

VEGA

MANUAL CONTROL UNIT FOR ORCHARD SPRAYERS

USE AND MAINTENANCE "Original Instructions"



VALVOLMECCANICA

Di Cevenini Lorenza e Chiara & C S.n.C.

Via Privata Adige, 4 - 28078 ROMAGNANO SESIA (NO) ITALY

Manual Control Unit for orchard sprayers

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INTRODUCTION

The descriptions and the illustrations contained in this manual aren't binding. Therefore Valvolmeccanica reserves the right to modify parts and details considered convenient for improvement or for any binding or commercial requirements, at any time and without updating immediately this manual.

According to the model, to the possible customized configuration and depending on a continuous technical evolution, pictures and data could not be found on Your Unit; the intervention processes remain however valid.

1 - TERMS OF WARRANTY

1.1 The warranty period is of 24 months.

- Valvolmeccanica responsibility is strictly limited to the replacement and/or to the reparation of those parts that after inspection would be considered defective in manufacture or processing. The transport costs of the parts evaluated covered by warranty, of their removal and replacement labor, are not included in the warranty.
- When the customer will receive the Unit, he must check that it has not been damaged during the transport, that it corresponds completely to the ordered model and that it is equipped with all the ordered accessories.
- **Any claims must be submitted in writing within 6 days from the date of the receipt of the unit. The customer should assert this warranty claims only if he has complied with the warranty terms and if he has sent to Valvolmeccanica the warranty certificate duly completed in every part, within the period of 10 days from the date of receipt of the unit.**
- **The warranty does not apply in cases of normal use, neglect in maintenance, not-correct use, negligence or accident, nor when the maximum pressures of use will be crossed.**
- The warranty expires when the customer will do tampering, repairs and/or installation of non-original spare parts, without Valvolmeccanica or its authorized representative consent. It expires also when the customer does not comply with the instructions described in the use and maintenance manual.
- Valvolmeccanica will never be liable for costs, losses or any kind of damage, resulting from the use, or not-correct use, or from partial or total malfunction of the unit.

FILL IN AND SEND THE FOLLOWING WARRANTY CERTIFICATE

WARRANTY CERTIFICATE

MODEL:.....

DATE OF PURCHASE:.....

CUSTOMER NAME AND SURNAME (or company name):.....

ADDRESS:.....

PHONE NUMBER :..... CUSTOMER SIGNATURE:.....

STAMP AND SIGNATURE OF THE AUTHORIZED RESELLER OR DEALER WHO MAKES THE DELIVERY.



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2 - DESTINATION, INFORMATION AND ADVICES

2.1 In this user manual with the term “Vega” refers to all the versions of the Manual Control Unit for orchard sprayers.

- In this user manual there are the necessary information for the Use and the Maintenance of your Vega.
- It's recommended to carefully read and follow the instructions before using your Vega.
- Keep this user manual in a dry and accessible place so that it will be intact in case of need.
- Immediately request a new user manual to the manufacturer in case of loss or destruction of it.
- We recommend to fill in the lines below right now.
- Always provide these information to Your agent, both for assistance and for spare parts.


MOD.....

DATE.....

ADDRESS.....


.....


3 - GENERAL SAFETY RULES

 **CAUTION: Read carefully these instructions and let them read also to the people who use Vega. Before use, be sure that they are well understood. Failure to observe the following rules can cause serious damages to the operator and to the environment.**

3.1 Before starting the Vega, read carefully the use and maintenance manual.

- Make sure it is read also by the operator who will use it.
- Vega must always be used with extreme caution. Inattention and improper use can cause accidents.
- Vega must always be used only by qualified personnel from the dealer or the manufacturer.
- The operator must be provided with specific license eligibility to use agrochemicals products.
- Maintenance and repairs must be done by qualified personnel who is competent with the characteristics of Vega or by manufacturer authorized workshops.
- It must always be mounted original spare parts in case of repair, to avoid compromising the work for which it has built.
- No special tools are required for repairs, normal commercial equipment are enough.
- Especially during the testing and the cleaning of the shutter calibrated return, avoid direct contact with the liquid mixture or its residues.
- Don't ever make any repair or maintenance operation when Vega is operating.
- Carefully follow instructions and warnings indicated on the safety stickers placed on the Bar.
- Use Vega exclusively for liquids control/command on the orchard sprayers, activity for which it has been designed and built.

 **CAUTION: Don't use Vega with corrosive acid liquids or with any other liquid or product not related to fungicidal treatments.**

 **CAUTION: Wear appropriate personal protective equipment (DPI), before make the above described operations or any other action that would put the operator in contact with chemicals, as is prescribed by law.**



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4 - PROHIBITED USES

4.1 Vega installation inside the cockpit.

- Application of particulars that modify the work for which it was built.
- Application of tools or equipment not supplied with Vega.

5 - SAFETY MEASURES TO PREVENT ACCIDENTS ON WORK

5.1 Wear personal protective clothing and equipment (DPI).

- Before every treatment, check the integrity of the pipes connected to Vega.
- Daily check the tightness of all the pipes clamping nuts and of the cable ties that lock the hoses on the fittings.
- CAUTION Perform these operations when Vega is not working, after turning off the tractor and after removing the key from the panel.

6 - RESIDUAL RISKS

6.1 There are some residual risks due to a wrong use by the operator, for this reason we recommend mounting protective sheath around the dangerous areas, such as lock-nuts and pipes connected to Vega.

7 - STEPS TO TAKE IN CASE OF ACCIDENT

7.1 In case of accident, turn off the tractor and remove the key from the panel, then contact or go to the nearest health center.

- In case of contamination, do all the above described operations bringing the handled chemical safety data sheet, to give way to the medical staff to act with safety and speed.

8 - VEGA MALFUNCTIONING

8.1 In case of malfunctioning due to breakages of components of Vega, immediately stop the treatment and using the washing circuit tank of the operating unit on which is mounted it, wash it carefully discharging the washing liquid in the working field. Then replace the broken parts or contact the dealer or the manufacturer requiring the intervention of qualified mechanics.

9 - PREVENTIVE MEASURES AGAINST FIRE

9.1 Don't move closer to Vega flames or heat sources.

- There are mounted on the control unit plastic parts, materials deriving from oil so potentially flammable.

10 - RISK ANALYSIS

Vega has been subjected to various tests, during the design phase, and since all the sources of danger have been eliminated, it can be considered practically safe. Possible dangers can result from improper use of it:

17.1 - Connection to a pump above 50 Bar.

- Piping and fittings not properly fixed.
- No protective sheath.
- Use with damaged components.
- Agrochemicals products incorrect use.



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11 - VEGA DESCRIPTION

11.1 - Brass body and fittings

- Teflon internal bushing
- Viton seals
- D nylon operating lever for the selection of flows.
- E nylon handle for pressure regulation.
- F shutter for the calibrated control of the drain that keeps constant the pressure regardless of use of only one or both flows contemporary.
- G Pressure gauge



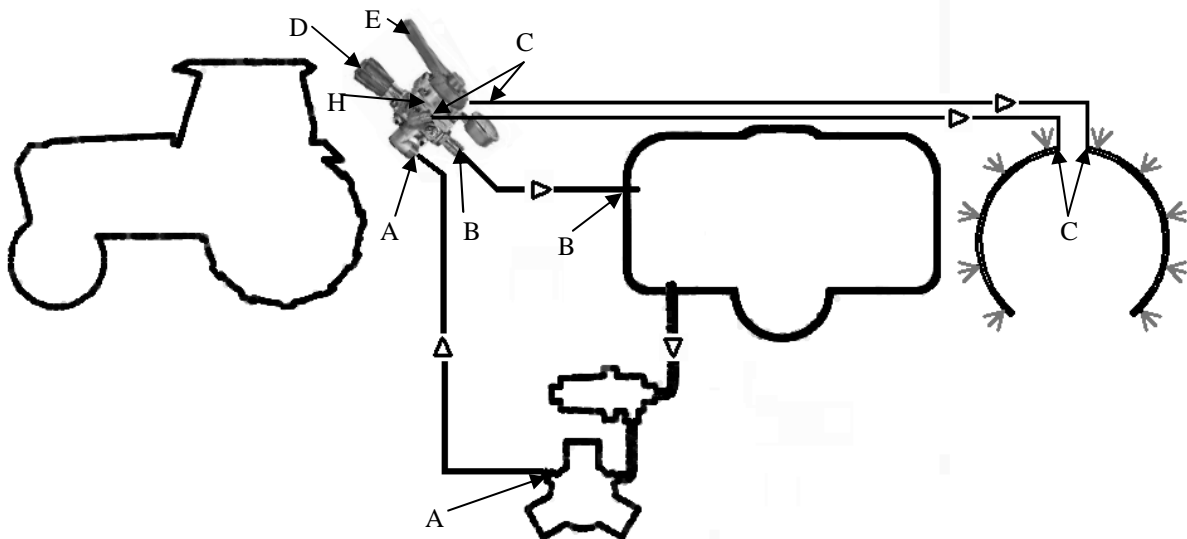
12 - INSTALLATION

12.1 Safety rules

- Don't install the unit inside the cockpit.
- Install the unit so that the setting lever and the regulation pressure handle are located in accessible position for use, but far from the operator.
- Ensure that the components mounted on the pressure line can bear a higher pressure than the maximum pressure at which the unit is working.
- Mount a drain pipe with the working pressure rating greater than the one of the same drain.
- Mount the outlet hoses with the working pressure rating greater than the one of the flow.
- Mount a protective sheath around the fittings and the pipes.

12.2 Installation procedure

- Fix the control unit (H) on the orchard sprayer far from the tractor cockpit.
- Connect the pump outlet pipe to the control unit inlet fitting (A).
- Connect the outlet fitting drain pipe of the control unit to the orchard sprayer tank (B).
- Connect the lateral fittings outlet hoses of the control unit to the holder jets halos of the orchard sprayer (C).



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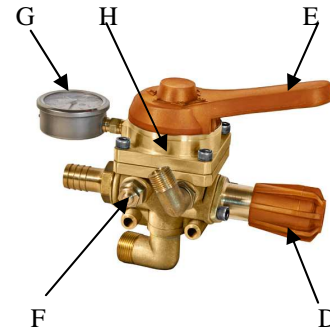
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13 - OPERATING PRINCIPLES

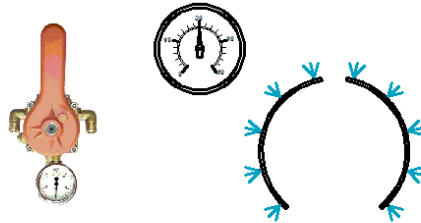
This control unit works when it's connected to an atomizer equipped with a diaphragm pump. The liquid produced by the pump reaches the control unit (H) where the pressure is increased with a handle (D) and with an other handle (E) are selected the outlets that allow the liquid to reach the distribution halos.

The calibration pin (F) is used to calibrate the return of the liquid into the tank. Unlocking the lock-nut on the shutter, and acting in clockwise and counterclockwise on the same shutter, it is possible to calibrate the return of the liquid in order to maintain constant the working pressure when one of the two outputs are closed.

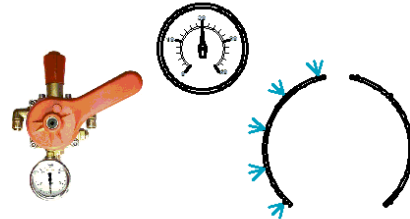


14 OPERATING DIAGRAM

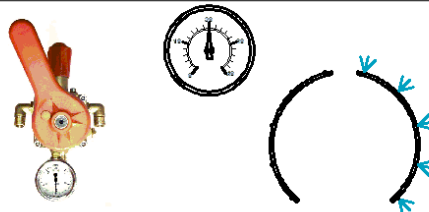
Aperto DX - SX
Aperto da ambo i lati con passaggi grandi che permettono una portata di 200 litri/minuto



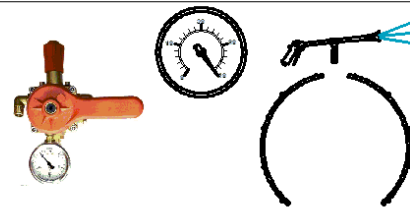
Aperto DX
Aperto a destra con spillo di calibrazione sullo scarico che permette di mantenere costante la pressione di lavoro



Aperto SX
Aperto a destra con spillo di calibrazione sullo scarico che permette di mantenere costante la pressione di lavoro



In pressione
Scarico chiuso che permette di inviare tutto il liquido alla massima pressione ad una lancia esterna



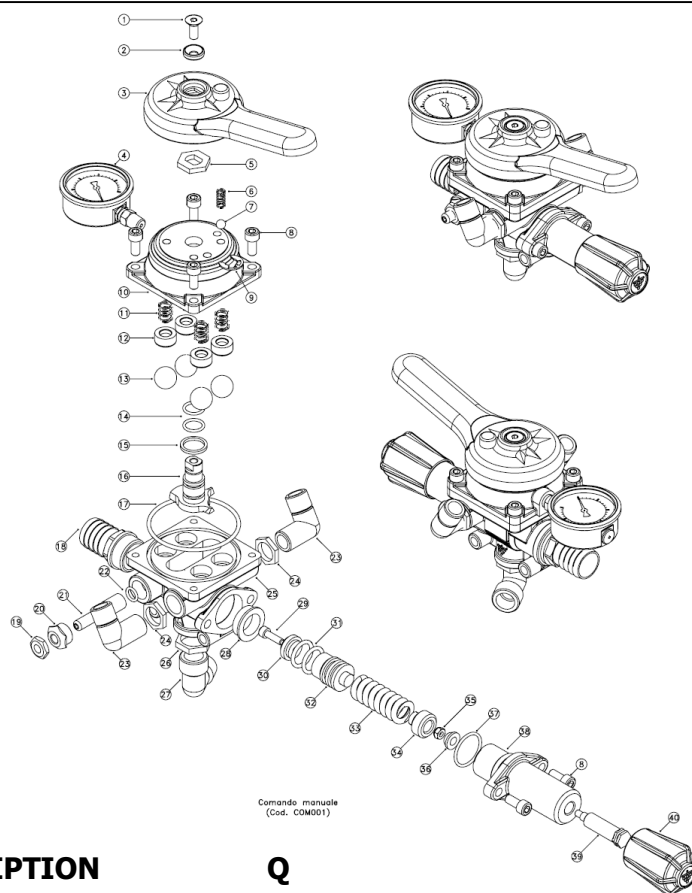
In riciclo
Scarico aperto che permette il riciclo totale del liquido nel serbatoio



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N. CODE	DESCRIPTION	Q
1	A103MI0000 8MA countersunk screw	1
2	L102MI0000 Lever lock washer	1
3	A006PL0000 Control lever	1
4	A034RA0060 Ø 63 Pressure gauge	1
5	L101MI0000 27 hex. insert for control lever	1
6	A002MO0000 Push sphere spring	1
7	A104MI0000 Ø 8,731 sphere for position	1
8	A109MI0000 M8 x 18 stainless steel caps screw	6
9	A100MI0000 Snap ring	1
10	L050CO0000 Diverter cover plate	1
11	A009MO0000 Stainless steel push sphere spring	4
12	A017GU0000 Teflon seat for sphere	4
13	A110MI0000 Ø 20,638 stainless steel sphere	4
14	A027OR0000 15,08 x 2,62 viton o-ring	2
15	A018GU0000 Tab washer for spindle	1
16	L009ST0000 Diverter spindle	1
17	A024OR0000 78,97 x 3,53 Viton O-ring	1
18	A026RA1030 Ø 30 Coupling	1
19	L108MI0000 Drain Valve, 10MA Locknut	1
20	L107MI0000 Drain Valve, 22 hex. nut per a stem	1

N. CODE	DESCRIPTION	Q
21	L106MI0000 Drain Valve	1
22	A028OR0000 9,19 x 2,62 Viton O-ring	1
23	L011RA1212 1/2" M.M. Elbow	1
24	A013RA1200 1/2" Ring Nut	2
25	L051CO0000 Diverter body	1
26	A013RA3400 3/4" Ring Nut	1
27	L011RA3434 3/4" M.M. Elbow	1
28	A094MI0000 Pressure regulation stainless steel seat	1
29	A076MI0000 6M x 12 caps screw	1
30	A095MI0000 Ø 24 Stainless steel breechblock	1
31	A025OR0000 20,22 x 3,53 Viton O-ring	2
32	A096MI0000 Piston supporting breechblock	1
33	A008MO0000 Pressure regulation spring	1
34	L099MI0000 Spring spacer	1
35	A105MI0000 6M self-locking nut	1
36	L098MI0000 Conique washer pushing spring	1
37	A026OR0000 29,82 x 2,62 Viton O-ring	1
38	L052CO0000 Diverter regulation pressure sleeve	1
39	A097MI0000 Handle regulator Insert	1
40	A005PL0000 Handle with insert for regulator	1



15 - VEGA CLEANING

- Through the outlet hose (A) that arrives from the pump enter clear water into the control unit, rotate the handle (E), regulate at 3 or 4 Bar the knob (D) until when clear water comes out from the spray nozzles mounted on the halos connected to the outlet hoses (C).

16 - VEGA MAINTENANCE



CAUTION! Before starting any maintenance operation, carefully read the use and maintenance user manual.

Make sure that the control unit is externally clean and the liquids circuit empty and clean.

16.1 - ORDINARY MAINTENANCE

COMPONENT	OPERATION	CHECKING PERIOD
Gaskets	Check the integrity	Every treatment
Pipes	Check the integrity	Every treatment
Hose clamps	Check the integrity	Every treatment
Pressure gauge	Verify the functionality	Every treatment

16.2 - EXTRAORDINARY MAINTENANCE

- Complete replacement of all gaskets every 2 years
- Complete replacement of all hydraulic pipes every 5 years

17 - MALFUNCTIONS OR DEFECTS IDENTIFICATION

DEFECT	CAUSE	SOLUTION
The solution to be sprinkled doesn't come out from the nozzles.	1) The liquid doesn't reach the nozzles at the correct pressure.	1) Verify that the ways inside the unit are not blocked.
The solution to be sprinkled comes out from the nozzles not uniformly.	1) Internal bushing and gaskets worn. Pipes lock nuts slacked.	1) Ceck the bushing and the gaskets of the unit. 2) Tighten the pipes lock nuts.

18 - SCRAPPING

When the Vega reaches the end of its working life and it is no longer usable, it is necessary to scrap it.

CAUTION: Do not leave the Vega completely abandoned because it could be a source of danger and some parts should be pollutants.



18.1 Carefully clean the unit both internally and externally.

- Contact a specialized center for scrapping that will arrange for appropriate recycling or disposal in accordance



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19 - FAC SIMILE COMPLIANCE CERTIFICATE

19.1 CE Declaration of conformity

In compliance with Directive 2006/42/CE Annex II A Directive 2009/127 CE

The manufacturer **VALVOLMECCANICA** of **Cevenini Lorenza and Chiara & C S.n.C.**

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DECLARES THAT THE FOLLOWING MANUAL CONTROL UNIT:

Generic name: Manual control unit

Function: Equipment for the selection of the outlets and the orchard sprayers pressure regulation.

Model: VEGA

Trade name: VEGA

IT COMPLIES WITH THE RELEVANT REQUIREMENTS OF THE DIRECTIVE "MACHINES" 2006/42/CE AND WITH NATIONAL IMPLEMENTATION PROVISIONS

FOR THE VERIFICATION OF THE CONFORMITY WITH THE ABOVE MENTIONED DIRECTIVES, HAVE BEEN USED THE FOLLOWING HARMONISED RULES:

- EN ISO 4254-1 : 2010, EN ISO 4254-6 : 2010
- UNI EN 12761-1 : 2001, UNI EN 12761-2 : 2001

AND ALSO THE TECHNICAL SPECIFICATIONS:

- ISO 11684:1995

AUTHORIZED PERSON TO MAKE THE INTERNAL BOOKLET (1):

Cevenini Rolando

C.so Matteotti, 323/B - 13037 - Serravalle Sesia (VC) - Italy

Romagnano Sesia (NO) Date:.....

Valvolmeccanica of Cevenini Lorenza and Chiara & C S.n.C.

(Legal representative)
LORENZA CEVENINI



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