02

ELECTRIC CONTROL UNIT FOR CROP-SPRAYING APPLICATIONS

CE

463 - 464 - 465 - 471 SERIES

INSTALLATION, USE AND MAINTENANCE

• LEGEND SYMBOLS

	= **Generic danger**
	= **Warning**

This manual is an integral part of the equipment to which it refers and must accompany the equipment in case of sale or change of ownership. Keep it for future reference; ARAG reserves the right to modify the specifications and instructions regarding the product at any time and without prior notice.

CONTENTS

1 PRODUCT DESCRIPTION

ARAG electric control units for crop-spraying applications consist of individual, modular-design electric valves.
When installed on crop spraying machines, they ensure regular distribution of pesticides.

This booklet describes all the various parts that may be included in the unit. Some of these parts may not be included in your unit. Likewise, given the modularity of the product, some types of parts may not be assembled together but are only alternatives for others.

The illustrations in this booklet are, therefore, provided only as indications. For detailed information, please refer to the description of the part in question and not of the unit in general.

ARAG is not liable for any damage caused directly or indirectly by the type of fluids used for spraying by its control units.

The operator has full liability for the use of these products and therefore must verify the safety regulations indicated on the package by the manufacturer of the liquid and must wear suitable protective clothing (gloves, overall, footwear, helmet, etc.) as required by law.
ARAG is therefore not liable for any damage or injury to persons or animals as a result of the incorrect use of the products employed, without protection or contrary to recommendations.

1.1 Intended use

This device is designed to work on agricultural machinery for crop spraying applications.

The machine is designed and built in compliance with EN ISO 14982 standard (Electromagnetic compatibility - Forestry and farming machines), harmonized with 2014/30/UE Directive.

IMPORTANT:
THE VALVES MUST NOT BE USED WITH THE NEW ARAG CONTROL BOXES OF THE 4669 SERIES.

2 FUNCTIONING OF THE PRODUCT

2.1 Components of electric control units

2.1.1 Electric control units with main control valve SERIES 471

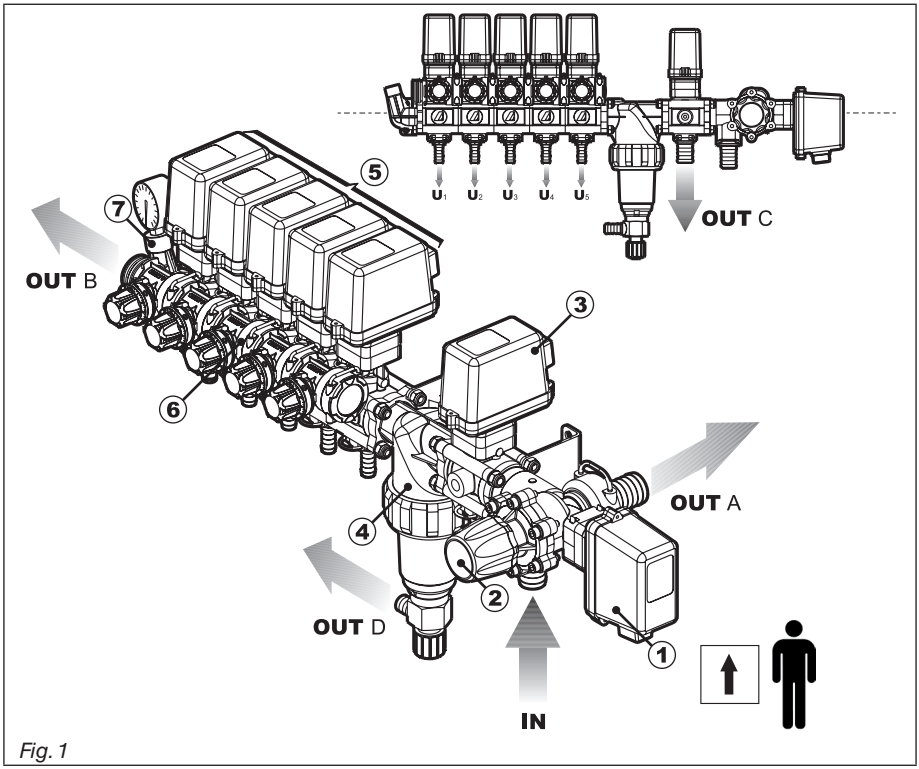


Fig. 1

1 Gearmotor of main control valve
2 Maximum pressure valve
3 Proportional electric valve
4 Filter
5 Boom section electric valves
6 Metered by-passes
7 Pressure gauge adapter or pressure transducer connection

IN Intake of liquid for spraying
OUT A Drain for maximum pressure valve
OUT B Drain for metered by-pass
OUT C Drain for proportional valve
OUT D Drain for self-cleaning filter
U1÷U5 Boom section delivery

The main control valve series 471 is an assembly made up of main control valve gearmotor (1) and maximum pressure valve (2).

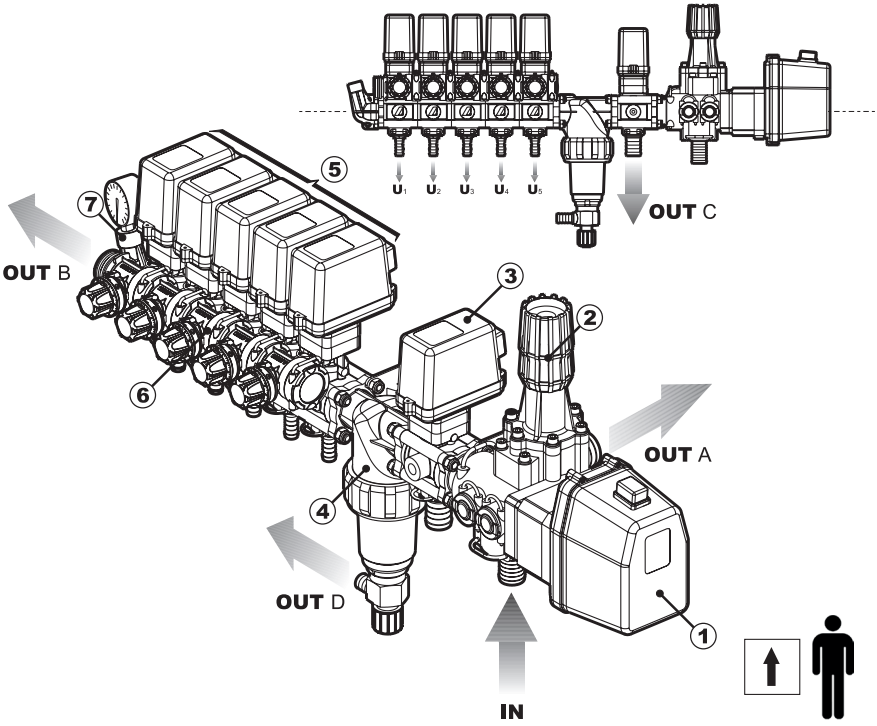


Fig. 2

1 Gearmotor of main control valve
2 Maximum pressure valve
3 Proportional electric valve
4 Filter
5 Boom section electric valves
6 Metered by-passes
7 Pressure gauge adapter or pressure transducer connection

IN Intake of liquid for spraying
OUT A Drain for maximum pressure valve
OUT B Drain for calibrated backflows
OUT C Drain for proportional valve
OUT D Drain for self-cleaning filter
U1÷U5 Boom section delivery

The main control valve series 464 is an assembly made up of main control valve gearmotor (1) and maximum pressure valve (2).

1 Gearmotor of main control valve

Opens or closes main valve to let fluid flow through the system.

Gearmotor is operated via a suitable switch installed on the control device of the unit (e.g.: control box or computer).

• **Valve open** = liquid sent directly to the circuit for application;

• **Valve closed** = liquid sent to the tank;

the suction system, if present, starts functioning.

2 Maximum pressure valve

Eliminates the excess liquid when the set pressure level is reached.

Can be adjusted manually using the appropriate knob; the knob has a different colour according to the maximum pressure for the valve (refer to par. 7.1 - Correspondence between valve parts and maximum valve pressure).

3 Proportional electric valve

Adjusted via a dedicated switch installed on unit control device (e.g.: control box or computer), this valve regulates spraying pressure: when the vehicle progress speed changes during spraying, the volume of the liquid distributed per surface unit (litres/ hectare) remains stable.

The increase or reduction in delivery is proportional to the number of revs of the engine with a tolerance of +- 20%.

4 Filter

Protects nozzles from dirt, which would eventually reduce their performance.

With self-cleaning filters, there is less need for frequent cleaning of the cartridge inside the filter.

5 Boom section electric valves

These valves open/close the corresponding boom section; for valves with metered by-passes, the valve closed position is the same as the drain position for the respective metered by-pass.

6 Metered by-passes

These are adjusted so the level of spraying pressure remains steady when one or more sections of the boom are closed.

7 Pressure gauge adapter or pressure transducer connection (supplied on request)

Connection for pressure gauge or pressure transducer to provide working pressure indication when main control valve is open.

Details of operation will follow: about how to adjust single components, please read cap. 4 - Setting before use and cap. 5 - Use; for information on suitable control devices, please read par. 3.4 - Connection to control devices.

3 INSTALLATION

3.1 Safety regulations

• Do not install the control unit inside the driver's cab.
• IInstall unit so that manual valves can be easily accessed, but well away from operator's station.
• The intake flow rate for the unit must be less than maximum flow rate envisaged for the main control valve.
• The parts and the hoses that are installed on the main pressure line (delivery line) must be capable of withstanding greater levels of pressure than that of the maximum pressure valve (refer to par. 7.1 - Correspondence between valve parts and maximum valve pressure).
• Commission the drainage system according to the maximum delivery flow rate for the pump. Also install hose whose nominal operating pressure is greater than that of the drain: any bottlenecks in the drainage system could cause abnormally high pressure levels.
• Make sure the hoses used are suitable for the diameters of the chosen hose tails. Use systems to secure the hoses that are suitable for the hoses in question.
• It is recommended to install a pressure-relief device (Series 459 on general ARAG catalogue) on the pump to avoid risks caused by a unit malfunction.
This device does not replace a further safety valve, but it can limit unit damages in case of sudden over-pressures.

Contact skilled personnel for any intervention requiring modifications to the configuration of the hydraulic connections.
ARAG is not liable for any damage to equipment or injury to persons, animals or things caused by incorrect or unsuitable connection of the unit.
Likewise, ARAG is not liable for any damage caused directly or indirectly to equipment or machinery, or injury to persons, animals or things caused by unsuitable or unfit hoses, cable grips, wraps or other accessory.
All forms of warranty are rendered null and void in case of damage to the unit caused by the above.

3.2 Installing and connecting the unit

Install the control unit and secure it using the appropriate holes located on the brackets, as shown in Fig. 3.

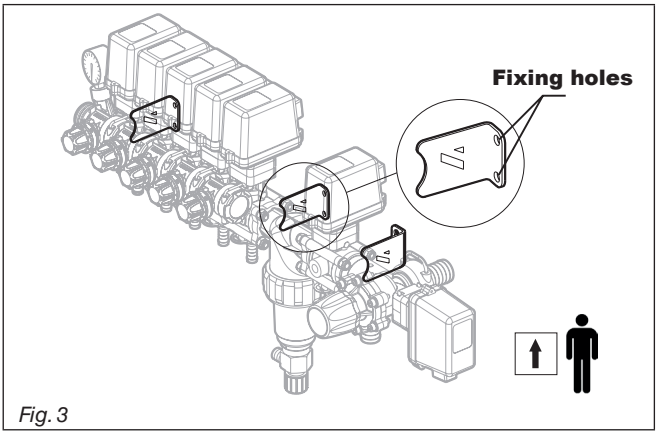


Fig. 3

Observe unit mounting positions shown in Fig. 4:

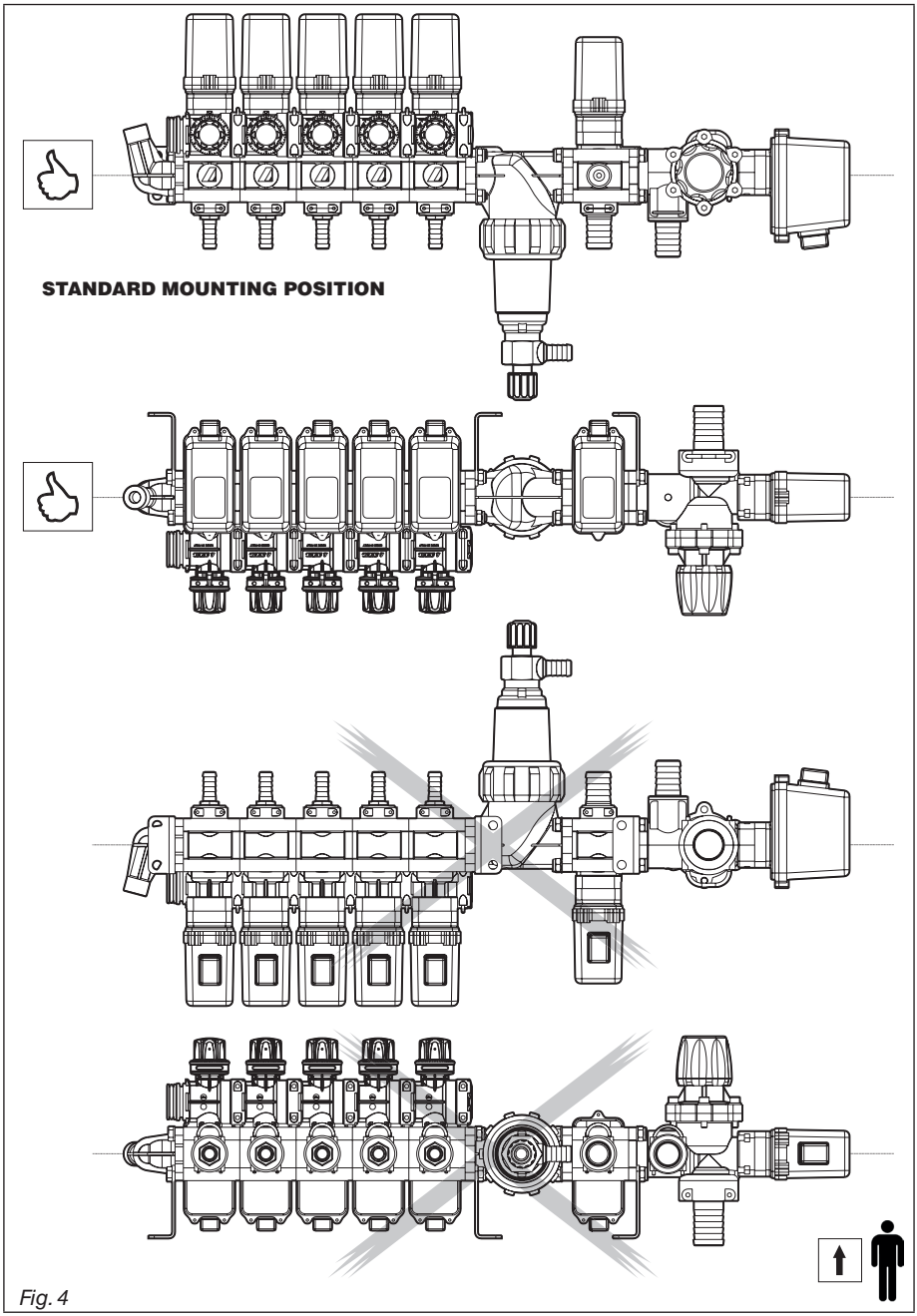


Fig. 4

3.3 Connecting up the system

Connect the hoses in the system according to the layout shown below.
Take care:
- Not to connect backflow hoses in the lower part of the tank with the intention of using them as hydraulic stirrers; only place them in the upper part so the liquid drops down by gravity, as shown in Fig. 5.
- Make a separate connection of the backflow of the valves with the tank.

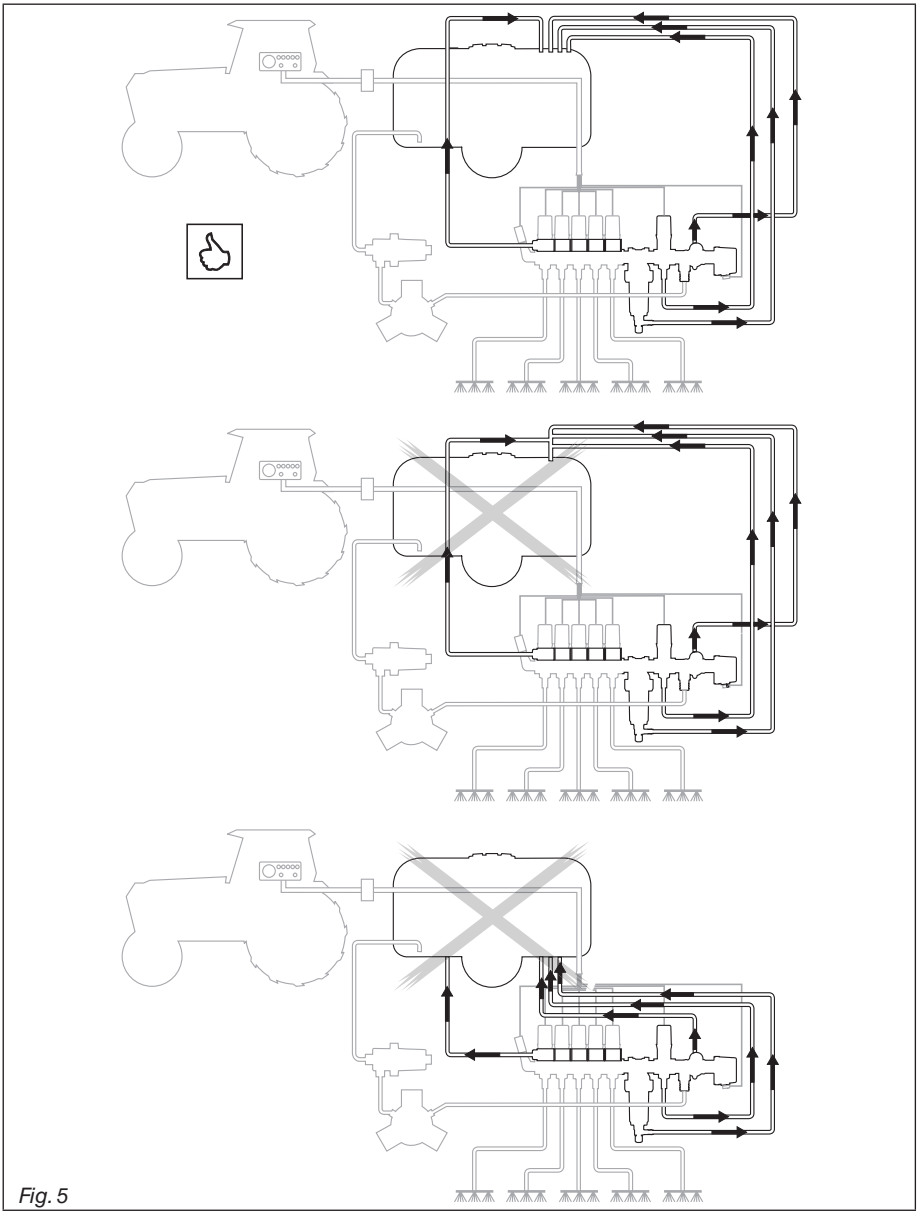


Fig. 5

3.4 Connection to control devices

• The diagram below is for illustrative purposes only; to ensure correct operation, always refer to the installation manual relevant to the control device you are using.
• Connections and setting into operation are best left to qualified personnel. ARAG disclaims all liabilities for damage to equipment, persons or animals resulting from wrong or improper connection of the unit.
• Any damage to the unit resulting from the above will automatically invalidate any warranty rights.

Electric units are designed for connection to ARAG control devices (computers, monitors, displays). Each control device comes complete with the necessary connection cables and all cables are marked for ease of identification; please see Fig. 6 for a description of cable marks and their meanings.

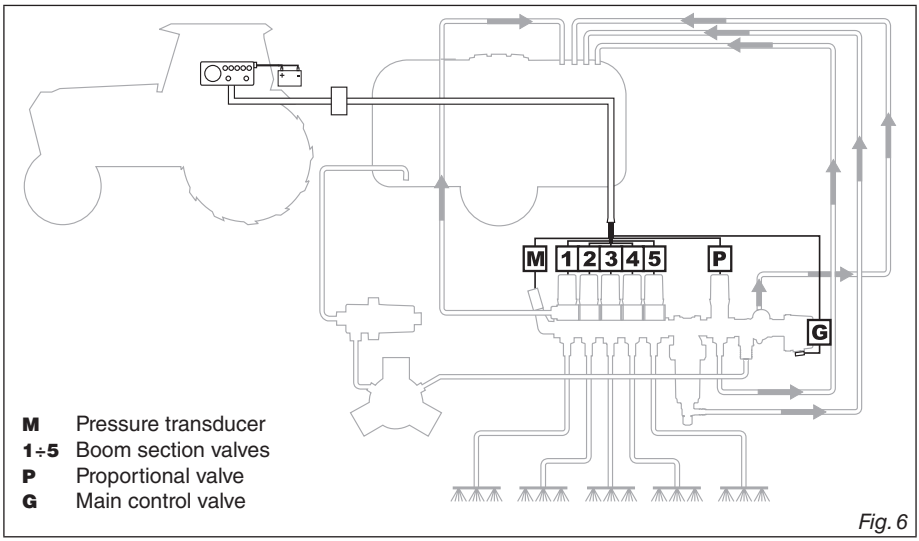


Fig. 6

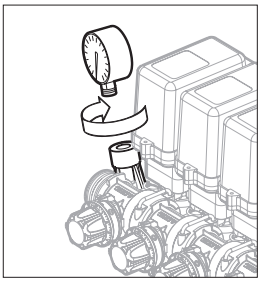
• Use only the cables supplied with ARAG computers or control boxes.
• Do not pull on the cables. Be careful not to break, tear or shear the cables.
• Check wiring and cables for damage from time to time.
Minimum required cross-section area for cables connected to main control valve is 1.5 mm²; minimum required cross-section area for cables connected to remaining unit components is 0.75 mm².
• Any damage resulting from use of unsuitable cables or anyway other than ARAG cables will automatically invalidate any warranty rights.
• ARAG disclaims all liabilities for damage to equipment, persons, animals or things resulting from the above.

4 SETTING BEFORE USE

• ONLY use clean water for any intervention or adjustment without any chemical additives.
• Observe rated power supply voltage.
• Make sure to disconnect power to the device before arc welding; consider physically disconnecting the power supply cables.

• The hook-up diagram shown in Fig. 6 is for illustrative purposes only; standard unit adjustment procedure may vary depending on which control device is used.
• All indications on installation, adjustment and operation reported below are intended for the unit installed in the standard mounting position (Fig. 4).
• For detailed information on the operation or adjustment of the valves included in the unit, ALWAYS refer to the operating and maintenance instructions manual relevant to your control device.
• All valves incorporate a protection that shuts down operation automatically in the event of overvoltage; to reset the valves, remove power supply to the unit for about 20 seconds.
• Pressure readings are indicated by the pressure gauge or displayed at the control device (where unit is equipped with a pressure transducer).

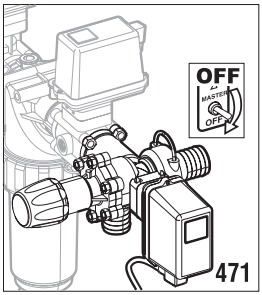
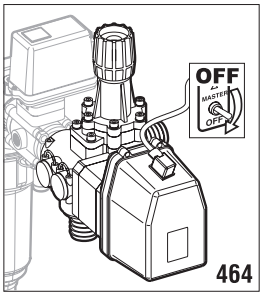
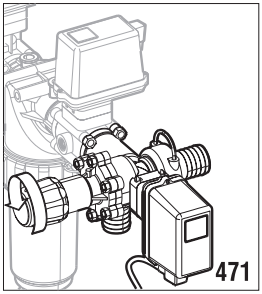
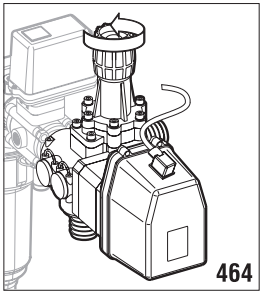
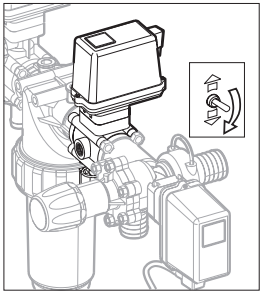
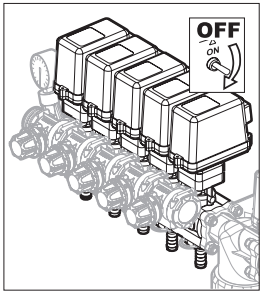
4.1 Electric unit adjustments before operation

1		Install pressure gauge or pressure transducer to the seat in the pressure gauge adapter.	**• Make sure the flat gaskets supplied with the control unit are correctly positioned in the pressure gauge adapter seat.** **• Nylon adapter = 1 gasket** **• Brass adapter = 2 gaskets**

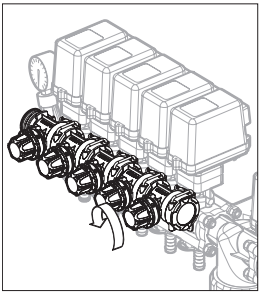
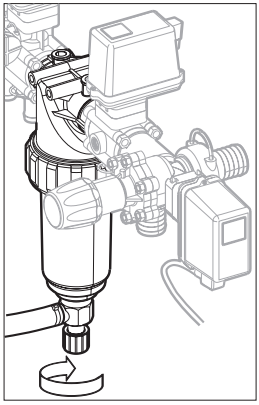
• Pressure gauge:
Screw into pressure gauge adapter seat until firmly in place; do not overtighten.
Use ARAG pressure gauges with 1/4" M coupling and a suitable end scale for the maximum operating pressure.

• Pressure transducer:
Use ARAG transducers **(code 466112.x00)**; please read the instructions manual supplied with the device for full installation information.

CONTINUES

2			Set the relevant switch on the control device to "OFF" to set the main valve so as to allow discharge.
3			Turn the knob anticlockwise to completely open the hand wheel of the maximum pressure valve.
4			Push down the relevant switch on the control device to fully open the proportional valve.
5			Set the relevant switches on the control device to "OFF" to close all section valves.

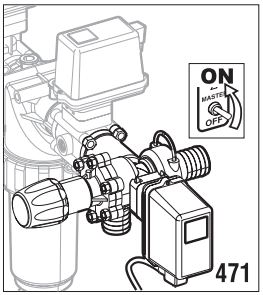
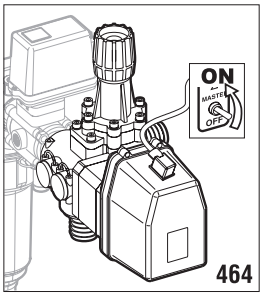
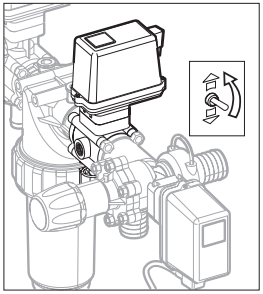
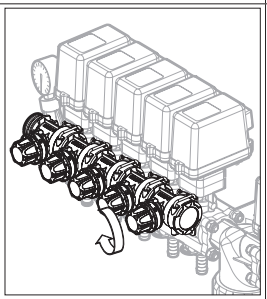
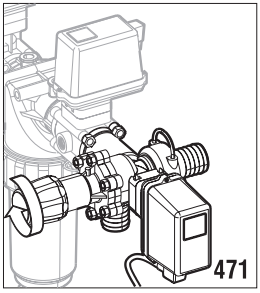
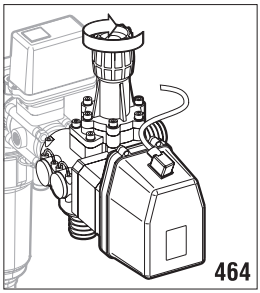
CONTINUES

6		Open all the compensation cocks by turning their knobs anticlockwise.
7		Turn the knob clockwise and completely close the drain to the self-cleaning filter.

End of par. 4.1 - Electric unit adjustments before operation

4.2 Adjustment of maximum operating pressure (only applicable for units with proportional valve)

Should either of the following be noted during operation:
• pressure above the maximum limit for the system and safety valve;
• abnormal leaks of liquid;
- stop work, switch the pump off and check that the installation and preliminary procedures have been completed correctly.

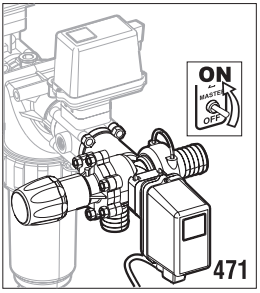
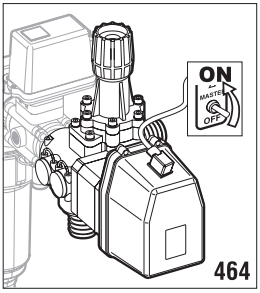
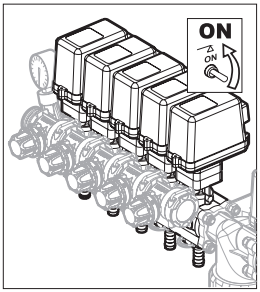
1	Start pump operation.		
2			Set the relevant switch on the control device to "ON" to open the main valve: this will let fluid in through the system.
3	Gradually increase the number of revs of the pump until the maximum operating level is reached.		
4		Push up the relevant switch on the control device to fully close the proportional valve.	
5		Close all the compensation cocks by turning their knobs clockwise.	
6			Adjust the maximum pressure valve by turning its knob clockwise until the pressure of the valve is about 20% above the unit's maximum operating pressure.

5 USE

For detailed information on operation or adjustment of unit valves, ALWAYS refer to the operating and maintenance instructions manual relevant to your control device.

Pressure readings are indicated by the pressure gauge or displayed at the control device (where unit is equipped with a pressure transducer).

5.1 Calibration of operating pressure

1	Select the type of nozzle and the relative operating pressure according to the litres/hectare (l/ha) to be sprayed and the speed of progress.		
2	With the machine off, start the pump and take it to its operating level.		
3			Set the relevant switch on the control device to "ON" to open the main valve.
4		Set the relevant switches on the control device to "ON" to open all section valves.	
5	Now take the unit pressure to the required level for spraying: there are two ways to perform this adjustment:		

5.1.1 Constant pressure units (Fig. 7 and Fig. 8)

This kind of unit does not have a proportional valve, therefore the calibration of the operating pressure is carried out by the maximum pressure valve.
The adjustment is made by turning the knob on the maximum pressure valve until operating pressure is obtained:

- **Turn clockwise to increase pressure;**
- **Turn anticlockwise to decrease pressure.**

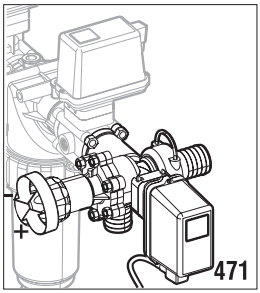


Fig. 7

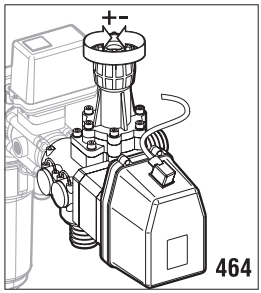


Fig. 8

5.1.2 Units with proportional valve (Fig. 9)

The calibration of the operating pressure is carried out by the proportional valve.
To adjust, operate the relevant switch on the control device until achieving the desired pressure.

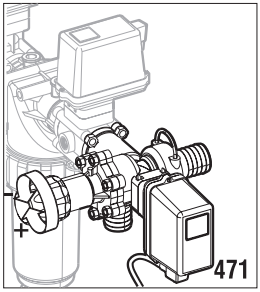


Fig. 9

⚠

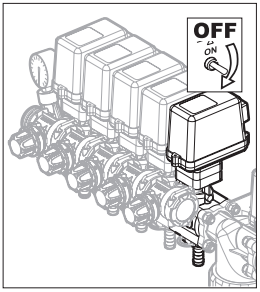
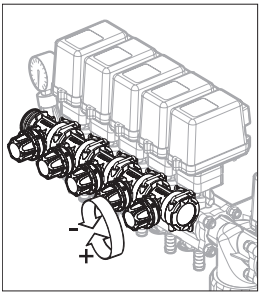
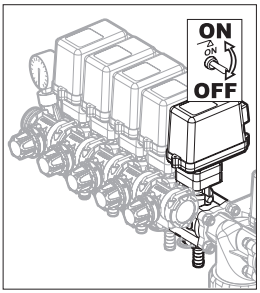
In this case, the proportional valve must be used for pressure adjustment and not the maximum pressure valve since the proportional valve would not compensate the variations in speed correctly should the operating pressure be too close to the calibration of the maximum pressure valve.

5.2 Calibrating the metered by-passes

These cocks safeguard the constant distribution of liquid even in case of operation with one or two section valves closed.

Calibration must be carried out EACH TIME the type of nozzle is changed.

The metered by-pass calibration knobs are equipped with a graduated scale. Once each metered by-pass has been calibrated, enter the value of the graduated scale for the type of nozzle in use in the tables on page 20. This means that it will not be necessary to recalibrate a given metered by-pass the next time the same nozzles are used, but simply set it to its value in the tables.

1		Close one section valve by setting its corresponding switch on the control device to "OFF".
2		Adjust the corresponding compensation cock by turning the knob until the pressure level is restored on the pressure gauge that was previously set with all the section valves open.
3		Open and close the section valve (operate its switch on control device as needed) and make sure that pressure value remains steady. **If pressure fluctuates, repeat the operations described at step 2 until no more fluctuation occurs.**

CONTINUES

4	Calibrate ALL section valves before running a treatment; the calibration can be done as follows, depending on the configuration of the control unit: **• the number of nozzles is EQUAL for all section valves** you need only to calibrate one single valve, then set the graduated scales of all the others to the same mark. **• the number of nozzles is DIFFERENT for each section valve** each section valve must be calibrated independently. **• the number of nozzles for each section valve is MIRRORED (Fig. 10)** you need to calibrate only one part of the control unit (right or left boom, valves **A, B, C**): calibrate the other part of the boom by setting the corresponding metered by-passes to match the valve settings on the section of boom already calibrated (Fig. 10).

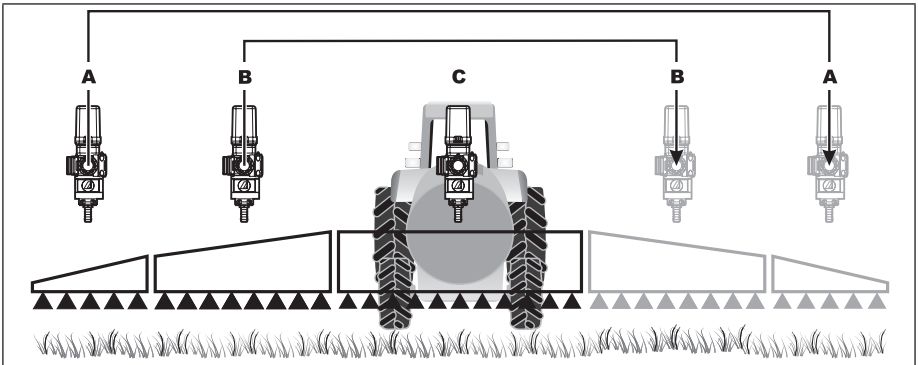


Fig. 10

If the types of nozzle are not changed, the adjustments made will safeguard a uniform distribution of liquid even when spraying needs differing levels of operating pressure.

5.2.1 Metered by-pass calibration tables

NOZZLE TYPE	COLOR	REF.	NOZZLE TYPE	COLOR	REF.	NOZZLE TYPE	COLOR	REF.

NOZZLE TYPE	COLOR	REF.	NOZZLE TYPE	COLOR	REF.	NOZZLE TYPE	COLOR	REF.

NOZZLE TYPE	COLOR	REF.	NOZZLE TYPE	COLOR	REF.	NOZZLE TYPE	COLOR	REF.

6 MAINTENANCE / DIAGNOSTICS / REPAIRS

• Disconnect power to the control unit before washing.
• Wear protective gloves, goggles and clothing.
• Do not use high-pressure water jets to wash the outside of the control units.
• Sponge with neutral detergent and rinse.
• Wait until unit is fully dry before restoring electric connections.
• ARAG is not liable for any damage caused to equipment or injury to persons or animals caused by cleaning with unsuitable products. All forms of warranty are rendered null and void in case of damage to the unit caused by the above.

6.1 Flushing the liquid passages of the electric control units

After every treatment carefully wash the unit channels, flushing with clean water or, if necessary, water with a specific detergent.
Follow the indications in the table below for the frequency of cleaning:

MANUAL CLEANING	FREQUENCY
Cleaning with clean water	After each use
Filter cleaning	After each use
Filter cleaning (self-cleaning type)	**• Closed cock:** after each use
	• Open cock: every month or every 100 hours
Cleaning using a specific detergent	Every month or every 100 hours

• Check that gaskets are sealing correctly while washing the unit. Look for abnormal leaks. If any leak is found, have the unit uninstalled by qualified personnel and bring it to the nearest Service Centre.

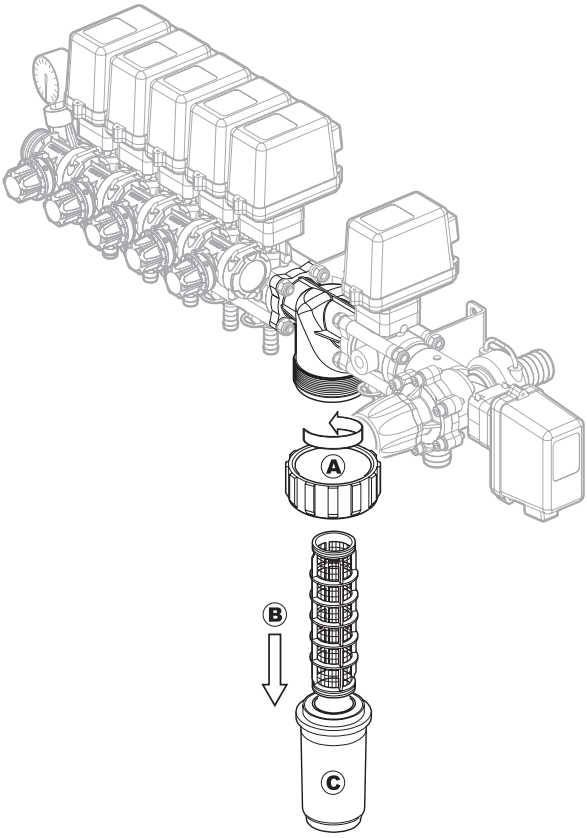
• Send the unit to your service centre to be checked over and for the valve gaskets to be replaced, if necessary, once a year or every 500 hours of operation of the system.

Units must be cleaned thoroughly prior to being sent to a Service Centre for control or repair.
Should the Service Centre receive a dirty unit, it will have the right to refuse delivery and repair of the same even if it is covered by guarantee.

6.2 Cleaning the filters

6.2.1 Manual cleaning

Clean the filter regularly according to the instructions described below:



1	Protective gloves, goggles and clothing must be worn.
2	Stop the machine and disconnect power to the unit.
3	Empty any remaining products out of the system.
4	Unscrew the lock ring **A** by turning it anticlockwise, slide the lid **C** and the cartridge **B**.
5	Wash the cartridge **B** and the lid **C** under running water.
6	Remove any trapped items under running water.

⚠ **Do not use compressed air or sharp objects for cleaning the cartridge.**

Take care not to damage the mesh when cleaning the filter: should you notice any damage to the mesh, replace the cartridge with a new one.

Refer to the ARAG spare parts catalogue for references for ordering spare parts.

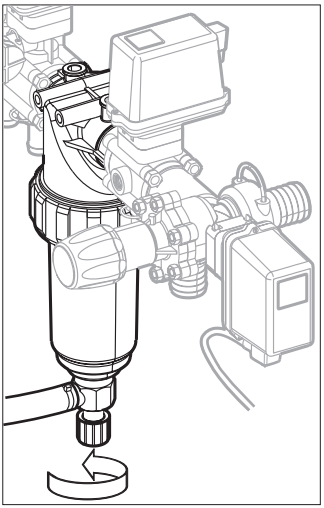
Make sure the drain on the self-cleaning filter is connected to the tank with a hose before starting cleaning.

There are two methods for cleaning:

• Continual cleaning:
The filter cock is left open so that cleaning is carried out during spraying.

In order to use the filter in this way, you must check that the unit's intake flow rate is sufficient to supply both the drain for the self-cleaning filter in addition to the unit itself.

This check is carried out as follows:



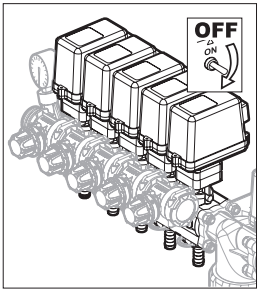
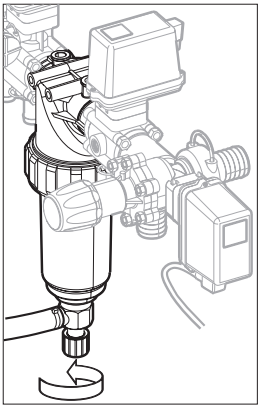
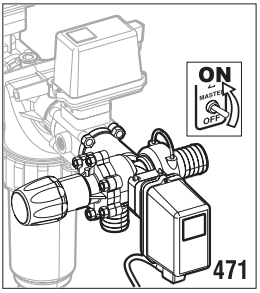
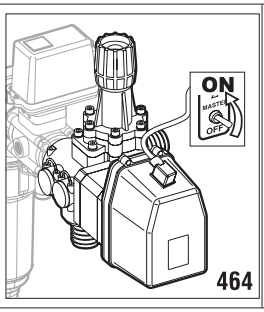
1	Protective gloves, goggles and clothing must be worn.
2	Open the self-cleaning drain completely by turning the knob anticlockwise.
3	Follow the steps for the adjustment of operating pressure (please see par. 5.1 - Calibration of operating pressure).
4	After the calibration of the operating pressure, the drain cock can be left open so that the filter is cleaned automatically during the use of the unit.

Should it prove impossible to reach operating pressure, the filter cannot be used in this way and must be cleaned by "regular cleaning".

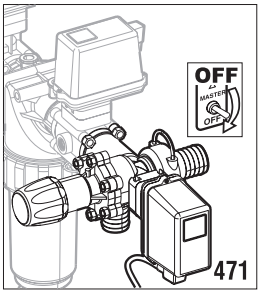
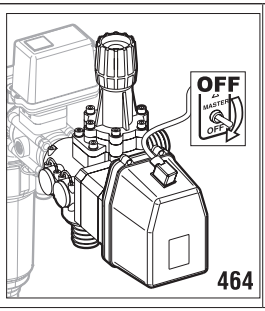
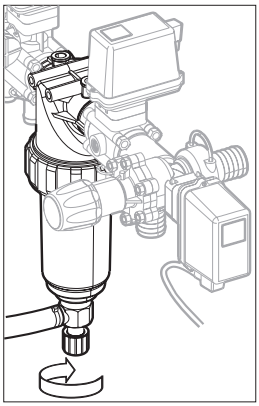
CONTINUES

Make sure the drain on the self-cleaning filter is connected to the tank with a hose before starting cleaning.

• Regular cleaning:
This procedure can be carried out at the end of each use or any time it is deemed necessary:

1	Protective gloves, goggles and clothing must be worn.	
2	Start the pump and take it to its operating level.	
3		Set the relevant switches on the control device to "OFF" to close all section valves.
4		Open the drain on the self-cleaning filter completely by turning the knob anticlockwise.
5	 	Set the relevant switch on the control device to "ON" to open the main valve.
6	Allow the system to operate for at least 2 minutes.	

CONTINUES

7			Set the relevant switch on the control device to "OFF" to close the main valve.
8		Close the drain on the self-cleaning filter completely by turning the knob clockwise.	

End of par. 6.2.2 - Automatic cleaning of self-cleaning filters

6.3 Troubleshooting

TROUBLE	CAUSE	REMEDY
Working pressure cannot be achieved by operation of switch on main valve control device.	Main valve motor malfunctioning	• Check electric connection.
		• Have gearmotor inspected at the nearest Service Centre.
	Inlet and outlet tubes not connected correctly	• Check delivery and outlet tube connections.
	Maximum pressure valve fully loosened	• Adjust maximum pressure valve.
	Self-cleaning filter drain fully open	• Tighten knob of self-cleaning filter.
	Delivery filter clogged	• Clean delivery filter cartridge.
	Suction filter clogged	• Clean suction filter cartridge.
	Insufficient liquid delivery to control unit	• Check pump rate.
		• Increase pump RPM.
		• Check for open branches or drain outlets upstream of control unit.
	Proportional valve fully open	• Operate pressure control switch to close proportional valve.
Pressure cannot be reduced by operation of switch on main valve control device.	Proportional valve motor not working	• Check electric connection.
		• Have gearmotor inspected at the nearest Service Centre.
	Proportional valve drain passage clogged	• Clean drain passage.
	A hydraulic agitator is connected to drain passage of proportional valve	• Remove hydraulic agitator and leave hole open.
	Drain tube of proportional valve undersized	• Change drain tube.
	Proportional valve flow rate lower than desired rate setting	• Change proportional valve.
Liquid coming out of section valves when main valve is closed	Drain passage of main valve obstructed	• Clean drain passage.
	A hydraulic agitator is connected to drain passage of proportional valve	• Remove hydraulic agitator and leave hole open.
	Drain tube of proportional valve undersized	• Change drain tube.
	Main valve plug gasket worn out	• Gasket needs replacing; bring complete unit to the nearest Service Centre.
	Chemical residue on gaskets and seat of main valve hose tail	• Clean parts with suitable detergent as indicated in cap. 6 - Maintenance / diagnostics / repairs.
Adjustment inaccurate: minor movements of switch on proportional valve control device lead to significant change in pressure	Proportional valve not correctly sized for system	• Change proportional valve.
	Insufficient liquid delivery to control unit	• Check pump rate.
		• Increase pump RPM.
		• Check for open branches or drain utlets upstream of control unit.
Large amount of pressure fluctuation when one or two sections are closed	Metered by-passes not adjusted	• Adjust metered by-passes.
Pressure gauge reading higher than actual pressure	Pressure gauge malfunctioning	• Change pressure gauge.
	Squashed gasket inside pressure gauge is partially obstructing passage	• Slightly loosen pressure gauge.
	Passages across valve and nozzle undersized, leading to significant pressure drop	• Choose section valve tubes and hose tails of correct size.

CONTINUES

TROUBLE	CAUSE	REMEDY
Pressure transducer reading higher than actual pressure	Transducer malfunctioning	• Change data settings in computer; if problem persists, change transducer.
	Passages across valve and nozzle undersized, leading to significant pressure drop	• Choose section valve tubes and hose tails of correct size.
One or more sections not closing correctly	Section valve motor not working	• Check electric connection.
		• Have gearmotor inspected at the nearest Service Centre.
	Section valve plug gasket worn out	• Change worn gaskets.
	Chemical residue on gasket and seat of section valve hose tail	• Clean parts with suitable detergent as indicated in cap. 6 - Maintenance / diagnostics / repairs.

7 TECHNICAL DATA

The units described in this manual can use two different systems of distribution depending on the parts that they are composed of:

• Constant pressure distribution:

these units have no proportional valve therefore the adjustment function is carried out by the maximum pressure valve located on the main control valve.
After the operating pressure has been adjusted, the unit's flow rate remains constant, therefore the vehicle progress speed must also remain constant in order to have uniform distribution per surface unit (litres / hectare or GPA).

• Distribution in proportion with engine revs:

the proportional valve installed on these units safeguards uniform distribution of spraying over the surface unit (litres/ hectare or GPA), even with variations of + 20% in the progress speed provided the same gear is maintained.

7.1 Correspondence between valve parts and maximum valve pressure

TYPE OF VALVE		TERMINAL STRIP COLOR	PRESSURE		REMARKS	
			BAR	PSI		
MAIN 471-464 SERIES		Black	10	145	--	
		Green	20	290		
		Blue	30	435		
MAXIMUM PRESSURE 463-465 SERIES		Black	10	145		
		Green	20	290		
		Blue	30	435		
		Orange	40	580		
		Red	50	725		
PROPORTIONAL	463 SERIES	Yellow	40	580	Open / close time 14 sec.	
		Gray	40	580	Open / close time 7 sec.	
	473 SERIES	Yellow	20	290	Open / close time 14 sec.	
		Gray	20	290	Open / close time 7 sec.	
BOOM SECTION	463 SERIES	Blue	10	145	Hose tail Ø 19 - 25 mm	Hose tail Ø 3/4" - 1" inches
			20	290	Hose tail Ø 10 - 13 - 16 mm	Hose tail Ø 3/8" - 1/2" - 5/8" inches
		Red	40	580	--	
	473 SERIES	Blue	20	290		

8 DISPOSAL AT THE END OF SERVICE

Dispose of the system in compliance with the established legislation in the country of use.

9 GUARANTEE TERMS

1. ARAG s.r.l. guarantees this apparatus for a period of 360 day (1 year) from the date of sale to the client user (date of the goods delivery note). The components of the apparatus, that in the unappealable opinion of ARAG are faulty due to an original defect in the material or production process, will be repaired or replaced free of charge at the nearest Assistance Centre operating at the moment the request for intervention is made.
   The following costs are excluded:
   - disassembly and reassembly of the apparatus from the original system;
   - transport of the apparatus to the Service Centre.
2. The following are not covered by the guarantee:
   - damage caused by transport (scratches, dints and similar);
   - damage due to incorrect installation or to faults originating from insufficient or inadequate characteristics of the electrical system, or to alterations resulting from environmental, climatic or other conditions;
   - damage due to the use of unsuitable chemical products, for spraying, watering, weedkilling or any other crop treatment, that may damage the apparatus;
   - malfunctioning caused by negligence, mishandling, lack of know how, repairs or modifications carried out by unauthorised personnel;
   - incorrect installation and regulation;
   - damage or malfunction caused by the lack of ordinary maintenance, such as cleaning of filters, nozzles, etc.;
   - anything that can be considered to be normal wear and tear.
3. Repairing the apparatus will be carried out within time limits compatible with the organisational needs of the Service Centre.
   No guarantee conditions will be recognised for those units or components that have not been previously washed and cleaned to remove residue of the products used;
4. Repairs carried out under guarantee are guaranteed for one year (360 days) from the replacement or repair date.
5. ARAG will not recognise any further expressed or intended guarantees, apart from those listed here.
   No representative or retailer is authorised to take on any other responsibility relative to ARAG products.
   The period of the guarantees recognised by law, including the commercial guarantees and allowances for special purposes are limited, in length of time, to the validities given here. In no case will ARAG recognise loss of profits, either direct, indirect, special or subsequent to any damage.
6. The parts replaced under guarantee remain the property of ARAG.
7. All safety information present in the sales documents regarding limits in use, performance and product characteristics must be transferred to the end user as a responsibility of the purchaser.
8. Any controversy must be presented to the Reggio Emilia Law Court.

10 CONFORMITY DECLARATION

The declaration of conformity is available at www.aragnet.com, in the relevant section.

Only use genuine ARAG accessories or spare parts to make sure manufacturer guaranteed safety conditions are maintained in time. Always refer to the internet address www.aragnet.com

D20013_GB-m07 05/2014

42048 RUBIERA (Reggio Emilia) - ITALY
Via Palladio, 5/A

Tel. +39 0522 622011
Fax +39 0522 628944

www.aragnet.com
info@aragnet.com