PREVENTIVE CLEANING (new machine). Prearrange a quantity of approximately 18-20 litres of hot water $60 / 80^{\circ} \mathrm{C}$ with non-foaming dish-washing detergent or other detergent for kitchen hygiene (such as Detersol or Sanaton). Operate the device as described under $\S 9$, with the float chamber pos 68 full of detergent water, continue to insert and remove the empty bottles at all distributors until the float chamber is empty. Rinse abundantly with hot water. Allow to dry in open air.
Option upon request: for perfect rinsing and drying of the internal conduits of the distributor we advise closing the open distributor locking flasks afterwards (see fig 2 b art.56232)
The device with the distributor lock flasks assembled can be subjected to flowing steam sterilization treatment at $120^{\circ} \mathrm{C}$.

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8.2 DAILY CLEANING Every time you finish the day's work, especially if you are working with edible liquids, it is indispensable to proceed with careful cleaning of the tubes, the tub and distributors (see §8.1).
8.3 EXTRAORDINARY MAINTENANCE AND CLEANING OF DISTRIBUTORS:
8.3a Unscrew the ring nut 58 Fig9
8.3b Immerse the entire device in detergent solution pushing the sliding tube upwards 51 (we advise closing the locking flask art.56232) afterwards, and moving the device energetically).
8.3c Allow the device to sit for a while to facilitate removal of any incrustation.
8.3d Rinse abundantly in water. Let dry. Reassemble entire unit.
8.4 DISTRIBUTOR DISASSEMBLY DUE TO LOSS OF LIQUID

Procedure to be followed to substitute parts which may become damaged through wear and tear. See fig 9
8.4a Leave the distributor assembled on the float chamber pos 68 8.4b

Push the sliding tube upwards pos 51.
8.4c Using a small screwdriver remove the peak O-ring pos 59.
8.4d Withdraw the sliding tube $51+$ lip packing seal 52 )+washer 53 +spring 54.
8.4e REPLACEMENT OF LIP PACKING SEAL (hereinafter referred to as LIP PACKING)

NOTE: Every time you disassemble the sliding tube 51 until it withdraws the LIP PACKING it becomes necessary to replace the LIP PACKING52 as well, since the lower internal sealing lip in the disassembly phase is easily damaged beyond repair. Lubricate the new LIP PACKING 54 using oil or Vaseline. Also lubricate [CHECK] the tube 56. The LIP PACKING 52 should be inserted beforehand, with the sealing lips turned downwards, in the suitable seat based in the tube 51. Using a small screwdriver or knife, facilitate the insertion, NOTE: TAKE CARE TO AVOID DAMAGING the sealing lips on the LIP PACKING. Take in hand the sliding tube 51 with the LIP PACKING 52 inserted. Insert the entire unit into the tube 56, rotating slowly in one direction, and pushing only forwards, slowly, until it completely passes the liquid entry holes. Continue to push upwards slowly, until you uncover the cutting seat on the O-ring 59. Place the O-ring 59.
8.4f Reassemble the spring 54 and the washer 53.
8.4 g REPLACEMENT OF O-ring 59

Push the sliding tube upwards into pos 51. Release the cutting seat of the O-ring59. withdraw the damaged O-ring using a small screwdriver or knife. Do NOT allow the sliding tube 51 to slide downwards, since it could cause it to escape from its own seat on the LIP PACKING 52, with consequent repetition of the above, at $\S 8.4 \mathrm{e}$. Using simple pressure, install the new O-ring59.
8.6 DISASSEMBLY FOR CLEANING OF THE FLOAT AND SEALING BALL

Remove the lid 68a, unscrew the two split pins pos 68c, using a wrench, unscrew 14 mm pos 68 e unscrew pos 68d. To remove incrustations, use appropriate chemical products. DO NOT USE ABRASIVES OR SHARP METAL DEVICES to clean the sealing ball and the support seat.

Pos $6^{\circ}$ 6b Denomination
68b Stainless steel ball float with spindle
68c n. 2 Split pins mm $2 \times 16$
68d Spindle with stainless steel ball
68e Guide nut spindle hole6
68 f Connection total discharge
68 g Lock nut ball mount

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## CHAPTER 9 TROUBLE SHOOTING

REFILL THE PUMP BODY WITH LIQUID BEFORE STARTING THE MOTOR
Refiller with distributors

| Nr | PROBLEM | REASON FOR DAMAGE | SOLUTION |
| :--- | :--- | :--- | :--- |
| 7 | The float 68b does not close <br> the maximum level of liquid <br> entering the float chamber <br> 68 | The liquid enters from a height <br> exceeding 10 metres. <br> Crust or impediments to the closing <br> of the liquid intake ball | Lower the level to 10 metres <br> Disassemble float §8.6 <br> Eliminate the impediment. |
| 8 | The float 68b does not close <br> the level between the float <br> chamber 68 | The liquid enters from the pump <br> under too much pressure. Failure of <br> hand wheel <br> 45 to open on the by-pass on the <br> suction pump. | Lower the range of the pump <br> closing the valve placed on the <br> delivery or open the pump <br> bypass v.5.3b |
| 9 | The float 68b does not close <br> the fill level in the float <br> chamber 68 | Encrusted Ball and/or sealing seat. <br> Presence of foreign bodies in the <br> closing area of the ball | Disassemble 68d spindle with <br> ball. §8.6 <br> Clean ball control and clean <br> ledge area. |
| 10 | The fill level of the bottles is <br> not constant. | Bottles of various heights | Select the bottles to be filled <br> based on heights |
| 11 | Failure to stop fill level with <br> escape of air and liquid <br> between the sealing cone and <br> the neck of the recipient to be <br> filled | Mouth of recipient not round, has <br> cutting edges or slight cracks <br> Sealing cone pos 60 worn spring <br> 54 worn or broken | Eliminate the defective <br> containers 4.2 Replace <br> sealing cone <br> Replace spring pos 54 §8.5 |
| 12 | Loss of liquid between sliding <br> tube 51 and washer 53 <br> dripping between tube 51 and <br> O-ring pos 59 | Loss of lip packing seal pos 52 Loss <br> from O-ring pos 59 | Replace trimming pos 52. §8.g <br> Replace or pos 59 §8.4e |

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## CHAPTER 10 FIGURES



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Fig.9a


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