

Product guide

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Welcome to the Product guide



Quality, Ease of Use, Safety and Value for money

The brand new NAVIGATOR trailed sprayer from HARDI is the third new trailer in the HARDI trailer range. It has been developed as

a global sprayer, in close contact with farmers.

What the farmers told us can be grouped in four main points:

Quality - the sprayer should be of a high overall quality, meaning high quality materials, good design and excellent finish.

Ease of use - the sprayer must work without too much concentration on small details. Farmers would like a well-equipped sprayer that is easy to operate and allows for quick filling and cleaning, just as it should offer all the features of a modern sprayer.

Safety - the sprayer should be easy to use with a high safety standard for the operator as well as for the environment.

Value for money - the sprayer should be long-lasting, meeting the farmers' present as well as future demands, so that also in 5 years' time, they would have a modern-looking product of favourable trade value even as a second-hand machine.

The NAVIGATOR is HARDI's answer to the demands of this customer segment, but how should the farmer know what choices and opportunities he has? Here we need you as a sales expert to tell him what the NAVIGATOR has to offer.

With this Product guide you have a marketing tool that goes far more into the depth with the technical argumentation than brochure material. Possibly use the Product Guide together with the interactive CD-ROM in order to get full benefit and the most satisfactory introduction to the NAVIGATOR.

Enjoy yourself!

Confidential

This is your personal sample of the NAVIGATOR Product guide and should be used as your personal sales tool - please treat it confidentially.

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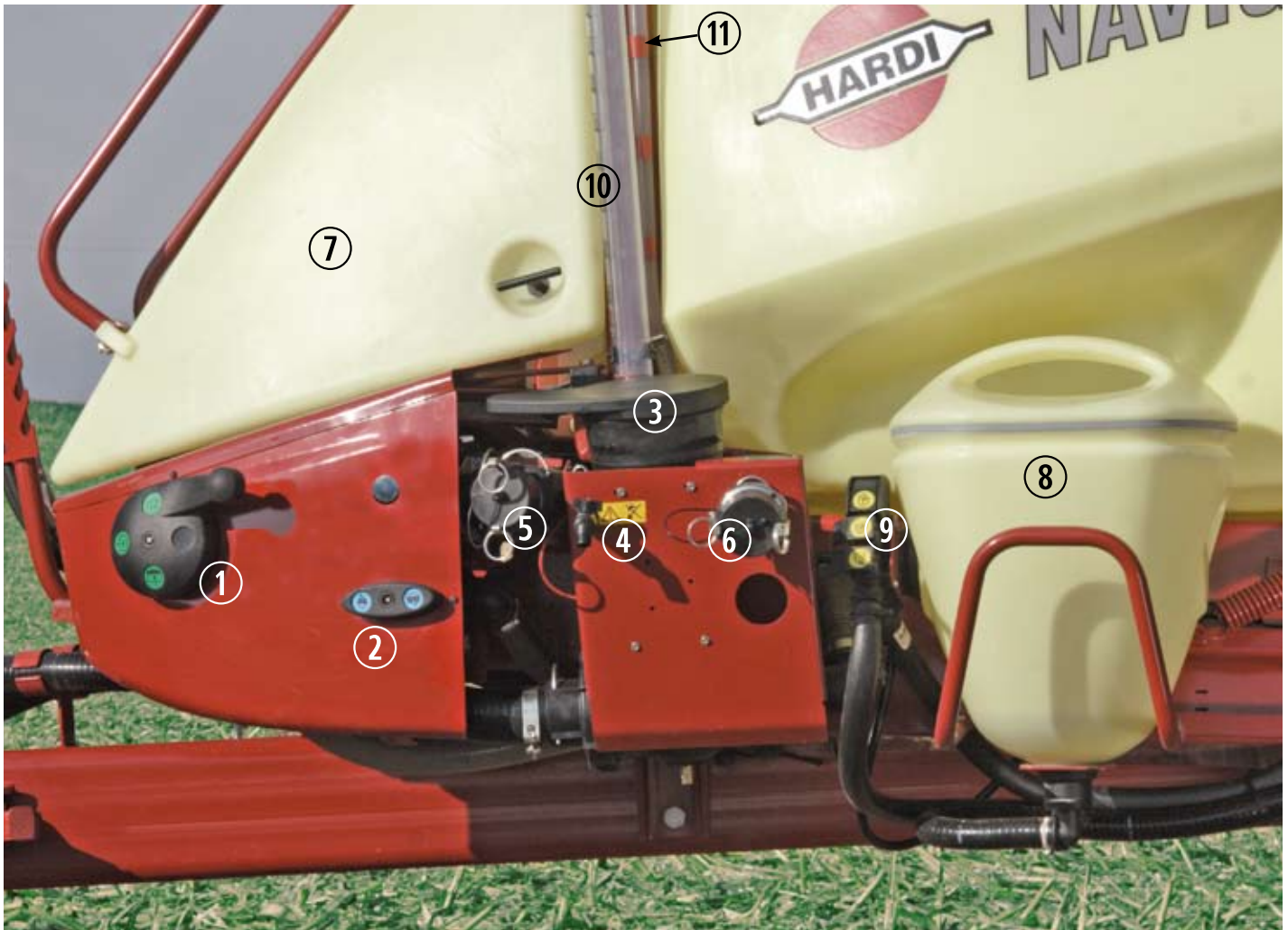
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The Obvious Choice

Concept

Quality	Ease of use	Safety	Value for money
<p>Integrated design No add-on solutions</p> <p>Surface treatment & high paint quality Zinc phosphate surface treatment Strong durable paint</p> <p>Choice of materials & manufacture quality Domex steel Laser-cut steel plates and tubing CNC bending Robot welding High standard on finish Long-lasting high-quality components</p> <p>HARDI test procedures Spray scanner and multi-functional test Tested to spray at 18.5 MPH in design process</p> <p>Market leader HARDI is seen as the industry leader of spray technique and has a high know-how -Your Sprayer Specialist</p> <p>Test BBA & NSTS accredited final test</p>	<p>Logical working zone with SmartValve & manifold valves Easy to control Easy to operate</p> <p>SafeSpray Vacuum gauge Filter blockage warning</p> <p>TurboFiller High capacity Easy and fast to operate</p> <p>CycloneFilter Self-cleaning and low maintenance</p> <p>Electronics LogicMenu at controllers User-friendly control</p> <p>SprayBox HyBox HC 2500 HC 5500</p> <p>AutoSectionControl No overspray Up to 5 % reduction of chemicals Easy control of multiple-section booms</p> <p>Service Easy daily service - every component is easy to inspect and reach</p>	<p>Working zone High safety level through design during connection, operation and filling</p> <p>EasyClean suction filter Safe cleaning, less chemical contact</p> <p>SafetyLocker</p> <p>Low centre of gravity</p> <p>RinseTank RinseTank located at the rear - better balance than competitors, improves driving performance</p>	<p>Modern design Long-lasting design High resale value</p> <p>HARDI pump Easy maintenance Can run dry Greater range of operating pressures</p> <p>SmoothRide suspension Minimizing shocks Better boom performance</p> <p>Clearance Excellent clearance and low centre of gravity Reduced crop loss</p> <p>Filling QuickFill RinseTank QuickFill Main Tank</p> <p>FastRegulation Liquid system Fast precision rate control</p> <p>EVC operating unit Reliable Can run without 12V</p> <p>EAGLE booms EAGLE booms from 45 to 100 feet</p> <p>Competitive price</p>

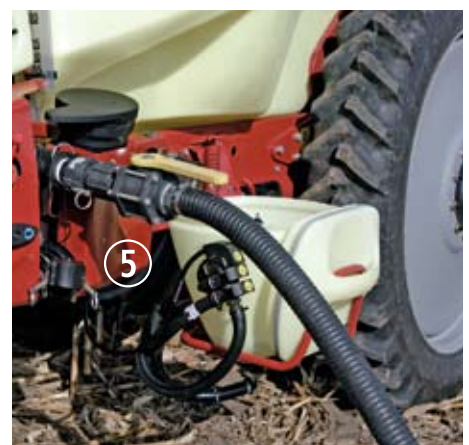
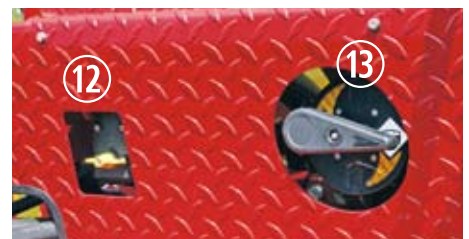
Working zone



1. SmartValve - pressure
2. Suction valve main tank/
RinseTank
3. EasyClean filter
4. Clean Water Tank valve
5. QuickFill Main Tank 2"
6. RinseTank Quick Fill 2"
7. SafetyLocker
8. TurboFiller
9. TurboFiller operating unit
10. Level indicator main tank
11. Level indicator RinseTank
12. Pressure regulation valve
13. Agitation valve

The NAVIGATOR has been designed with a strong focus on user-friendliness and ease of operation, and the working zone is a fine example of this. In this area, everything you need to operate the sprayer is available, with all primary functions placed in easy to reach positions and everything designed to be simple and logical to operate.

The SafetyLocker is placed behind the cover, right above the working zone.



Frame



Chassis

The heavy-duty NAVIGATOR chassis is built in high-tensile Domex steel ensuring exceptional strength.

The chassis is built to endure under the most difficult conditions anywhere in the world.

Low centre of gravity

A sprayer with a high centre of gravity would be very dangerous to operate, and therefore, large efforts have been done to ensure the lowest possible centre of gravity for the NAVIGATOR without compromising the clearance under the sprayer.



Unique design with long drawbar

The long drawbar is bolted underneath the frame, providing good driving stability and absorbing up and down forces at high-speed driving.

Excellent crop clearance

The unique design of axle and frame ensures excellent crop clearance, reducing crop damage to the absolute minimum. No brake rods or steering components are lower than the axle.

The drawbar connection on the tractor will always be the lowest point on the sprayer, and, in most cases, also the tractor axle is lower than the sprayer chassis. Important features of the NAVIGATOR design are the drawbar being small in width and one line upwards from the linkage to the axle. The vital clearance under the sprayer axle is excellent, varying from 27 - 31 inch depending on tire and wheel set-up.

Domex steel

Laser-cut tubing

CNC bending

Robot welding

Excellent crop clearance

Low center of gravity

Drawbar and support leg



Drawbar load:

3000
max. 2500 lb

4000
max. 3000 lb

The drawbar is standard with a combination clevis or ring eye mounting point. The bottom clevis is removable by unbolting it from the frame

Standard drawbar hole size is 42 mm.

A 6500 lb support stand that is easily removed is standard. The support stand can be used from both sides of the drawbar.



Service area

Chassis



Easy inspection of the tank

The lid is located in close proximity to the platform, allowing easy inspection of the tank. The design of the tank gives the operator excellent visibility of the sides as well as the bottom of the tank.

Footstep for easy access

A traversable footstep is fixed at the drawbar to facilitate access to the platform.

Relatively low platform placement

The platform is placed as low as possible for easy access.

Access to electronic system by lifting right cover

To aid in service accessibility the majority of electronic components and connections are located in a box behind the right front cover.

Easy access to fluid system

Excellent service access to the fluid system can be gained through the floor plate of the platform.

Protected placement of gauges

Gauges for monitoring the condition of the suction filter and the pressure gauge are mounted over the platform. This provides excellent visibility from the tractor and good protection from the elements.

Platform height over ground:
51 in

Platform
Width 24 in
Depth 21 in

Height from platform to lid:
3000: 47 in
4000: 58 in

Axles / Wheels



Fixed or adjustable axle

The Navigator is available with a fixed 60" axle, a fixed 120" axle or an adjustable 60" to 120" axle by turning the wheels. Adjustable axles are available as an option; they are easily adjusted by loosening the bolts.

Minimum inner dimension

The minimum inner dimension between the tires is: 47" + space between tire and frame.

Wheel

The Standard wheel and tire for the Navigator 3000 is a 12.4 X 42" with the option of a 320 R 46.

The 4000 is standard with the 320 R 46

Excellent crop clearance

Fixed axle or adjustable axle



Stub axle

NAVIGATOR 3000/4000:
10 bolt 11.25 Bolt Circle
Pilot hole 8.710"



SmoothRide



The optional SmoothRide suspension system is simple and reliable, requiring little or no service. The suspension gives a better ride of the sprayer, resulting in higher capacity as well as comfort.

2 polyurethane dampers absorb the movements. The dimensions of the dampers ensure that they do not get over-compressed when the tank is empty, which will make them last longer.

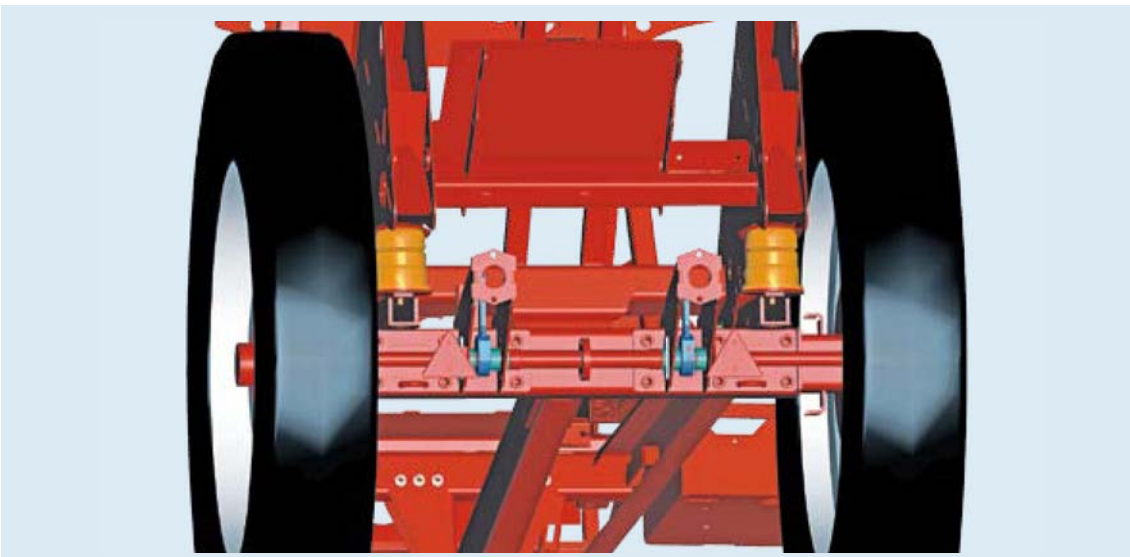
During road transport the trailer and consequently the boom will not be pushed so hard.

In field conditions the boom suspension will work better so the boom can be run in optimum height over the crop.

3000 /4000 l
Suspension travel
4 in

Suspension range
2200 - 17,6000 lb

More stable
Less roll than with
air suspension



ParaLift



ParaLift light
EAGLE 45-66 ft

ParaLift heavy
EAGLE 80-100 ft

Flexible height adjustment:
20" to 88"

ParaLift width:
40"

Automatic transport lock

Parallelogram lift systems are standard on modern sprayers. The HARDI ParaLift concept has shown its excellent performance on more than 20,000 trailer sprayers. No gliding parts, only horizontal bolts and an automatic mechanical transport lock ensure excellent boom stability with more or less no service.

Easy service

The HARDI ParaLift requires a minimum of service (lubrication, adjustment etc.) compared to traditional H-frame systems.

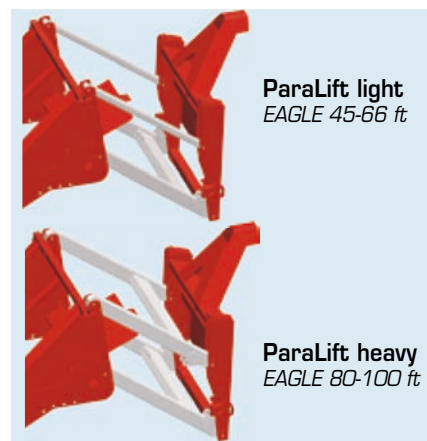
The HARDI ParaLift ensures high clearance above any crop

The long lift arms allow for very flexible height adjustment. The boom height is adjustable in a range of 20 to 88", depending on the sprayer wheel combination.

Wide attachment to the boom suspension ensures high performance of the boom. The outer dimension of the ParaLift is 40" this ensures a very stable attachment of the boom.

Hydraulic transport lock

Adjustable hooks lock the ParaLift automatically when the boom is folded in. Thus, the boom and the hydraulic lift cylinders will not be damaged during road transport, and exact transport position is obtained.



ParaLift light
EAGLE 45-66 ft

ParaLift heavy
EAGLE 80-100 ft

Main tank



The polyethylene tanks of the NAVIGATOR are produced as one part. They have a very flat surface, no inside walls, and they rest freely in the frame.

Low centre of gravity

To make the sprayer as stable as possible the tank is wider at the bottom and completely integrated in the frame design. This ensures a low centre of gravity.

Liquid is moved forwards as the tank is emptied, thereby maintaining weight on the drawbar. This ensures that the traction on the tractor is maintained, even when going up slopes with an almost empty tank.



Tube concept

A tube concept takes care that all fittings are in a safe position. When filling chemicals and water, the filling hose goes through the bottom of the tank and into a tube, which takes it to the top of the tank where the chemicals/water flow back down inside the tube and out into the tank at the bottom. This system reduces technical residues and minimizes foaming with maximal safety.

Efficient agitation

A hydraulic agitation tube gives a powerful agitation even with difficult powder chemicals.

Deep central tank sump

The sprayer is completely emptied even on slopes up to 10 degrees - uphill or downhill.

Easy to clean inside and outside

The smooth surface of the tank makes the machine very easy to clean.

Easy to rinse inside with the optional tank rinsing nozzles

100 % of the tank can be "seen" by the rinsing nozzles. No sharp corners prevent sedimentation of pesticide.

Volume

Nominal / Maximum
3000 = 800 gal
4000 = 1200 gal
 +/- 3%

Low centre of gravity

Efficient agitation

Easy to clean

Uniform weight distribution

Deep forward sump

Material: UV protected polyethylene

Material thickness: min. 10 mm

RinseTank



Material:
UV protected
polyethylene

Capacity:
130 gal

Material thickness
is 8 mm

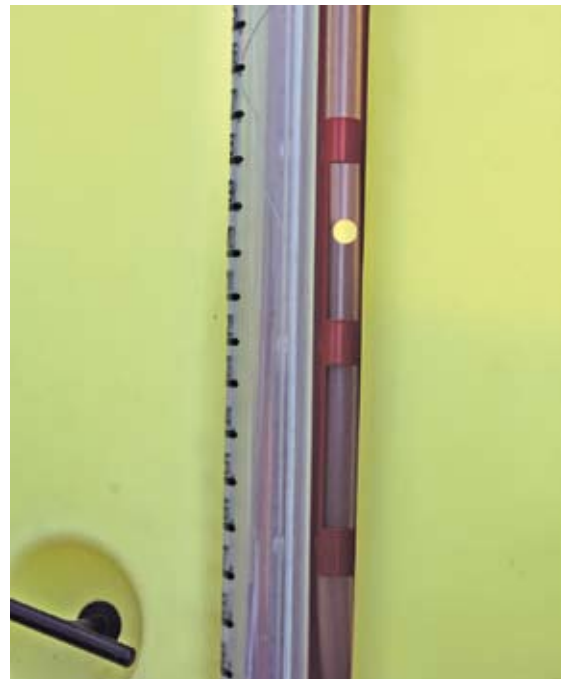
The optional 130 gal RinseTank is the same model as on the COMMANDER models, providing adequate liquid for both inside and outside cleaning.

Easy filling from the working zone
2" filling from the working zone is standard.

Placed on axle for added stability
The RinseTank is typically the last tank to be emptied, and its position on the rear axle provides additional stability.

Level indicator
The level indicator is placed on the left hand side in the working zone, allowing step-by-step cleaning.

Rinsing nozzles
Together with the RinseTank, two rinsing nozzles are delivered as standard.



Clean Water Tank



Optional Clean Water Tank for hand washing

Integrated into the overall design to ensure easy cleaning at the working zone. The 5 gal tank is built into the right front cover.

Well integrated

Easy filling operation from platform

The tank is filled from the platform through a large 2.5" filling hole.

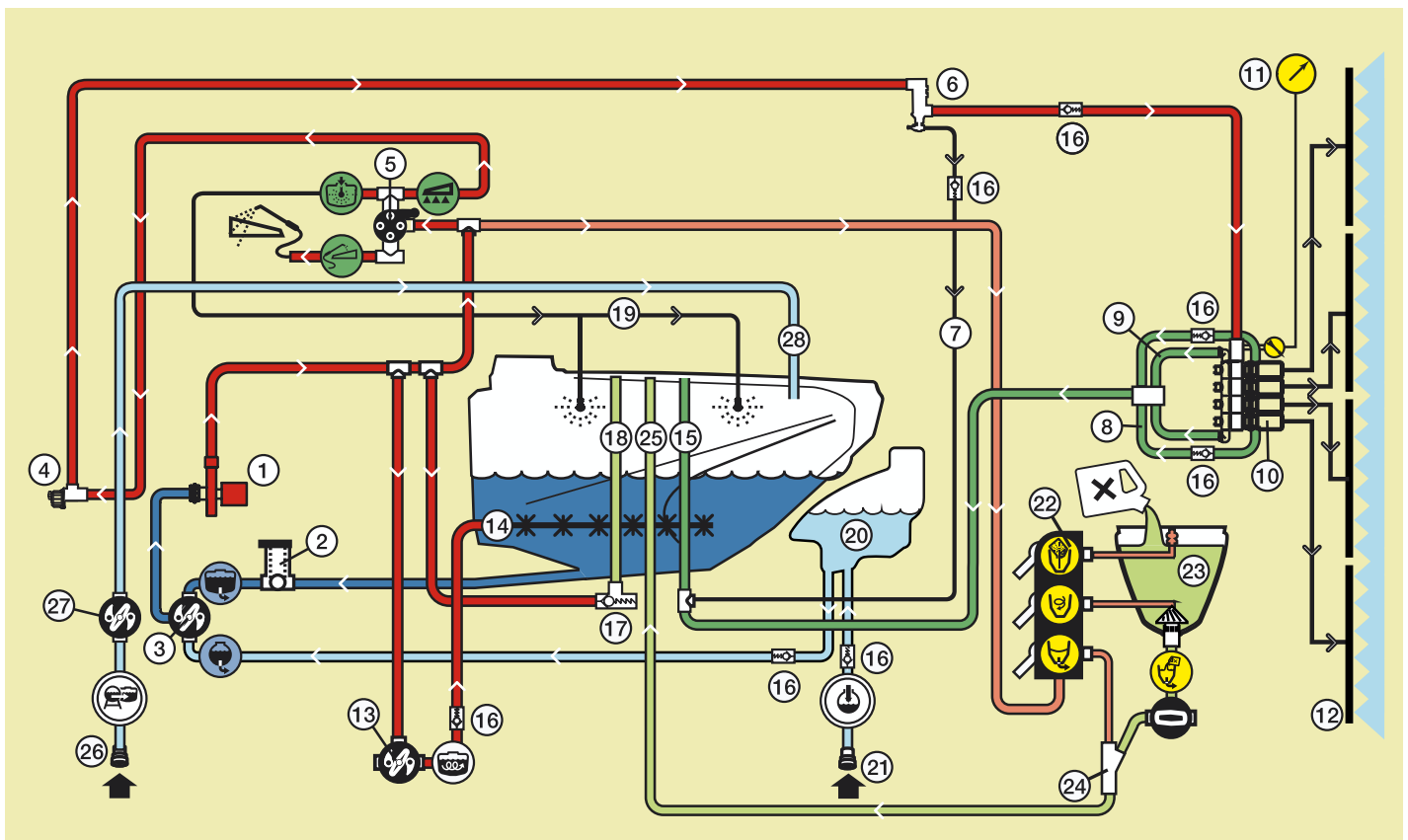
Material:
UV protected polyethylene
Capacity:
5 gal

Fluid diagram

Centrifugal liquid system

- | | |
|---------------------------------------|---------------------------------------------|
| 1. Pump | 15. Tank tube for return lines (riser pipe) |
| 2. EasyClean filter | 16. One-way valve |
| 3. Suction Valve Main tank/Flush Tank | 17. Safety valve |
| 4. Pressure control valve | 18. Tank tube riser pipe |
| 5. Pressure SmartValve | 19. Tank rinsing nozzles |
| 6. CycloneFilter | 20. Flush Tank |
| 7. Return line for boost function | 21. Flush Tank Quick Fill coupler |
| 8. Return pressure drop | 22. Valve block TurboFiller |
| 9. Return pressure equalization | 23. TurboFiller |
| 10. Distribution valves | 24. Ejector for TurboFiller |
| 11. Pressure gauge | 25. Tank tube for Turbofiller |
| 12. Spray boom | 26. Main Tank Quick Fill coupler |
| 13. Agitation valve | 27. Main Tank Quick Fill valve |
| 14. Agitation tube | 28. Main Tank Quick Fill hose to tank inlet |

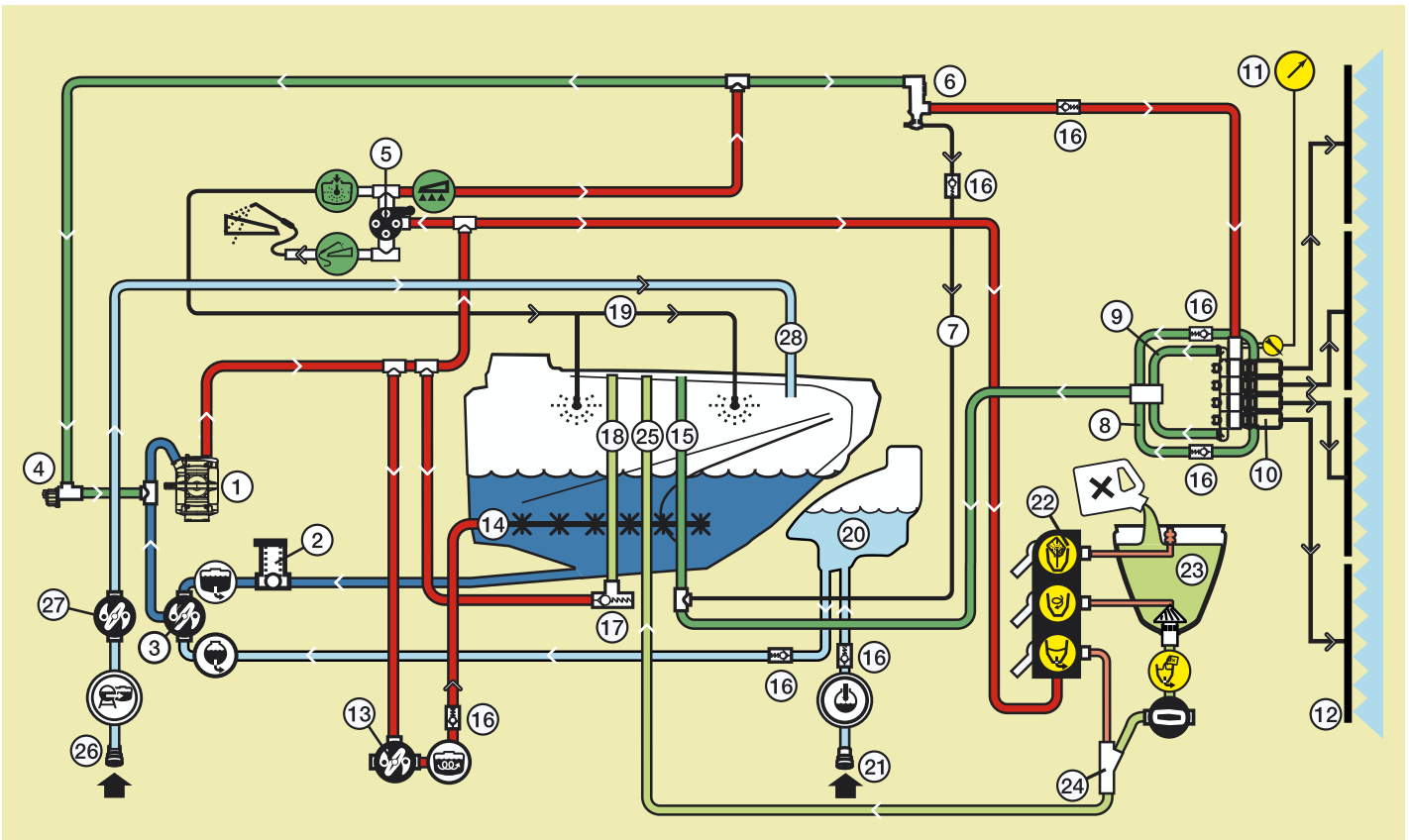
The liquid system has large dimensions in all valves, tubes and filters.



Diaphragm liquid system

- | | |
|---------------------------------------|---------------------------------------------|
| 1. Pump | 15. Tank tube for return lines (riser pipe) |
| 2. EasyClean filter | 16. One-way valve |
| 3. Suction Valve Main tank/Flush Tank | 17. Safety valve |
| 4. Pressure control valve | 18. Tank tube riser pipe |
| 5. Pressure SmartValve | 19. Tank rinsing nozzles |
| 6. CycloneFilter | 20. Flush Tank |
| 7. Return line for boost function | 21. Flush Tank Quick Fill coupler |
| 8. Return pressure drop | 22. Valve block TurboFiller |
| 9. Return pressure equalization | 23. TurboFiller |
| 10. Distribution valves | 24. Ejector for TurboFiller |
| 11. Pressure gauge | 25. Tank tube for Turbofiller |
| 12. Spray boom | 26. Main Tank Quick Fill coupler |
| 13. Agitation valve | 27. Main Tank Quick Fill valve |
| 14. Agitation tube | 28. Main Tank Quick Fill hose to tank inlet |

The liquid system has large dimensions in all valves, tubes and filters.



SmartValve



- Easy to operate**
- Multifunction**
- Convenient location**
- User-friendly icons**

All primary functions needed to operate the sprayer when filling chemicals or cleaning have been built into two main valves. These valves are located in the centre of the working zone.

The logically placed handles and the easy-to-read colour-coded icons make the system very easy to understand and operate and greatly reduce the start-up and operation time of the sprayer.

Pressure



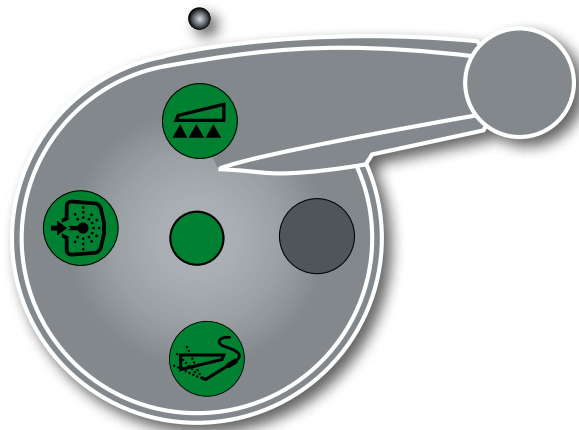
Tank cleaning



External rinse



Spraying



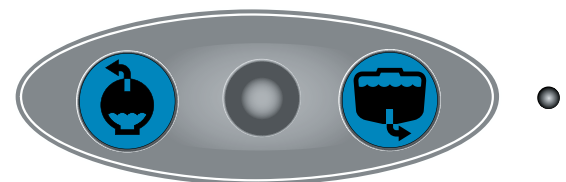
Suction



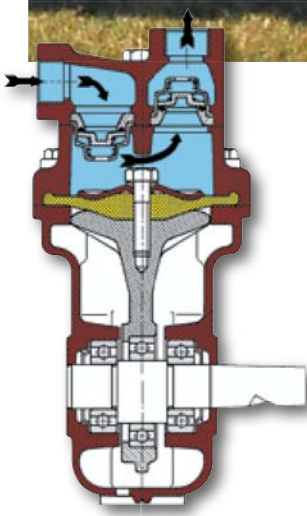
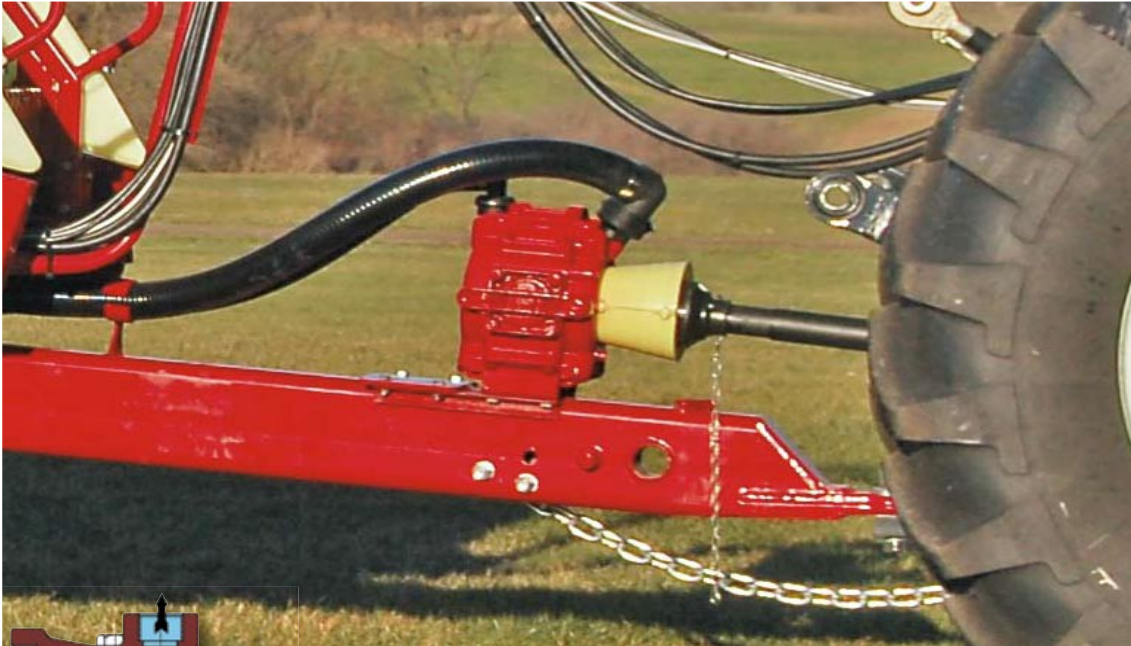
Suction from main tank



Suction from RinseTank



Pump



The NAVIGATOR liquid system is driven by the robust grease-lubricated HARDI diaphragm pump.

Self-priming

The pump is self-priming and will in all start-up conditions be able to prime the filling and spraying system.

Able to run dry without damage

The HARDI pump can run completely dry without any damage at all. No liquid for cooling is needed.

Easy service pump

The pump is mounted on the drawbar and is easily accessible for service.

Open crankcase

The unique HARDI pump has an open crankcase. This ensures that the crankcase will not hold any chemicals, thereby avoiding fast destruction of the bearings and the crankshaft in case of an unlikely diaphragm failure.

No contact between chemicals and moving mechanical parts

All moving parts are completely separated from the liquid running through the pump.

The pump transmission is either done with a standard PTO or with an optional wide angle PTO shaft.

Self-priming

Can run dry

Isolated mechanical and liquid components

Easy to service

Fluid system

Pumps available

Pump	r/min	Stroke	Capacity at 0 PSI
1303	540	6.0 mm	30 gpm
363	540	9.0 mm	51 gpm
363	1000	10.0 mm	53 gpm
463H	540	12.0 mm	85 gpm
463H	1000	6.5 mm	89 gpm
150H-Ace 206 Hydraulic Drive			60 gpm @ 115 PSI
200H-Ace 304 Hydraulic Drive			60 gpm @ 105 PSI

EVC operating unit



Pressure drop at 10 gpm: 7 psi

Manifold diameter: 18 mm

Radial sealing system

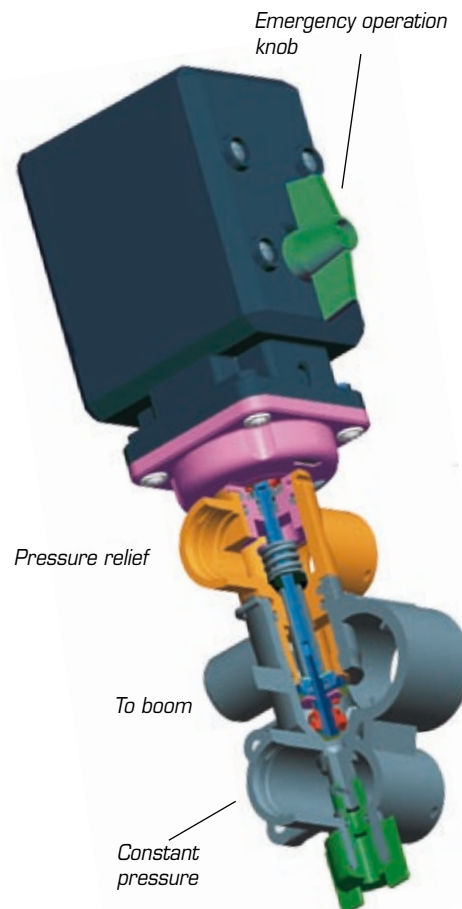
Easy service

The EVC is a modular system with a positive drive motor valve for each section. The durable motors ensure long life with low maintenance. When the section is switched to OFF, the pressure in the line to the nozzles is relieved. This results in instant shut-off at the nozzles.

The EVC has a constant pressure system. This system ensures that the spraying pressure remains constant when sections are opened or closed.

Radial sealing system

This is the best sealing system to guarantee no leaks.



Pressure control valve



The pressure regulation system is based on a high-capacity, high-speed bypass valve. A bleed line in the valve causes constant flushing to prevent residue build-up in the valve.

Quick acquisition of correct setting

It is located at the front of the sprayer so it can be monitored.

Exceptional reliability from well-proven HARDI electrical motors.

No internal residue build-up

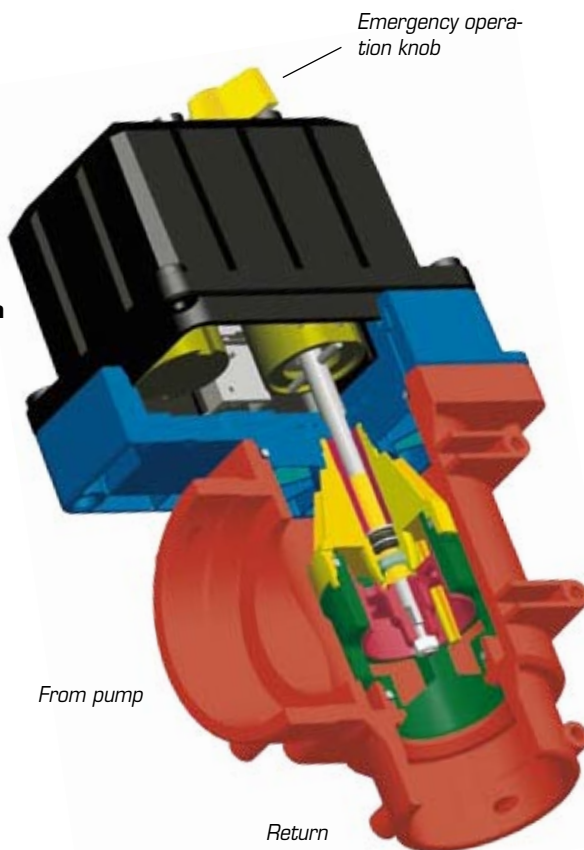
More security when changing to a different type of pesticide.

Can be operated with the control box alone (no computer).

Eases trouble-shooting.

Can be operated manually without electric power

A 'finish-the-job' feature, should an in-field problem occur.



- High-capacity, high-speed valve
- Reliable, proven motors
- Maximum flow: 158 gpm at 12 psi
- Manual override
- Easy to clean
- Revolutions from min to max: 13
- Revolutions per second: 1

EasyClean filter



SafeSpray vacuum gauge monitors filter condition

Easy to clean

Dirt trap

Auto shut-off

**Surface area
229 in²**

**Flow capacity
119 gpm**

**Inlet diameter
2½"**

**Outlet diameter
2½"**

**Screen size:
30 mesh std.
50 mesh
80 mesh**

The HARDI EasyClean **suction** filter is a high-capacity filter with a very large filter surface. The condition of the filter can be constantly monitored on an external gauge. This ensures that the filter is cleaned when needed and only when needed.

When opening the lid, the main valve automatically turns to OFF

The automatic shut-off valve ensures safe operation of the sprayer, without any risk of spill.

SafeSpray

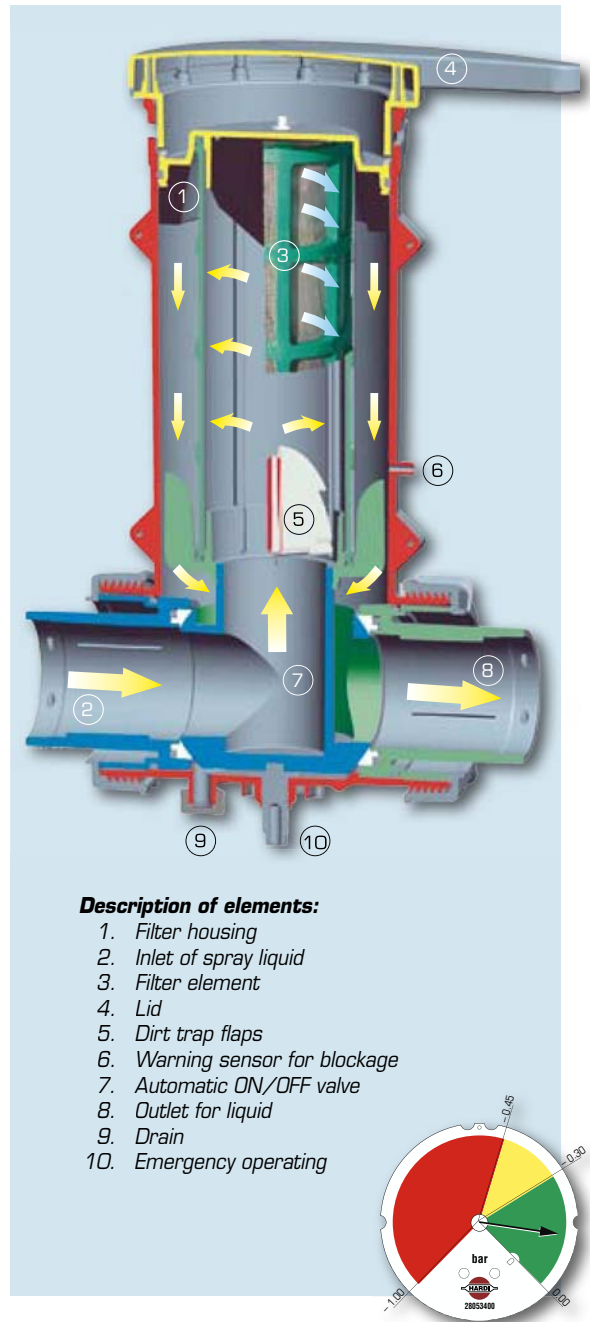
The unique SafeSpray vacuum gauge ensures that the filter is cleaned when needed and only when needed.

Very high capacity

The filter has a large screen surface ensuring sustained high capacity.

Filter fitted in upright position

The filter is fitted in such a position that it can be serviced from the ground, without any risk of spill.

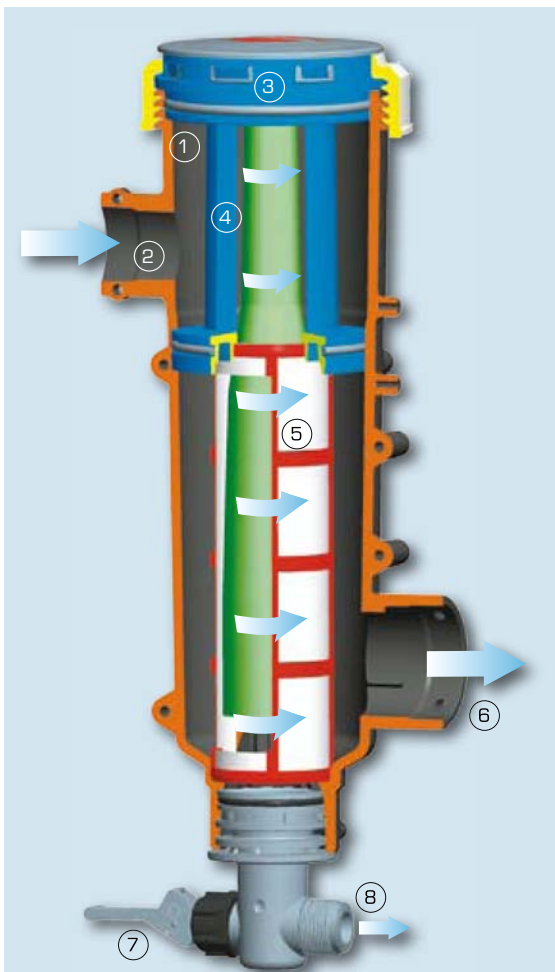


Dirt trap inside the filter screen ensures that impurities are removed from the system

Two flaps inside the filter ensure that impurities will be removed when the screen is pulled out.

CycloneFilter

Fluid system



Description of elements:

1. Filter housing
2. Inlet of spray liquid
3. Lid - one-hand operated
4. Cyclone chamber
5. Filter element
6. Outlet of spray liquid
7. Boost valve
8. Return line



The HARDI CycloneFilter is a unique self-cleaning **pressure** filter that uses a high-speed cyclone for additional cleaning action. The cyclone action increases the cleaning capacity of the filter significantly.

Unique cyclone action greatly improves the self-cleaning action

The cyclone created inside the filter increases the speed of the liquid against the filter screen, thereby increasing the effectiveness of the self-cleaning action.

Filter fitted in upright position

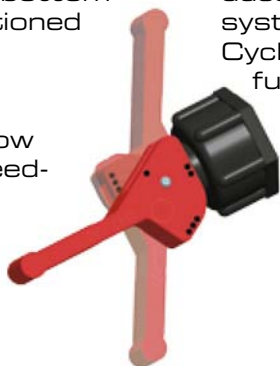
The filter is fitted in such a position that spill can be avoided when inspecting the filter.

This ensures fewer stops and reduced pressure loss in the liquid system. Furthermore, the HARDI CycloneFilter has a unique boost function that allows the filter to be flushed 'on-the-go' when needed.

Valve with 3 positions (OFF/ON/Boost)

The control valve in the bottom of the filter can be positioned in 3 different modes:

- (•) Self-cleaning OFF
Used when all the flow from the pump is needed
- (••) Self-cleaning ON
- (•••) Boost
Used to flush the filter screen



Flow capacity:
105 gpm

Inlet diameter
1 1/2"

Outlet diameter
1 1/2"

Screen size:
50 mesh
80 mesh std.
100 mesh

TurboFiller



Filling capacity
liquid up to
32 gpm

Size of hopper
9 gal

Effective
TurboDeflector

The HARDI TurboFiller is optional on the NAVIGATOR and developed to handle large quantities of powders and liquids. Its high capacity

is achieved through a combination of high vacuum and liquid rotation produced by a TurboDeflector inside the hopper.

High mixing capacity

Liquid at high pressure is being used to create a powerful rotation of the liquid inside the hopper. This movement gives the effect that every powder or liquid chemicals are mixed before they are sucked into the sprayer. The highest capacity is achieved when the TurboFiller is more than half-filled with water.

Optimum filling height

A spring-loaded bracket with transport lock makes it easy to change from field to filling position. The filling position is approx 95 cm from the ground.

The TurboFiller is easily operated with 3 valves:

- Container rinse
- Liquid in and TurboDeflector ON/OFF
- Ejector ON/OFF



TurboFiller



Very high vacuum and suction capacity

A large external ejector system creates a powerful vacuum that transfers powders and liquid directly into the tank.

Rotating nozzle used for cleaning containers and the TurboFiller itself

The built-in rotating nozzle will clean any chemical container. After use, the same nozzle will clean out the complete hopper. The nozzle has a spike that can penetrate the seal on most chemical containers.

Cleaning pipe

A cleaning pipe is fitted as standard on the TurboFiller. This trigger valve with 3 ft hose can be used for flushing the hopper or filling liquid into a container.

Container rinsing nozzle with spike

Cleaning pipe



Fluid system

Controller features

One cable only for quick connection

No loose cables or wires through the back window

Fused power supply for equipment security

No insecurity of power supply especially from an older tractor

Easy-to-monitor operation via the in-built status diodes

High-quality water-proof connectors

No damage from cross-polarisation

Easy to disconnect and connect with only 3 ft of cable

Jobcom

The Jobcom is the computer placed on the sprayer. The centrally placed box may contain up to several printed circuit boards as this is the service point for most of the electronics.

At trouble-shooting, a number of diagnostic diodes indicate the performance of the Jobcom. Normally, the Jobcom is accessed by HARDI service staff only.

Harness for tractor and cabin

A fused power harness connected directly to the tractor battery ensures good power supply.

The cabin harness is discrete with only one thin cable entering the cabin. The time required for connecting the computer on a daily basis will be minimised, and there is no messy nest of cables and wires.

Sensors

Proven sensors with excellent cable protection and high-quality connectors are used. The signal quality is very fine, ensuring trouble-free operation.

The sensors typically have a status diode to aid trouble-shooting. The diode will flash, thereby indicating correct function.

Inputs are electronically protected against defective or faulty connected sensors. A cross-polarisation will not damage the sensor.



Large colour-coded switches

The switches are easy to identify and use. Foam Marker, End Nozzles and an "A-B" switch are included for optional operator-specific functions.

Thermal fuses

No need to replace mechanical fuse if a short-circuit has occurred.

Emergency operation possible

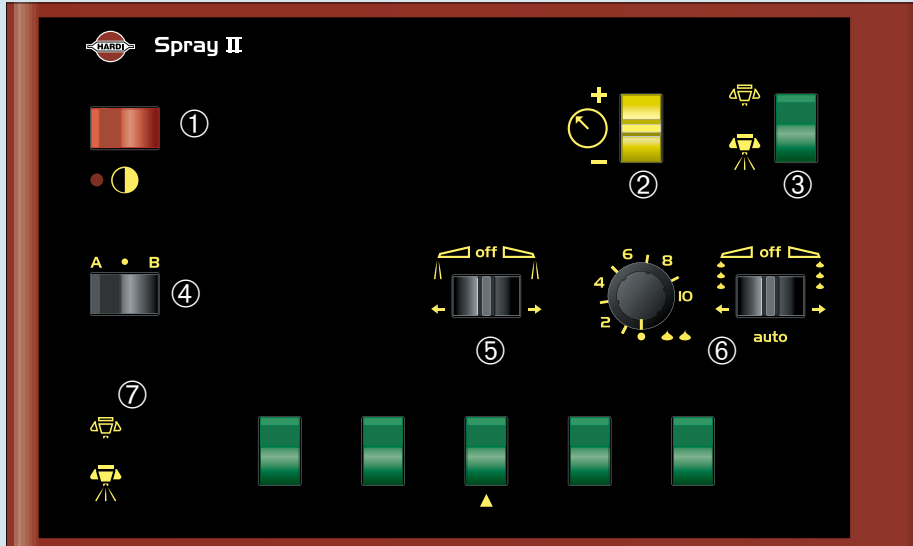
The control boxes can operate basic sprayer functions without the computer.

Control box unit

The control boxes are compact, ergonomically designed units that allow the operator's right hand to naturally rest around the right side of the box. The logical switch layout puts all frequently used functions at the operator's fingertips.

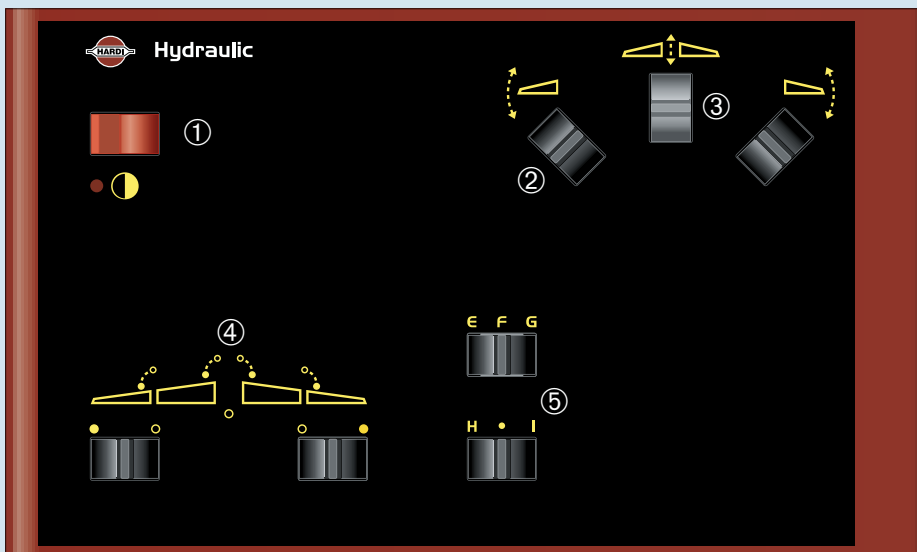
The supplied pillar bracket, designed for ISO mount points, is quickly fitted to the tractor. A wing bolt releases the boxes for quick removal. A single 39-pin plug is connected to the box. Cable diameter is only 13 mm.

Actual size:
8½x5x3¼ in



Spray II box

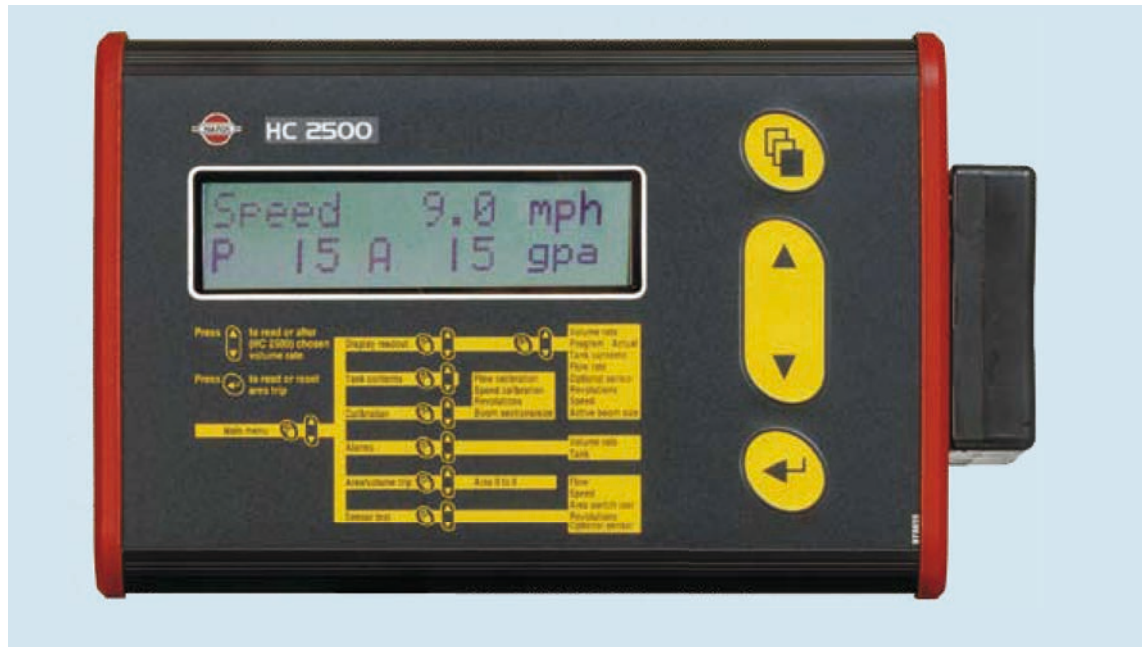
- 1. Power switch
- 2. Pressure regulation
- 3. Main ON/OFF
- 4. Options control
- 5. End nozzle control
- 6. Foam marker control
- 7. Boom section valves



Hydraulic box

- 1. Power switch
- 2. Tilt
- 3. Boom raise/lower
- 4. Boom fold
- 5. Options control

HC 2500 Controller



Actual size:
8x5¼x1¼ in

Display readout:
Volume rate applied
Speed
Programmed and actual volume rate
Flow rate
Tank contents
Active boom width
Eight register read-outs
Options readout

Options:
Revolution transducer
Pressure transducer

HARDI Controller 2500 is a well-proven computer for basic needs and is very simple to use.

Daily operation could be a change in the programmed volume rate. Pressing the “up” arrow increases the volume rate and pressing the “down” arrow decreases it.

The two-line readout can show up to 3 lots of information simultaneously. It is excellent for night spraying. Audio and visual alarms will warn the operator of incorrect volume rate and low contents.

Easy and simple to use

The readout has the help for every day use.

Up to eight area registers

There is also a register totalling covered area and volume sprayed.

Audio / visual alarms

Application rate and tank contents alarms to warn of discrepancies.

Speed and flow test

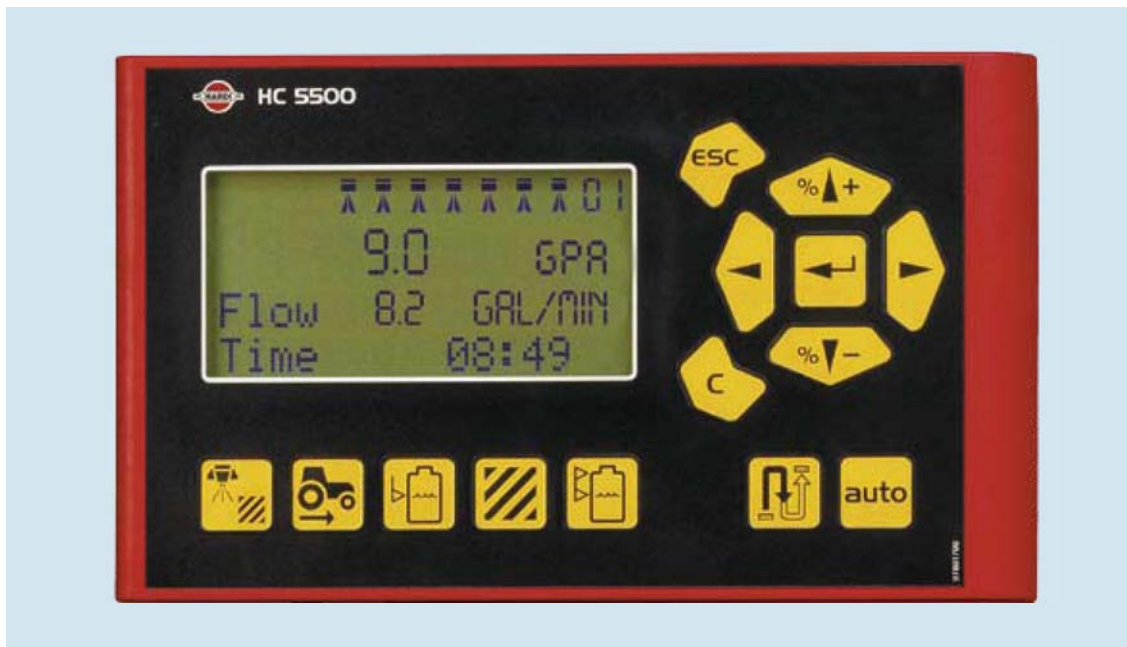
The transducers have a diode that lights up indicating correct operation.

Emergency operation of the sprayer possible

The basic sprayer functions can be operated without the computer.



HC 5500 Controller



The HARDI Controller 5500 is the choice where IntelliTrack steering and advanced farming tools are desired.

It can also automate functions like the Foam Marker. Furthermore, the operator is instantly informed of operation status and warned when vital parameters like pressure, speed, etc are not correct.

It is advanced farming, ready with up to 98 registers and the possibility of connection to a site-specific application map or a remote sensor as well as a 12 volt printer.

LogicMenu – easy to use

The LogicMenu facilitates the daily work; with the arrow keys the operator easily finds his way.

Display readout

- Activity status
- Active sections
- Register number
- Volume rate
- Speed
- Tank contents
- Area treated
- Total volume sprayed
- Distance/area left
- Programmed and actual volume rate
- Flow rate
- Actual time
- Work rate
- Optional readout

4 lines of information displayed simultaneously

Easy-to-read display - day or night.

Freedom of placement

The HC5500 and the Spray II box can be positioned anywhere in the cab for ease of use.

Pre-set keys

Pre-set keys offer shortcuts to display vital information.

Volume rate change on the go

Change the application rate on the go as a percentage of the prescribed rate, and hot keys are used to access vital information simply and quickly.

Untreated area displayed

The distance or area untreated is constantly calculated.

Emergency operation possible

The basic sprayer functions can be operated without the computer.

Pressure transducer

If a pressure transducer is fitted, the HC 5500 can be programmed with alarms for minimum and maximum pressure and set to not go under a minimum programmed pressure. This is important if, for example, the driving speed is too slow when starting in a corner of the field.

Actual size:
8 x 5¼ x 1¼ in

Advanced, user-friendly

LogicMenu

Provides more information, controls more features

Rates changed on the go

Hot keys

AutoSectionControl ready

Options for HC 5500

12 volt printer

Can be operated from the tractor and is a quick way to hard-copy the register data. This printer only takes a few seconds to print the data.



Cable for VRA

A Variable Rate Application ('GPS') cable is used for connection to other computers.

Pressure sensor

For on-screen pressure readout. Alarms can be set up to warn of incorrect pressure. It reads up to 10 bar. It improves application accuracy at low flow rates as the system switches from flow to pressure based sensing.



Electronic TankGauge contents sensor

For automatic on-screen tank contents readout. A warning for low tank contents can be set up.



Foot pedal switch

For spraying at higher speeds, it is best to use both hands for steering. The foot-operated switch is a remote for main ON/OFF function.



Boom survey

EAGLE SPB/C

boom:

- 100 ft - 6 sections
- 100 ft - 5 sections
- 90 ft - 6 sections
- 90 ft - 5 sections
- 90 ft - 4 sections
- 88 ft - 6 sections
- 88 ft - 5 sections
- 88 ft - 4 sections
- 80 ft - 6 sections
- 80 ft - 5 sections
- 80 ft - 4 sections
- 66 ft - 4 sections
- 66 ft - 3 sections
- 60 ft - 4 sections
- 60 ft - 3 sections
- 50 ft - 4 sections
- 50 ft - 3 sections
- 45 ft - 4 sections
- 45 ft - 3 sections



The EAGLE boom offers unequalled performance in rough conditions and is available in boom sizes from 45 to 100 ft.

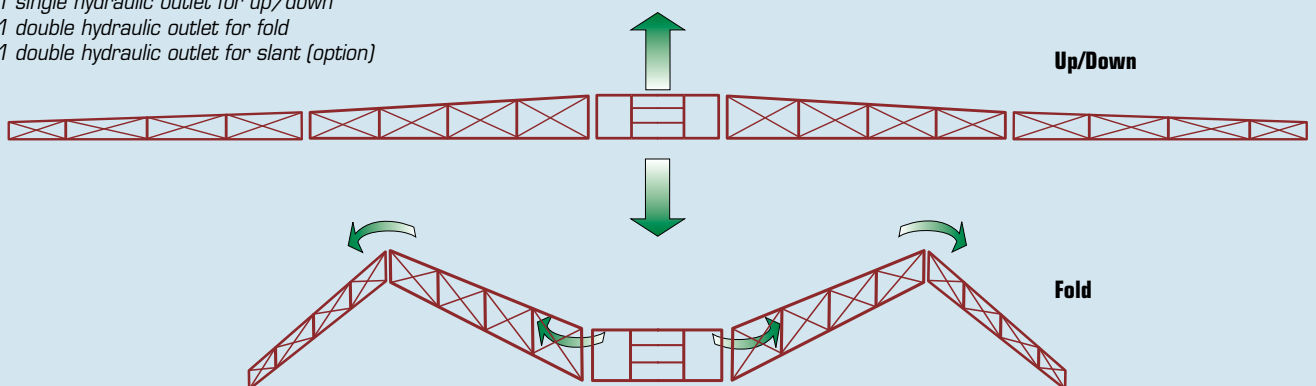
The perfect choice for medium to large farming operations, the two-dimensional EAGLE boom design with dynamically linked coil spring boom centre provides the smooth boom.

Boom hydraulics

Y boom

Requires

- 1 single hydraulic outlet for up/down
- 1 double hydraulic outlet for fold
- 1 double hydraulic outlet for slant (option)



EAGLE

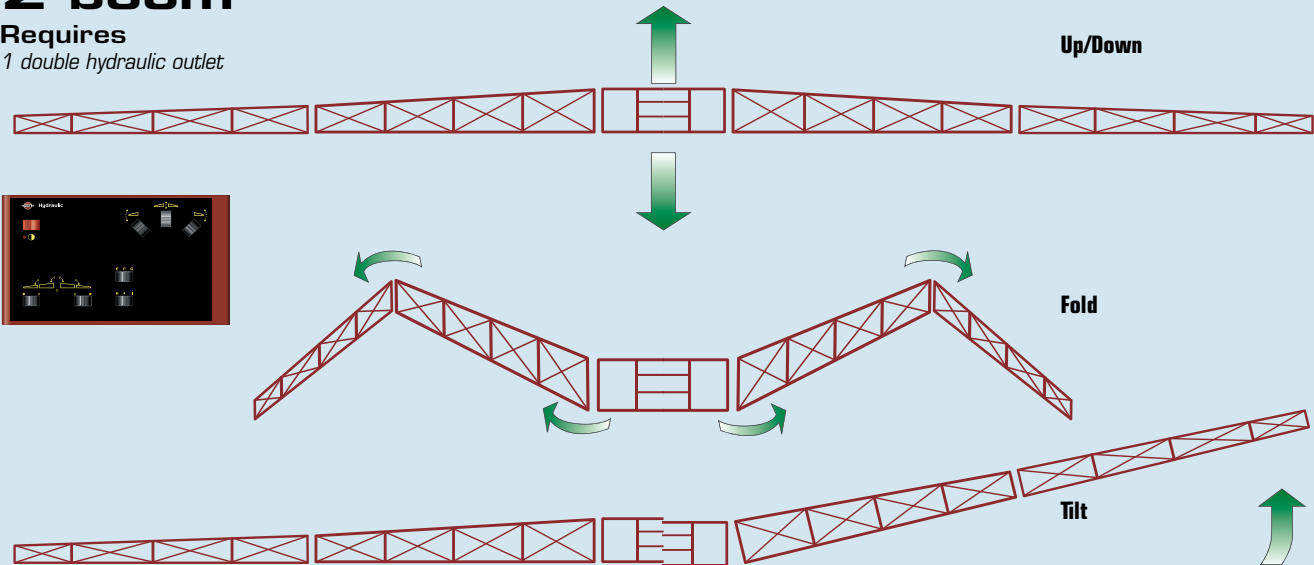


The strong and well-proven two-dimensional EAGLE boom is the ideal choice for operators looking for durability and value.

Z boom

Requires

1 double hydraulic outlet



Boom suspension

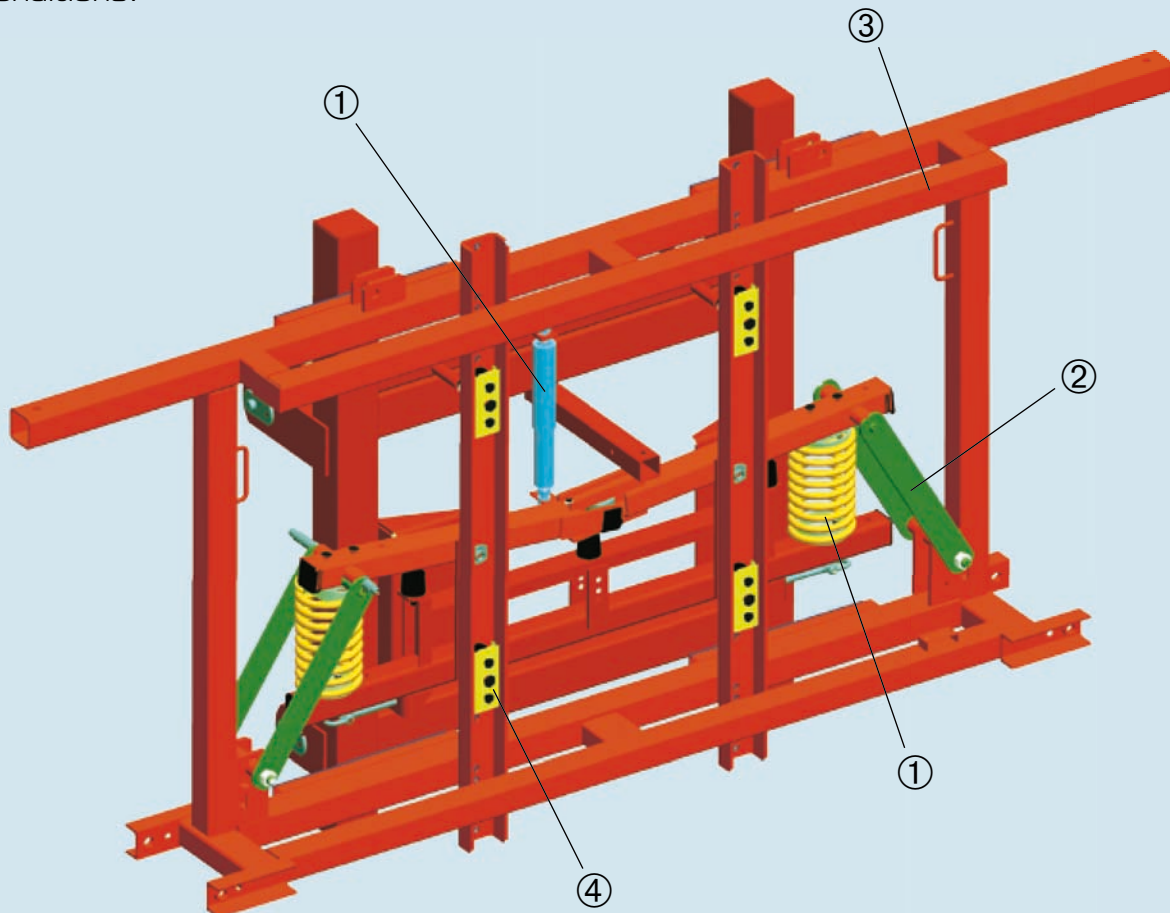
EAGLE

1. Coil spring The large coil springs and damper dampen the up and down movements from the field.

2. Trapeze arms Trapeze arms work together with the coil springs to provide exceptional boom ride.

3. Self-stabilizing trapeze All EAGLE booms feature a self-stabilizing centre section to accommodate all terrains.

4. Anti-yaw Yaw dampening of horizontal movements is integrated through 4 individual rubber buffers located on the centre section. This protects the boom in the toughest conditions.



Boom wings and nozzle holders



Folding wires

The inner section is up to 3 ft high. The folding cylinder is mounted near the centre section; the outer wing is pulled in and out by a strong wire. This system absorbs forward and backward movements of the outer boom wing.

Breakaway

An adjustable spring-loaded breakaway system protects the boom from damage.



Protected adjustable nozzle holders

The nozzles are well-protected by the boom structure. The nozzle holders can be adjusted up and down for different types of nozzles.

- 2-dimensional
- SYNTAL boom tubes
- Single nozzle holders
- Spring-loaded breakaway

Optional

- TRIPLET nozzle holders
- BoomFlush

Basic hydraulic Y version

Basic and simple

Suitable for open and closed centre hydraulics

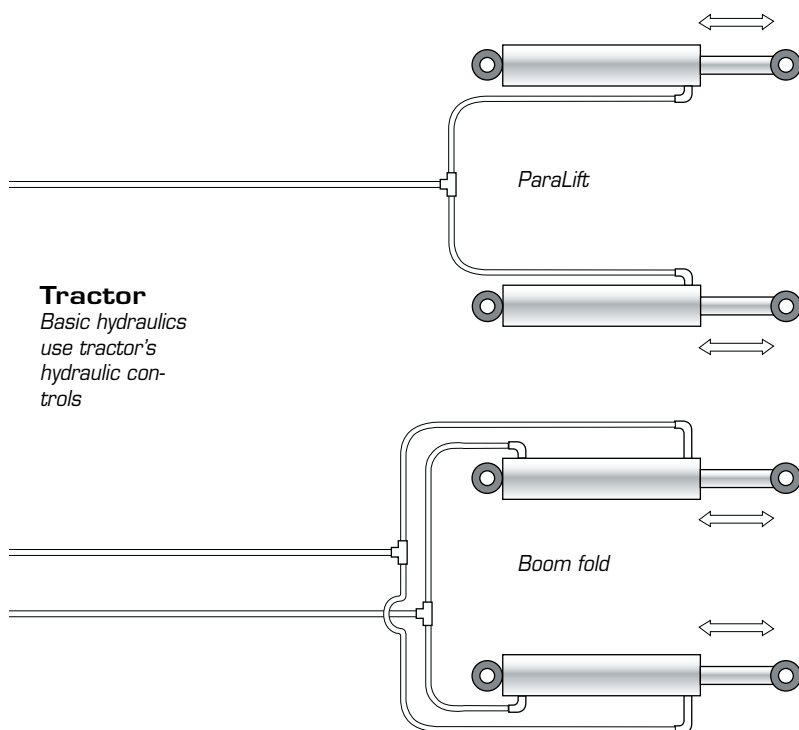
Boom and lift control via tractor's hydraulic levers

The basic hydraulic system is for EAGLE-Y booms.

This system requires the tractor to have one double- and one single-acting circuit, and if a hydraulic slant control is needed, another double-acting outlet is required. This allows the boom to work with the lift function connected into a single-acting circuit and the fold function connected into a double-acting circuit.

The boom is then operated with the standard tractor levers and no hydraulic box is required.

This hydraulic system will operate with all types of tractor hydraulic systems.



Electrically activated hydraulics

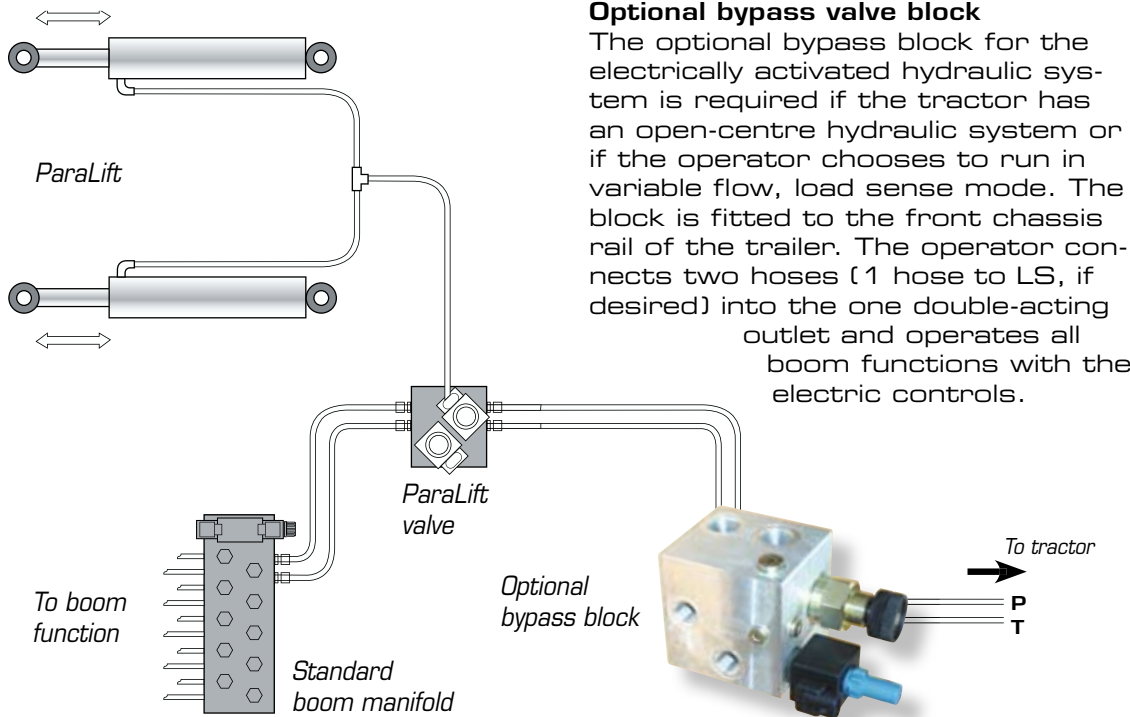
This system is designed for modern closed-centre hydraulic circuits.

The operator connects two hoses into the one double-acting outlet and operates all boom functions with the electric controls.

In this instance the operator will engage the hydraulic outlet for variable flow and then control boom functions with a hydraulic switch box.

With the HC 2500 and HC 5500 controller the hydraulic box is required.

Fingertip hydraulic controls
Designed for modern tractor hydraulics
Only two hose connections

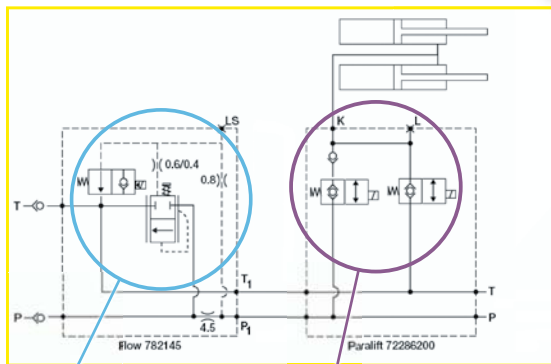


Optional bypass valve block

The optional bypass block for the electrically activated hydraulic system is required if the tractor has an open-centre hydraulic system or if the operator chooses to run in variable flow, load sense mode. The block is fitted to the front chassis rail of the trailer. The operator connects two hoses (1 hose to LS, if desired) into the one double-acting outlet and operates all boom functions with the electric controls.

Electric hydraulics required for:

- Boom tilt
- Open-centre hydraulic tractors
- Optional load sensing
- If only one double-acting remote available



Optional bypass valve
Required for LS signal

Standard
ParaLift valve

Boom circuit



ChemLocker

Width 22 in
Depth 21 in
Height 10 in

Load capacity:
220 lbs

A HARDI ChemLocker is a sprayer-mounted storage locker for chemical containers or bags.

It cannot be used when a Foam Marker is mounted.



SafetyLocker

Width 13.5 in
Depth 6.0 in
Height 11.5 in



A SafetyLocker can be assembled under the left side front cover for storage of gloves and mask close to the working zone.

External Cleaning Kit



A cleaning kit can be fitted for safe external cleaning of the complete sprayer in the field.

Faced with demands of in-field cleaning of the sprayer. The HARDI system offers a pressure of up to 220 PSI, ensuring quick and efficient outside cleaning.

Use of clean water
220 PSI:
6.5 gpm

Use of clean water
70 PSI:
4 gpm

Length of $\frac{3}{8}$ " hose: 65 ft

Max pressure
220 PSI



Foam Marker



**Tank capacity
25 gallon**

The HARDI electric remote Foam Marker can be fitted instead of the HARDI ChemLocker. A 25 gal tank greatly extends the working capacity. The Spray II box has a rotary knob to adjust the amount of foam produced. This offers the operator a pre-set function.

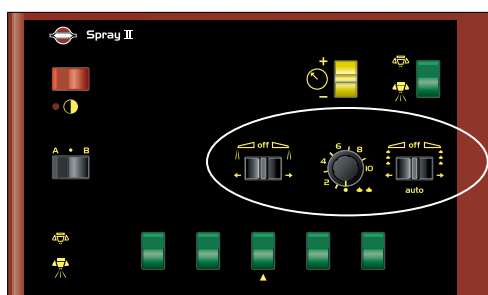
The foam quantity is metered electronically. As an alternative, the HARDI E-Z Guide Plus guidance system can be used.

Visual pre-set of foam quantity

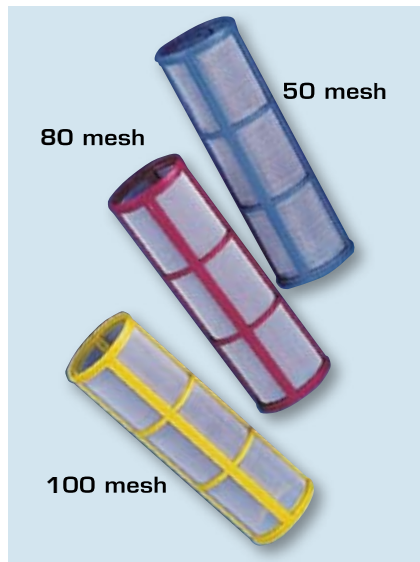
Controls integrated in the HC 5500 Spray II box

High capacity foam liquid tank

Operated from Spray II box



In-Line filter



Flow capacity:
14 gpm

Inlet diameter
3/4"

Outlet diameter
3/4"

Screen size:
50 mesh std.
80 mesh
100 mesh

To avoid blocking of nozzle filters when working with low volume rates or to eliminate the need for nozzle filters, the NAVIGATOR can be equipped with the easy-to-

service In-Line filters. The In-Line filters are placed on the boom.

Nozzle holder and boom tubes



The EAGLE boom can be equipped with TRIPLET nozzle holders to enable nozzle changes by simply rotating the assembly. Ensuring fast and simple changes between nozzle rates and/or patterns.

Calibration kit

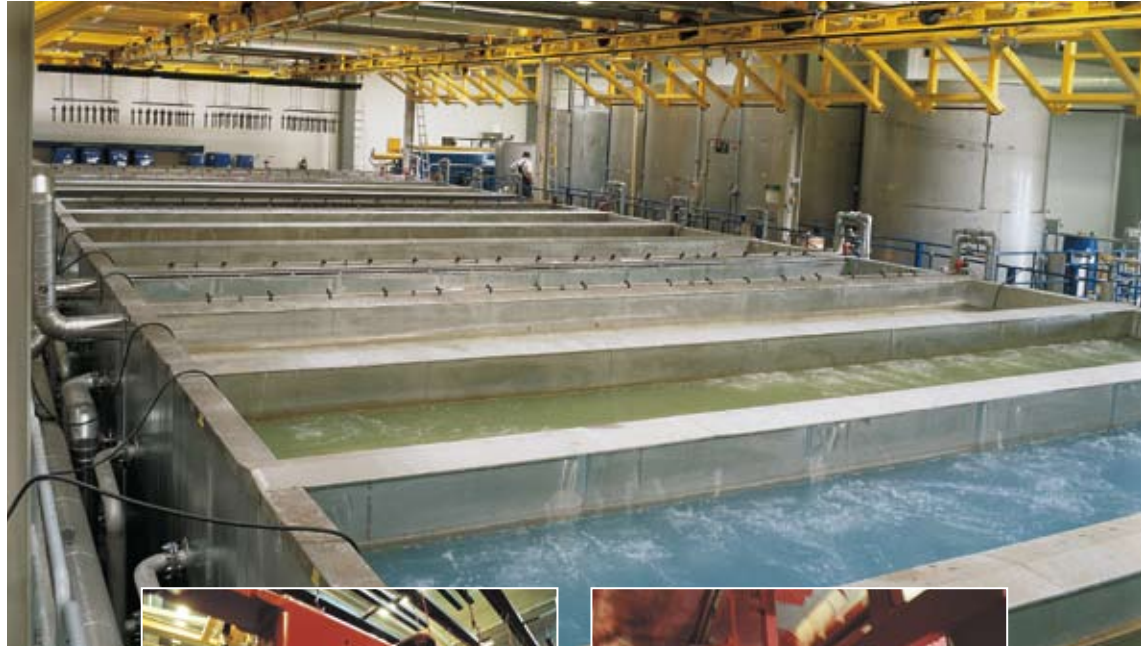


To ensure accurate application rates, a calibration kit is offered. The calibration kit includes:

- Measuring jug
- Nozzle wheel
- Cleaning brush

Options

Surface treatment



Material:
UV protected

13 steps of cleaning, degreasing and preparation

Hardening at 200 C° for one hour

Will last at least 1000 hours in salt fog test without any corrosion

The chassis and all other steel components have been pre-treated with zinc phosphate before the application of a high-quality coating of powder paint.

This treatment provides outstanding protection against corrosion from both chemicals and harsh weather conditions.



Nozzles

HARDI spray nozzle selection guide

The HARDI ISO nozzle series is the most complete nozzle series on the market. This full range ensures that nozzles of all relevant sizes are available for all spray jobs.

HARDI ISO – Standard-Flat Fan nozzle (F)



The essential, multi-purpose Flat Fan nozzle. Ensures maximum coverage and superior uniform distribution in most situations. These nozzles can be recommended for all pesticide applications.



HARDI ISO MINIDRIFT – Air Inclusion nozzle (MD)

HARDI MINIDRIFT makes it possible to change from Medium to Coarse/Very Coarse just by turning the TRIPLET - pressure and volume rate will stay the same - and the spray job can be finished even at higher wind speeds.



HARDI QUINTASTREAM 5-hole nozzle (Q)

For applying liquid fertilizer. This new (patent pending) HARDI designed nozzle series can uniquely ensure a uniform distribution

HARDI ISO – Low-Drift-Flat Fan nozzle (LD)



Low-Drift nozzles are recommended when optimal spraying conditions can not be achieved yet spraying cannot be postponed. These nozzles have less Very Fine (driftable) droplets.



HARDI INJET – Air Inclusion nozzle (INJET)

The mix of air and water gives these nozzles a very coarse droplet spectrum, which will remarkably decrease the risk of drift. Recommended for very wind tolerant applications of soil applied and systemic pesticides.

at boom heights from 14 - 40 inches. The easy way to turn your sprayer into a high precision fertilizer applicator.



ISO number/ color	Spray quality	GPM	GPA at MPH												
			5	6	7	8	9	10	11	12	15	20	25		
0075-Pink	F - - -	0.075	4.5	3.7	3.2	2.8	2.5	2.2	2.0	1.9	1.6	1.4	1.2		
01-Orange	F M - VC	0.100	5.9	5.0	4.2	3.7	3.3	3.0	2.7	2.5	2.1	1.9	1.7		
015-Green	F M C VC S	0.150	8.9	7.4	6.4	5.6	5.0	4.5	4.1	3.7	3.2	2.8	2.5		
02-Yellow	F M C VC S	0.200	11.9	9.9	8.5	7.4	6.6	5.9	5.4	5.0	4.2	3.7	3.3		
025-Lilac	M M C VC -	0.250	14.9	12.4	10.6	9.3	8.3	7.4	6.8	6.2	5.3	4.6	4.1		
03-Blue	M C C VC S	0.300	17.8	14.9	12.7	11.1	9.9	8.9	8.1	7.4	6.4	5.6	5.0		
04-Red	M C VC VC S	0.400	23.8	19.8	17.0	14.9	13.2	11.9	10.8	9.9	8.5	7.4	6.6		
05-Brown	M C VC VC S	0.500	29.7	24.8	21.2	18.6	16.5	14.9	13.5	12.4	10.6	9.3	8.3		
06-Grey	C - - VC S	0.600	35.6	29.7	25.5	22.3	19.8	17.8	16.2	14.9	12.7	11.1	9.9		
08-White	C - - VC S	0.800	47.5	39.6	33.9	29.7	26.4	23.8	21.6	19.8	17.0	14.9	13.2		
10-Light blue	C - - - S	1.000	59.4	49.5	42.4	37.1	33.0	29.7	27.0	24.8	21.2	18.6	16.5		
15-Light green	- - - - S	1.500	89.1	74.3	63.6	55.7	49.5	44.6	40.5	37.1	31.8	27.8	24.8		

All values are at 40 PSI

Spray quality: F = Fine, M = Medium, C = Coarse, VC = Very coarse, S = Solid stream

Pressure range: For F, LD, MD and Q is 20 to 70 PSI (20 to 50 PSI recommended) and for INJET 40 to 120 PSI (40 to 80 PSI recommended).

Dimensions

Technical specifications

		3000	4000
Pumps, type – gpm		1303 -30 / 363 -51 / 463 - 85	1303 -30 / 363 -51 / 463 - 85
Booms EAGLE, ft		45, 50, 60, 66, 80, 88, 90 and 100	45, 50, 60, 66, 80, 88, 90 and 100
Suspension		Optional	Optional
Hydraulic outlets needed (Y models)		1 single- + 1 double-acting	1 single- + 1 double-acting
Hydraulic outlets needed (Z models)		1 double-acting	1 double-acting
Total length, ft	A	19.5	19.5
Total height, with EAGLE boom, ft	B	12.5	12.5
Width with EAGLE boom, ft	C	10.0	10.0
Track width fixed axle, inch	D	120	120
Track width adjustable axle, inch	D	60 – 120	60 - 120
Length draw to axle, ft	E	15	15
Clearance, inch	F	27 (320R × 46)	27 (320R × 46)
Rinse Tank, gal		130	130
Clean Water Tank, gal		5	5

* Weight on 3000 and 4000 is with 80 ft EAGLE boom

EAGLE 45 – 100 ft

The EAGLE boom offers unequalled performance in rough conditions. The strong and well-proven two-dimensional EAGLE boom is the ideal choice for operators looking for durability and value.



Weight specification

Weight in lb

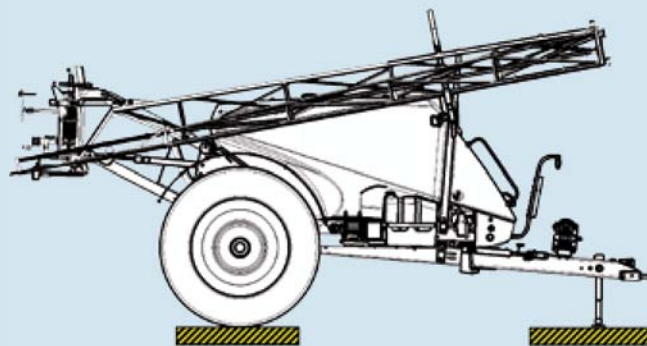
NAV 3000 800 gallons

Boom width	Empty tank			Full tank		
	Axle load	Drawbar load	Total weight	Axle load	Drawbar load	Total weight
45'	6897	310	7207	12687	2220	14907
50'	6917	320	7237	12707	2230	14937
60'	6963	308	7271	12753	2218	14971
66"	6989	315	7304	12775	2229	15004
80'	6864	616	7480	12782	2398	15180
88'	6934	623	7557	12899	2402	15301
90'	6956	634	7590	12918	2416	15334
100'	7062	660	7722	12980	2442	15422

NAV 4000. 1200 gallons

Boom width	Empty tank			Full tank		
	Axle load	Drawbar load	Total weight	Axle load	Drawbar load	Total weight
45'	6930	332	7262	14995	2645	17640
50'	6950	342	7292	15015	2655	17670
60'	6996	330	7326	15061	2643	17704
66"	7022	337	7359	15085	2652	17737
80'	6897	638	7535	15184	2685	17869
88'	6967	645	7612	15316	2740	18056
90'	6989	656	7645	15338	2751	18089
100'	7095	682	7777	15404	2773	18177

The data is measured with booms in transport position, main tank filled to net volume, RinseTank full and TurboFiller. The weight can be differing up to +/- 450 lbs depending on sprayer specifications.



HARDI Service

Service

HARDI machinery is serviced by a grid of specially educated service technicians. HARDI is aware of the importance of supplying knowledge to the buyers along with the sprayers. This increases the value of the sprayer for the end-user. To emphasize HARDI's investment in spreading know-how about the technical and applicational aspects of the sprayers, HARDI founded the 'HARDI Academy' in 2004. HARDI Academy offers a wide range of courses, from 1st level technician to high specialist level. The strategy followed is still that of heavily investing in educating our customers and their customers.

Extensive user manuals

Along with the HARDI sprayer comes an extensive User Manual, instructing the user in all relevant matters to get the most of the new machine. The manual covers all light service issues and usage instructions for the entire machine, including the electronic and computing devices. Also included are Service Manuals for technical service.

Spare parts

Availability of spare parts is a crucial issue to secure the reliability of the HARDI sprayer. Some parts are wearing parts, which need to be replaced as a consequence of using the sprayer. Other parts are suddenly needed due to collisions and other acute mishaps.

The spare part stock carried by any HARDI distributor is backed up by central spare part stocks, carrying all fast and most slow moving parts. This chain of supply secures a smooth and reliable service to HARDI machines worldwide. HARDI spare parts are available all over the world, and most areas are covered within 24 hours. Find the complete HARDI spare part catalogue at: www.hardi-international.com.

Original HARDI spare parts are, of course, manufactured under the same strict tolerances and quality demands as the complete machines. This goes for wearing parts that are mostly easily replaced as well as for the complex hydraulic and mechanical parts.

