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# **HARDI Solenoid Control**

## **Instruction book**

**670770-GB-11/2002**

HARDI INTERNATIONAL A/S reserve the right to make changes in design or to add new features without any obligation in relation to implements purchased before or after such changes.



# EU Declaration of Conformity

## Manufacturer,

HARDI INTERNATIONAL A/S  
Helgeshøj Allé  
DK 2630 Taastrup  
DENMARK

## Importer,

declare that the following product;

.....  
.....

Adhere extra shipping package labels to inside cover.

**A.** was manufactured in conformity with the provisions in the COUNCIL DIRECTIVE of 14 June 1989 on mutual approximation of the laws of the Member States on the safety of machines (89/392/EEC as amended by directives 91/368/EEC and 93/368/EEC) with special reference to Annex 1 of the Directive on essential safety and health requirements in relation to the construction and manufacture of machines.

**B.** was manufactured in conformity with the standards current at that time that implements a harmonised standard in accordance with Article 5 (2) and other relevant standards.

Taastrup 06.11.2002

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Product Development Manager  
Lars Bentsen  
HARDI INTERNATIONAL A/S

# Operator safety



Watch for this symbol . It means **WARNING, CAUTION, NOTE**. Your safety is involved so be alert!  
Note the following recommended precautions and safe operating practices.

-  Read and understand this instruction book before using the equipment. It is equally important that other operators of this equipment read and understand this book.
-  Local law may demand that the operator be certified to use spray equipment. Adhere to the law.
-  Pressure test with clean water.
-  Wear protective clothing.
-  Rinse and wash equipment after use and before servicing.
-  Depressurize equipment after use and before servicing.
-  Never service or repair the equipment whilst it is operating.
-  Disconnect electrical power before servicing.
-  Do not eat, drink or smoke whilst spraying or working with contaminated equipment.
-  Wash and change clothes after spraying.
-  Wash tools if they have become contaminated.
-  In case of poisoning, seek doctor or ambulance. Remember to identify chemicals used.
-  Keep children away from the equipment.
-  If any portion of this instruction book remains unclear after reading it, contact your HARDI dealer for further explanation before using the equipment.



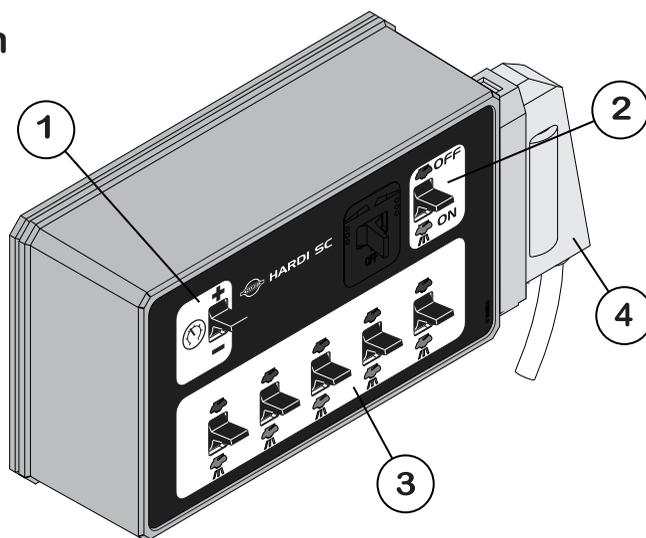
## Description

HARDI SC Solenoid Control is a remote control unit for your sprayer. Simple to use and maintain, the HARDI SC unit is perfect as your first electric remote control.

Available in 3,4 or 5 section control kits with choice of electric or manual pressure regulation.

The Hardi SC remote operated solenoid control system has been designed for in cab sectional control of spraying equipment. Ideal for sectional control on small and medium sized spraying equipment. The SC solenoids are easy to install and simple to maintain. The control unit can include foam marker operation- see page 9

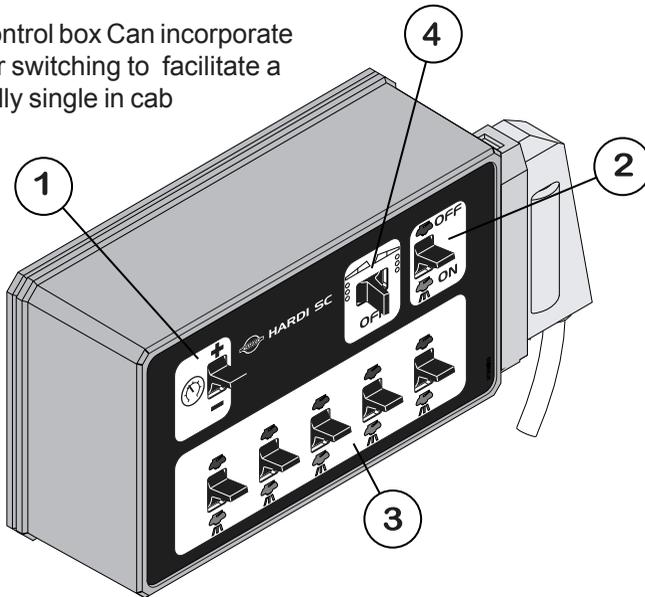
## Operation



- ① Pressure regulation  
(only for units where pressure regulation is fitted)
- ② Main ON/OFF
- ③ Sections ON/OFF
- ④ Multi pin connection plug

## Foam marker

The Hardi SC control box can incorporate the foam marker switching to facilitate a more user friendly single in cab switch box.



- ① Pressure regulation  
(only for units with electric pressure regulation)
- ② Main ON/OFF
- ③ Boom ON/OFF
- ④ **Foam marker**  
Right side ON  
OFF  
Left side ON

### To fit foam marker

Ground (neg.) must be supplied from main power supply to the foam marker.

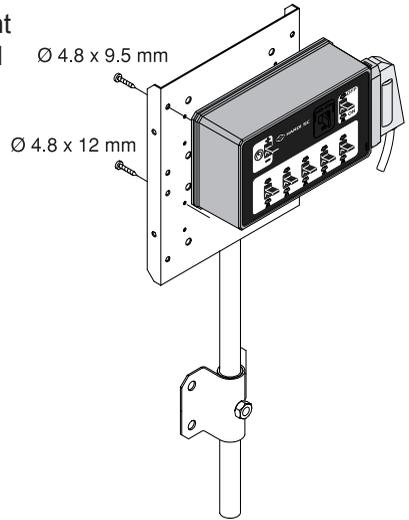
Right and left (pos.) shall be connected to 5th section cable  
(See electric diagram).

For adjusting frequency of foam blobs - adjustment are to be made on the foam marker compressor unit.



## SC operating unit control box

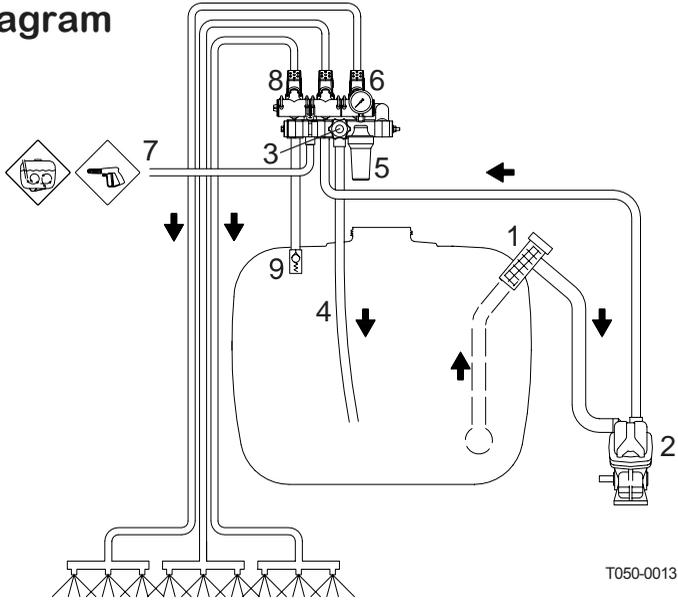
The control box is fitted at a convenient place in the tractor cabin. The control box has 4 screw holes in the back cover. Mount it on flat surface, - alternative use the HARDI universal bracket.



Power requirement is 12V DC.  
Note Polarity!

For EVC:    Brown pos. (+),  
              Blue neg. (-).

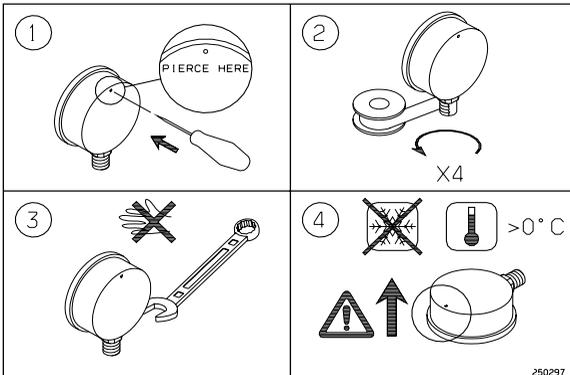
# Liquid diagram

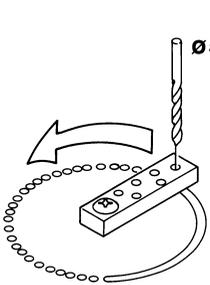
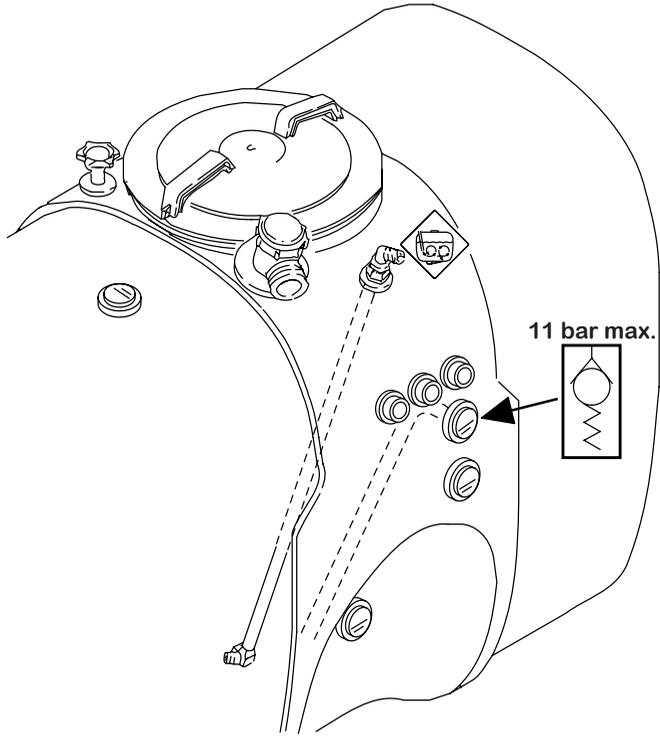


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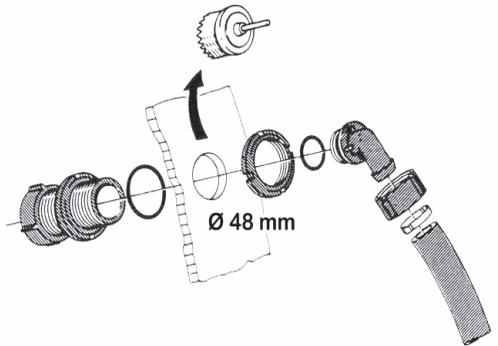
- 1. Suction filter
- 2. Pump
- 3. Pressure control (manual or electric)
- 4. Liquid return to tank
- 5. Pressure filter
- 6. Pressure gauge
- 7. Outlet for prewssure agitation or spraygun
- 8. Solenoid sectin valves
- 9. Solenoid section valve

# Assembly instructions





Drill hol  
predrille



	ømm		
A	33		
F	93		S-93
B	48		Ø 48

# Fault finding



Symptom	Problem	Solution
Fuse blow	Polarity wrong	Change polarity
	Short circuit on cables	Renew harness
	Defective diode in control box	Renew control box (PCB)
	Section valve power consumption to high	Renew valve
Section valve will not open	Fuse blown	Renew fuse
	Section valve defective	Renew section valve
Valve will not close	Dirt in servo hole in diaphragm	Clean side hole in diaphragm
Leaking	Center bolt loos	Tighten center bolt
	Defective pressure relief valve	Renew pressure relief valve
	Defective seals	Relief valve
Section valve, pressure valve, HARDI-Matic works slow	Current to low	Check 12 volt powersupply
Electric pressure valve, HARDI-Matic not works	Relais worn	Change relais

## Tecnical specification

Power supply: 12 V

Fuse: 6.3 A

Temperature range: 2°C - 60°C

Power consumption pr. valve: 800mA

Max. pressure: 11 bar

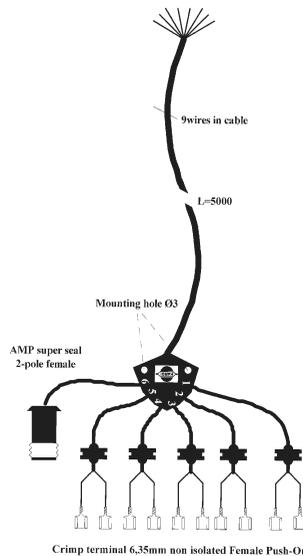
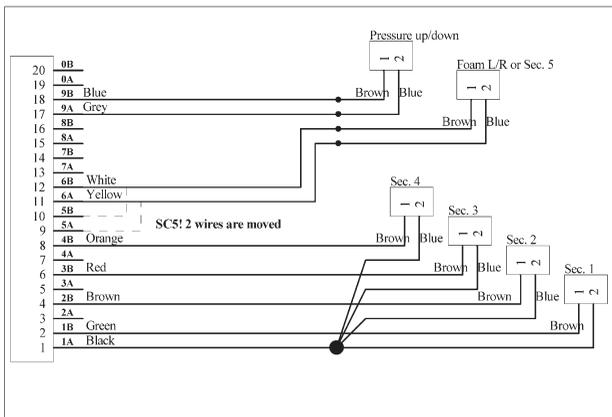
Maximum allowed flow for control unit: 20 l/min

Pressure loss over the valve	l/min	10	20
	bar	0.3	1

# Electric diagram

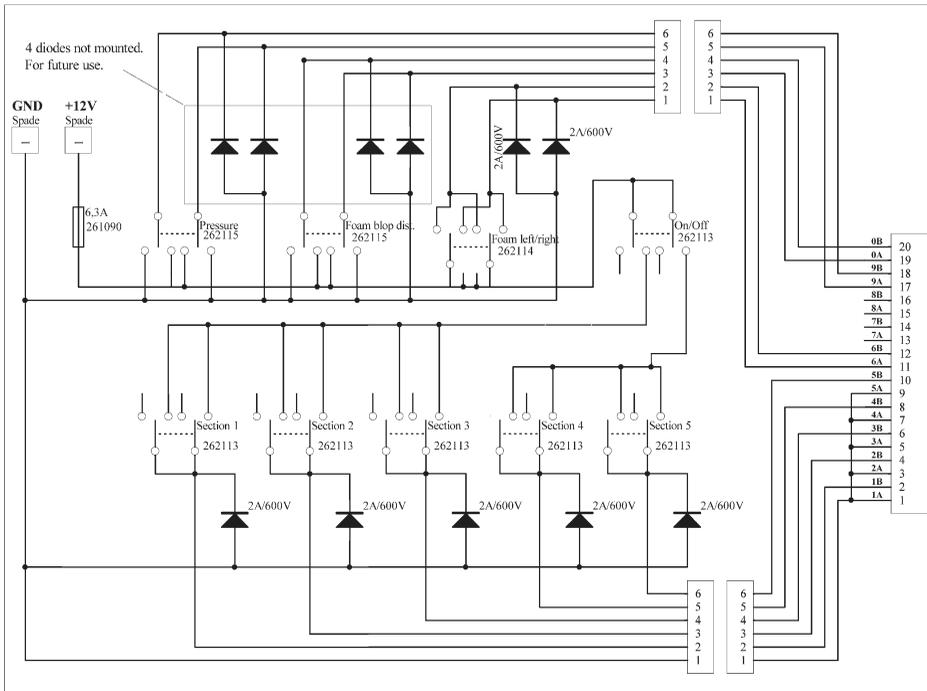
280233 connection cable for armature SC3 & SC4

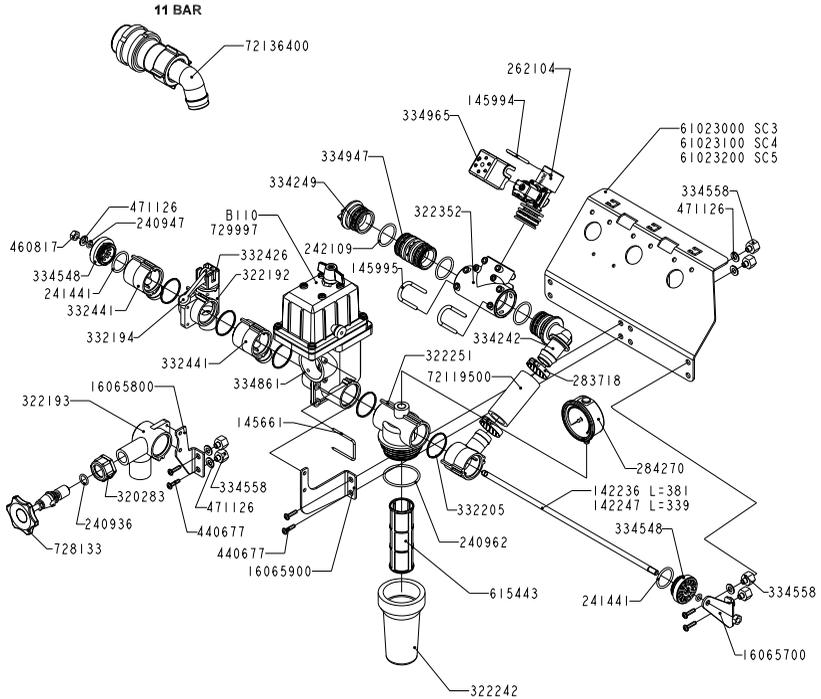
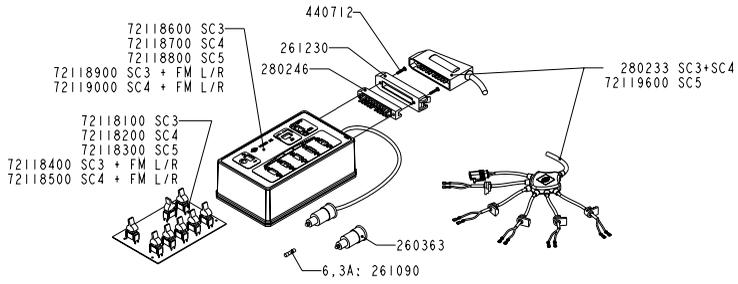
72119600 connection cable for armature SC5

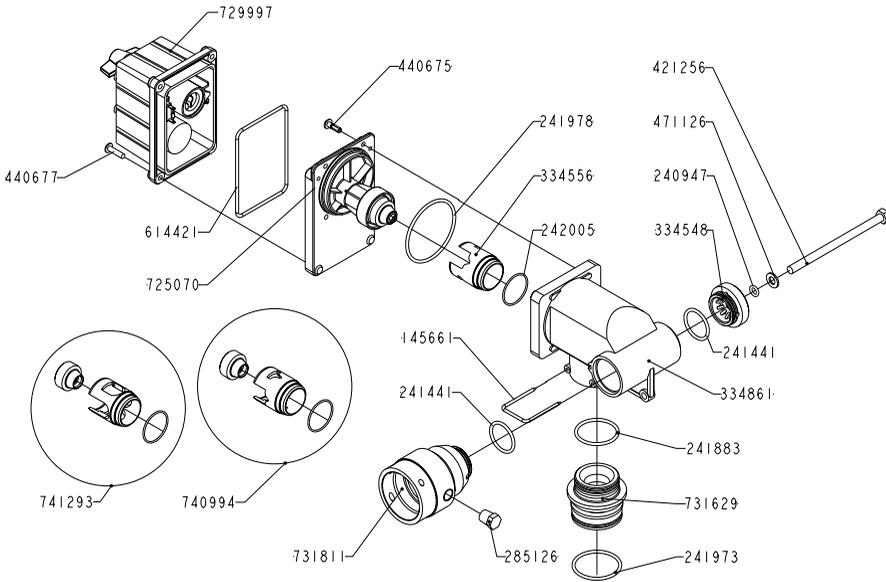
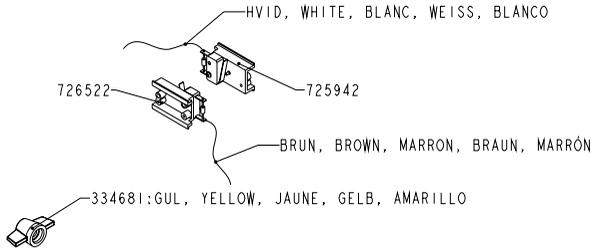


Crimp terminal 6,35mm non isolated Female Push-On

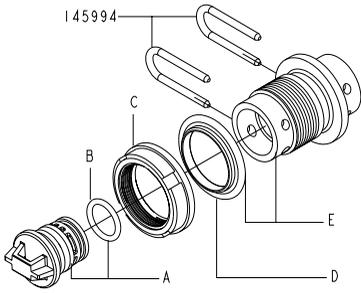
## SC3..5 Control box



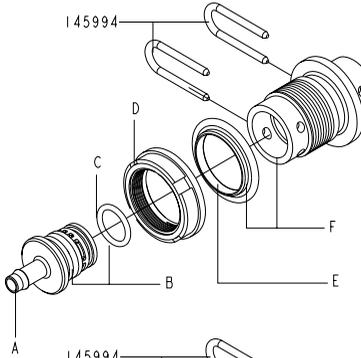




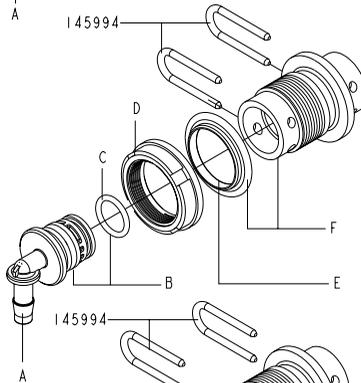
**B510**



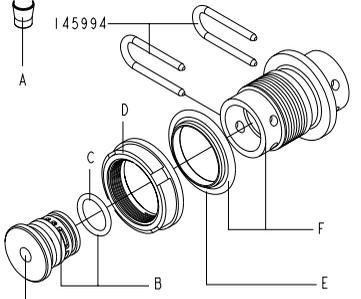
A(HOSE UNION);	B(GASKET);	C(UNION NUT);	D(GASKET);	E(BUSH);
726577	242108	322106	324259	726462



A(HOSE);	B(HOSE UNION);	C(GASKET);	D(UNION NUT);	E(GASKET);	F(BUSH);
3/8"	726554	242108	322106	324259	726462



A(HOSE);	B(HOSE UNION);	C(GASKET);	D(UNION NUT);	E(GASKET);	F(BUSH);
3/8"	726566	242108	322106	324259	726462
1/2"	726567	242108	322106	324259	726462



A(THREAD);	B(HOSE UNION);	C(GASKET);	D(UNION NUT);	E(GASKET);	F(BUSH);
1/8" RG	726693	242108	322106	324259	726462

L101





