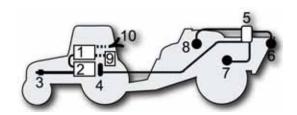




## HC 5500

HARDI Controller 5500 is more than a basic rate controller. It has many features that will enhance the liquid system on your sprayer and allow you to access more information on the work carried out. How could you work without it?













# Preset keys for everyday use

Changing the readout of vital information while spraying must be quick and easy. A series of presets for the readout of volume rate, speed, tank contents, area treated and total volume sprayed are at your fingertip. They will appear in the large format area of the screen.

Preset keys become short cut keys Values that need to be altered from job to job, like programmed volume rate, can be accessed by a short cut through the preset keys.

## Sprayer computer components

- 1. HC 5500
- 2. Spray control box
- 3. Power supply
- 4. Cable to sprayer
- 5. Junction box
- 6. Flow transducer
- 7. Speed transducer at wheel
- 8. Fill transducer (optional)
- 9. Printer (optional)
- 10. Foot pedal switch (optional)







## Distance or area left readout

The guesswork of whether the tank will empty in the middle of a run is forever gone. The distance or area left is constantly calculated.

# AUTO key

The "hand" icon shows whether the volume rate is in automatic or manual mode



To scroll up or increase a value



To move the cursor to the left



To enter a menu or accept a value



To move the cursor to the right



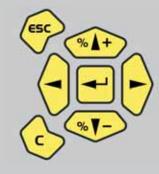
To scroll down or decrease a value



To escape a menu



To clear a value



# **Navigation keys**

When spraying, the navigation keys can be used to change the volume rate in a set percentage or volume.

The navigation keys are mostly used to code in the initial values.

### **Full integration**

It is so simple to fit. The design is fully integrated with the other control boxes so the HC 5500 is the natural choice for your HARDI sprayer. It typically takes only one cable connection to connect. The sprayer control box already has the necessary plug.

## Freedom of placement

The HC 5500 is small enough not to clutter the tractor cabin. It can be located independently from the controls. It is logical to locate it in the line of travel while the controls can be located close to the operator.

# Large clear screen

The black text on green background is easy to read, even in bright sunlight. The 4" x 2" screen can show more than 5 lots of information simultaneously. The screen has back-lighting for night time spraying.

### **Crucial information in large format**

Vital on-the-go information is displayed in a larger format so it is easier to read.

### Quick start to go spraying

An available Quick Guide is enough to get you spraying. An in-depth explanation of functions and possibilities can be fully explored, step by step, in the comprehensive operators' manual.

### Quick to attach

It takes only a couple of seconds to set the equipment in the tractor cabin. The turn of a wing bolt is all that is needed to secure the HC 5500 and controls. Audio and visual alarms. Alarms can be set to warn of incorrect volume rate, low tank contents, excessive speed and for optional transducers e.g. high or low pressure if a pressure transducer is being used. A warning is also given if a boom section is left switched off.

# No battery for memory

HC 5500 does not rely on batteries to maintain the memory when the power has been disconnected. This simplifies storage.

# Spray with and without HC 5500

As extra security, it is still possible to continue spraying even if the HC 5500 is removed from the sprayer.

# **Advanced farming ready**

The volume rate may be supplied from an external source e.g. a site specific application map or a remote sensor. An icon on the screen will indicate when this is active.

### Registers, hard copy and data transfer

Up to 98 registers with real names can be used. A copy of the register information and HC 5500 configuration can be made with a 12 Volt printer. It is also possible to transfer the data to an office PC.

#### **Auto Foam marker**

To ease operation of the HARDI Foam marker, the HC 5500 can be set to turn it on an off and switch sides automatically. Status is shown on the screen.

#### Auto ON/OFF

The main ON/OFF can be set to open or close at a certain speed. This allows the operator to fully concentrate on driving.

### Menu location identification

Once a menu is opened, a number is shown for every menu. This is a great aid to identify your exact location in the menu system.

### Changes of volume rate

The HC 5500 can be programmed to increase or decrease the volume rate in freely chosen percentage steps or 3 different rates.

### Clock and alarm function

Includes date, time of day, stopwatch and an alarm.

### Toolbox menu

This menu is a collection of helpful items. These include distance measurement, a stopwatch and alarm clock, service interval readout and a diagnostic components check.

# Logbook menu

This menu groups all data collection methods. It includes printing to a 12 Volt printer and data dumping to an office printer. This could be done, for example, using the Hyper Terminal function in Microsoft Windows.

# Minimum speed and pressure setting

The pressure regulation valve can be automatically prevented from regulating under a set speed or pressure.

This prevents a poor spray pattern from the nozzles.

### Service intervals

Sprayer service reminders are displayed when the service interval is due.

#### Nozzle check interval

Nozzles do wear and once the limit is reached they should be changed. This can be easily forgotten or over looked. After a certain number of hours, a reminder to check nozzles is displayed.





### HC 5500

### Readout:

- 1. Boom section status.
- 2. Active register (area trip).
- 3. Large format readout of volume rate, speed, tank contents, area treated and total volume sprayed, distance or area left.

Status for manual spraying, external rate and service interval reminders are also shown when relevant.

The third and forth line can be set up by the operator to show the following:

- Programmed and actual volume rate.
- Flow rate.
- Optional transducer readout.
- Actual time.
- Work rate.
- Actual volume rate.
- Actual tank contents.
- Actual speed.
- Volume and area covered.
- Active boom width.

### Spray box

- 1. Power switch
- 2. Air volume (TWIN only)
- 3. Air slot (TWIN only)
- 4. Manual pressure regulation
- 5. Main ON/OFF
- 6. Valve function A-B\*
- 7. End nozzle ON/OFF\*
- 7. Foam marker regulation\*
- 9. Foam marker ON/OFF\*
- 10. Boom section valves
- \* Optional equipment





# HARDI NORTH AMERICA INC.

1500 West 76th St Davenport, IA 52806 Phone: (563) 386-1730 Fax: (563) 386-1280 337 Sovereign Road London, ON N6M 1A6 Phone: (519) 659-2771 Fax: (519)659-2821



The Sprayer

# Touch the future

with integrated electronics





HG &

#### Status bar

GPS status, sprayed area. Guidance lightbar and driving speed are always on the same spot.

#### Mapping toolbox

Here the guidance system can be controlled, and boundaries can be made.

#### Task bar

To the left the main screen buttons are placed and to the right the function buttons.



#### Product toolbox

Here the dose rate can be controlled. Flow rate and tank volume are also shown here.

#### Map screen

Map view can be in 2D or 3D format. Which sections are active, can be seen here at one glance.

#### Sprayer specific part

Here the operator can see more detailed information about his sprayer.

#### AutoHeight area

Here all the data of the AutoHeight are controlled and displayed.

### Integrated electronics

The HC 8500 / HC 9500 are multicolour HD touch-screens. The complete integration of all important information on one work screen is an important criterion. Easy to operate, optimal overview brings maximum control.

#### HC 8500 / HC 9500 work screen

On the working screen the driver can operate AutoHeight, AutoSectionControl, as well as guidance and the dosing. The view can be switched between 2D and 3D, when guidance is active.

#### HC 9500 HC 8500 **Feature** Dimension 12.1" (30.7 cm) 8.4" (21.3 cm) ISOBUS Virtual Terminal USB port AutoSectionControl Guidance Coverage Mapping Data Logging Variable Rate Application Smart Report™ N/A **Boom Height Control** 0 0 **AutoSteer Control** 0 0 OptRx® Crop Sensors 0 N/A Camera Support 0

HARDI reserves the right to change the specifications without notice. Illustrations shown may include optional extras and accessories.



#### Virtual Terminal

The HC 8500 / HC 9500 displays are designed to meet the ISO 11783 ISOBUS Virtual Terminal standard. So the sprayer could also operate as with a HC 6500 terminal on.

### Data management and data transfer

The HC 8500 / HC 9500 have an USB port as standard feature; via this port data can be exchanged. This simplifies application reporting, providing an easy way to generate detailed application reports for governmental record keeping. Reports provide location, product information, applied totals, field areas, as applied maps and field boundaries. The data can be transferred to different farm management software.

The HC 9500 automatically creates an application report in a pdf-format which can be saved, emailed or printed. For this no additional software is required. Basic information about weather, soil conditions, products, etc. can be added.

# HARDI INTERNATIONAL A/s

Helgeshøj Allé 38 • DK 2630 • Taastrup • Denmark E-Mail: hardi@hardi-international.com • www. hardi-international.com

### **HARDI Ltd.**

Watling Suite (unit B)
High Cross Business Park
Coventry Road • Sharnford
Leicestershire • LE10 3PG

Phone: 01 455 22 22 30 • Fax: 01 455 22 22 40 E-Mail: sales@hardi-uk.com • www.hardi.co.uk



The Sprayer



# HC 9500 HC 9500 work screen

The complete integration of all important information on one work screen is an important criterion.

On the HC 9500 working screen the driver can operate AutoHeight, AutoSectionControl, as well as guidance and the dosing.

The view can be switched between 2D and 3D.



### **Virtual Terminal**

The HC 9500 display is designed to meet the ISO 11783 ISOBUS Virtual Terminal standard. So the HC 9500 could also operate as the HC 6500.



**Touchscreen:** Multi color HD touchscreen 12.1" (30,7 cm)

**ISOBUS:** Compatibility with the ISO 11783

Virtual Terminal Standard

**Precision farming:** Real time data logging

AutoSectionControl: Standard

**USB port:** Data management and data transfer ready via

USB port

**Guidance:** As standard, prepared for Automatic Steering

**Speakers:** Integral speakers with stereo sound

**AutoHeight:** Prepared for AutoHeight

# Status bar

GPS status, sprayed area, Guidance lightbar and driving speed are always on the same spot.

# **Mapping toolbox**

Here the guidance system can be controlled and boundaries can be made.

# Task bar

To the left side the main screen buttons are placed and to the right side are function buttons.

# AutoHeight area

Here all data of the AutoHeight are controlled and displayed.



# **Product toolbox**

Here the dose rate can be controlled.

Flow rate and tank content are also shown here.

# Map screen

Map view can be in 2D or 3D. Which sections are active can be seen here in one glance.

# Sprayer specific part

Here the operator can see more detailed information about his sprayer.



## **GRIP and SetBox**

The primary functions are controlled on the well proven HARDI GRIP. Operation is done without moving focus from the field. The main on/off function and the section switches are only used until the AutoSectionControl is activated. Also the hydraulic functions are only used to change settings, if AutoHeigth is available.

The SetBox controls secondary functions. The keys are larger so even at a distance, operation can be carried out. The keys are grouped into seven control areas to simplify operator's understanding. Here the COMMANDER SafeTrack or the TWIN FORCE settings can be controlled.

### GPS 1500 and GPS 2500

The GPS 1500 and GPS 2500 are both all-in-one antenna/ receiver systems. These compact, low-profile units feature fixed or magnetic mounting options and offer an affordable solution for sub-meter accuracy with fast startup and re acquisition times. The GPS 2500 features a dual frequency receiver making it ideal for operations that require a high level of accuracy in the field.

- Outputs simulated radar speed
- Up to 10 Hz output
- Output of NMEA position data to other equipment
- Ideal for AutoSectionControl applications
- e-Dif® technology provides accuracy without the need for a subscription to a differential signal
- Differential correction options include WAAS/EGNOS, OmniSTAR HP/XP and VBS.
- GLONASS capable (GPS 2500)

<b>GPS-Differential correction</b>	GPS 1500	GPS 2500
WAAS/EGNOS		
OmniSTAR XP/HP/VBS		

# **ISOBUS Bridge**

If a HC 9500 is delivered with a HARDI sprayer that has been factory equiped with the ISOBUS bridge, then the ISOBUS bridge is doing the communication between the terminal and the sprayer's jobcom. There is only the ISOBUS plug as an connection between the tractor and the sprayer, so the setup is very easy. For non ISOBUS tractors an ISOBUS update kit is available.



# Data management and data transfer

The HC 9500 has a USB port as standard feature, via this port data can be exchanged and a smart report option. This simplifies application reporting, providing an easy way to generate detailed application reports for governmental record keeping. Reports provide location, product information, applied totals, field areas, as applied maps and field boundaries.

Enter basic information about weather, soil conditions, products used, etc.

Automatic creation of PDF reports that can be saved, emailed or printed. Requires no additional software.

The HC 9500 can transfer data to different farm management software.



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# One single ISOBUS terminal replaces a multitude of terminals specificly for single implements on the tractor.

ISOBUS compatible following ISO 11783







### **ISOBUS ISO 11783**

The primary goal of ISOBUS data technology is to standardise the communication which takes place between tractors and implements while ensuring full compatibility of data transfer between the mobile systems and the office software used on the farm.

ISOBUS makes inefficiency a thing of the past by creating a standardized and compatible interface between the tractor and associated implements with the future aim of achieving plug and play capability for every combination. Just plug it in, and you are ready to go. One single ISOBUS terminal replaces a multitude of terminals specificly for single implements on the tractor.

# **ISOBUS** bridge

HARDI sprayers can be ordered with an ISO-BUS bridge. By this, the sprayer can be directly operated with ISO-BUS virtual terminal (VT). The HARDI functions like SafeTrack and Prime

Flow will be operated and controlled from the ISO-BUS virtual terminal on a compatible ISO display To make the complex sprayer operation easier, the proven HARDI GRIP will be delivered with the sprayer, so that all primary spray functions as on/off and section switches as well as the hydraulic operation can be done easily and safely with the grip. Also a SetBox will be used to operate sprayer specific equipment as TWIN air assistance or SafeTrack steering directly, and also other secondary functions.

## **Data transfer**

HARDI sprayers with ISOBUS use the data transfer capabilities of the ISOBUS terminal's task controller. HARDI ISOBUS supplies the data that leading farm software systems require.

# **ISO Display**

HARDI is compatible with certain manufacturer's displays. Please contact HARDI or your nearest HARDI dealer for more specific information. Some displays are limited to VT operation, and certain functions

like Auto Section control are dependent on manufacturers display capabilities.





# HARDI North America

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 $\ensuremath{\mathsf{HARDI}}$  - The  $\ensuremath{\mathsf{Sprayer}}$ 

