

# Intelligent capacity

Ergonomics, Visibility and Optimization



ALPHA  
EVO





## EvoCab

### EvoCab optimizes visibility with 3-pillar design

The new large spacious EvoCab is specifically developed by HARDI with its "3-pillar design", which provides a new standard for visibility with more than 320° around the sprayer.

An extremely low sound level in the EvoCab and the automatic climate control give the sprayer operator an optimization of the overall performance of his machine.

An air cooled lunch box and an extra seat to the left of the driver support the idea of the optimized space this machine provides.



*SprayCenter in EcoDrive model*

### HARDI SprayCenter

The driver can operate all spray and hydraulic functions directly from the cab with the right hand located arm rest SprayCenter. The HC 9500 12.1" touch screen controller features an integration of all electronic functions such as AutoTrack, AutoHeight, AutoSectionControl and other intelligent features as AutoWash, AutoAgitation etc.

All functions are fully controlled from the cab and underline the level of optimization, the operator can gain from this machine.

### 3 driving modes: Comfort/Normal/Power

3 driving modes are available as choices for the operator. This gives the operator the possibility to customize transmission reaction to his best feeling.





## Ergonomics

By developing the new EvoCab, HARDI's main focus has been the operator ergonomics. All switches that need to be used when driving are placed as close as possible to the operator.

All primary switch functions have been placed on the new SprayCenter that adjusts with the seat and consequently the operator.

Secondary switch functions are grouped on the roof panel just above the operator's head and easily touchable from the driver's seat.

## Optimization

With Ergonomics and Visibility - Optimization was the third high focus area when developing EvoCab. Operator environments such as Automatic climate control, space, sound level or carbon air filtering have been developed to give maximum comfort and minimum stress to the driver.



### Comfortable seat

The high quality ALPHA evo seat provides you with a high level of comfort when you spend many hours in the field. Fully adjustable to be adapted to everybody, this suspended seat combined with machine suspension provides you with comfort even in rough conditions.



### Instructor seat and lunch box

the instructor seat is located Left of the operator, The air cooled lunch box can be found under the instructor seat.

## Liquid system



### TurboFiller

The HARDI TurboFiller is developed to handle large quantities of powders and liquids. Its high capacity is a result of high vacuum combined with rotation of the liquid forced by the TurboDeflector placed in the bottom of the hopper.

Changing from transport to the 37" high filling position is easily made by means of a spring-loaded bracket with automatic transport lock.

A multifunctional 3-valve operating unit and a cleaning pipe make the chemical filling easy and efficient. The cleaning of containers and the TurboFiller itself is managed by a rotating nozzle.

### AutoWash

- Only program choice needed as the rest is automatic
- Operator and tractor cab are not contaminated
- Time is saved as process is controlled from cab
- Effective so pesticide cross-contamination is avoided
- Residuals negligible at the end of the spray task

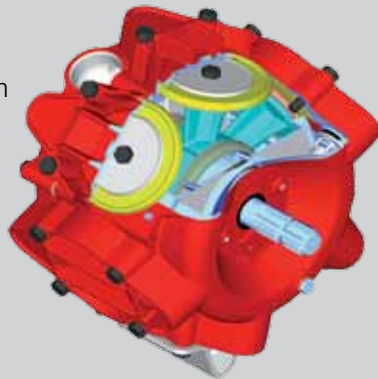


### Pump

The ALPHA liquid system is driven by the robust grease-lubricated HARDI diaphragm pump. The diaphragms separate the liquid from the vital parts of the pump such as its bearings and crankshaft, ensuring reliable and durable operation.

HARDI diaphragm pump features:

- Self-priming
- Able to run dry without damage
- Easy to service
- Grease-lubricated crankcase



### WorkZone

The liquid system can be operated from the cab or from ground by a controller located next to the TurboFiller.





## DynamicFluid4

### Dynamic fluid system based on 4-sensor technology

The fluid system on the ALPHA evo is a new concept developed to obtain shorter response time and thereby more precise application in the field.

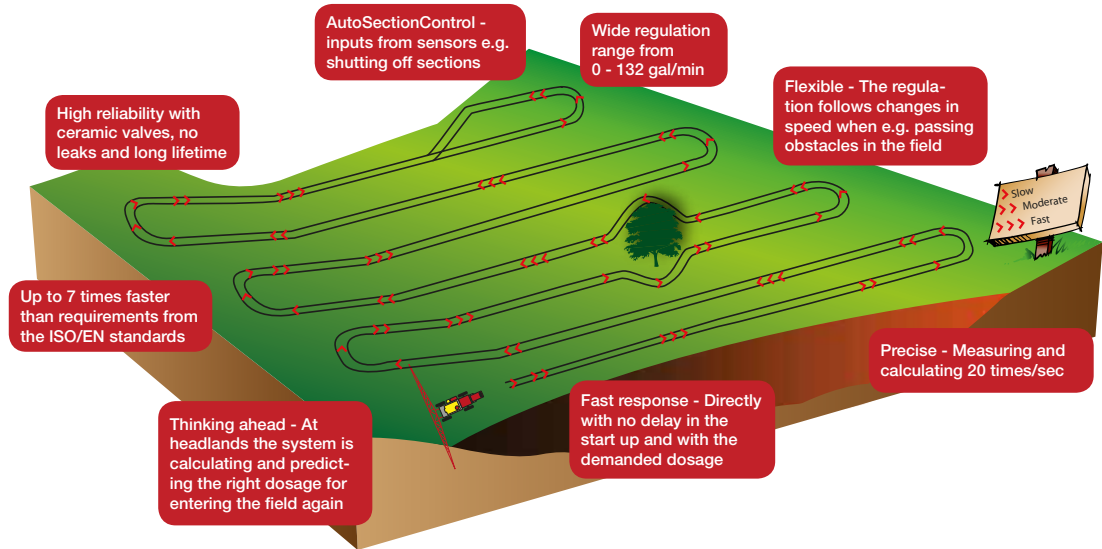
New powerful engines on the ALPHA evo and the hydrostatic transmission have given new driving patterns with more variance in the speed and faster acceleration, factors which together with the GPS controlled section control is challenging for the performance of the liquid system.

In a traditional fluid system the regulation is made on feedback from what is already "historical" data. For example the RPM is increased, and shortly after the flow will be too high at the nozzle. When that is measured, the spray computer will regulate the pressure down again but in the meanwhile the application rate has been too high.

The DynamicFluid4 system will calculate the consequences of the increased RPM and make the regulation instantly. The DynamicFluid4 property of pro-acting is based on 4 sensors in the fluid system measuring RPM, position of regulation valves, flow and pressure. Together with new software and new unique ceramic regulation valve, DynamicFluid4 is offering precision in the application rate giving the best performance available on the market.

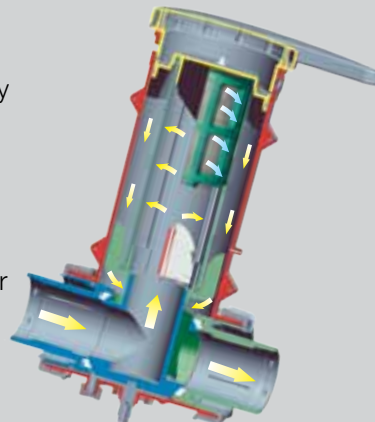
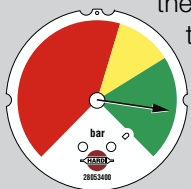
## Stability and safety

The sensors in DynamicFluid4 each has their individual task, but they will also work as back up for each other (Limp-home) and the regulation will continue in case of sensor failure. Regulation can also be done manually.



## EasyClean filter

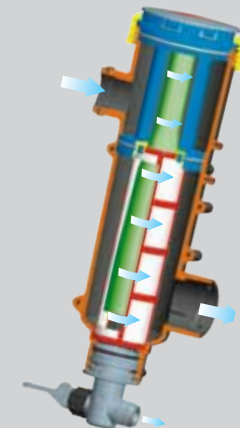
The EasyClean filter is a high capacity suction filter. The condition of the filter can be constantly monitored via a SafeSpray vacuum gauge. This ensures that the filter is cleaned when needed and only when needed. When cleaning the filter, all you have to do is to twist the lid 90°. This will close a main tank valve in the bottom of the filter and open the filter for inspection.



## CycloneFilter

The CycloneFilter at the pressure side is a unique self-cleaning filter with a high-speed cyclone action that increases the cleaning capacity of the filter significantly.

In addition, the CycloneFilter has a unique boost function allowing the filter to be flushed when needed.



## Full control - integrated electronics

### HC 9500

All the main spraying functions are operated with the fingertip multifunction joystick in conjunction with the HC 9500 12.1" touch screen spray controller to provide the highest level of performance and application precision.

The HC 9500 controller provides the operator with a powerful, full-featured precision farming tool for guidance, data logging, application report generation, automated steering and more.

### ISOBUS compatibility

The HC 9500 offers compatibility with the ISO 11783 (ISOBUS) Virtual Terminal Standard.



### GPS

Equipped as standard with GPS AutoSection-Control and manual guidance system, ALPHA evo has a GPS receiver placed at the rear of the cab. A special bracket has been designed to open the roof without moving the receiver. This to be able to keep all settings.



### One work screen

The complete integration of all important information on one work screen is an important criterion. On the HC 9500 work screen, the driver can operate the AutoSectionControl, AutoHeight, guidance and dosage as well as the AutoSteering.



# SprayCircle

## Documentation

- USB port for data transfer
- Smart report as pdf
- Real time data-logging
- Transfer to farm management software

## AutoWash

- Only program choice needed as the rest is automatic
- Operator and tractor cabin are not contaminated
- Time is saved as process is controlled from cabin
- Effective so pesticide cross-contamination is avoided

## AutoSectionControl

- Product savings of 3 % or more are documented
- Operator fatigue is greatly reduced
- Precision shut-off can be individually set up

## AutoSteering

- Automatic steering can be ordered as optional with ParaDyme

## TurboFiller

- To handle large quantities of powders and liquids
- High capacity is a result of high vacuum combined with rotation of the liquid forced by the TurboDeflector placed in the bottom of the hopper

## AutoAgitation

- Maximizes agitation without foaming
- Minimizes tank residues when spraying is finished
- Automatic tank contents readout on the HC 9500 display

## Set dosage

- 2 fixed application rates can be programmed
- Quick change in l/ha steps
- Usages of external dose rates possible

## Spraying - AutoHeight

- With the support from the precise HARDI AutoHeight system, you can choose your active boom height settings on crop or soil height
- The height is measured with 3 or 5 ultrasonic sensors





## Steering

### Ground clearance

The ground clearance on a standard machine is 47".

A high ground clearance is available as an option. With this feature, clearance will be 59" with standard tires.

### Easy operation and manoeuvrability

A foot pedal activates the 4-wheel steering functions.

Realignment of the rear wheels is automatic, and a lock is activated for road travel.

At headlands, the four steering wheels permit a 100 % respect of crops and a very low turning radius angle.

### High capacity

Two coil springs on the front axle and one coil spring at the rear axle ensure a high driving performance without operator fatigue.

### ALPHA evo 4100 Track Width

Axle size, inches	Axle M	Axle XL	
			Max speed
320/90R46 option	87-101	112-133	33 mph

All track widths are measured with standard offset.



### 3 types of steering

With permanent 4-wheel drive, the ALPHA evo can be driven in 2- or 4-wheel steering mode.



Front wheel steering - road traffic



4-wheel steering - field mode



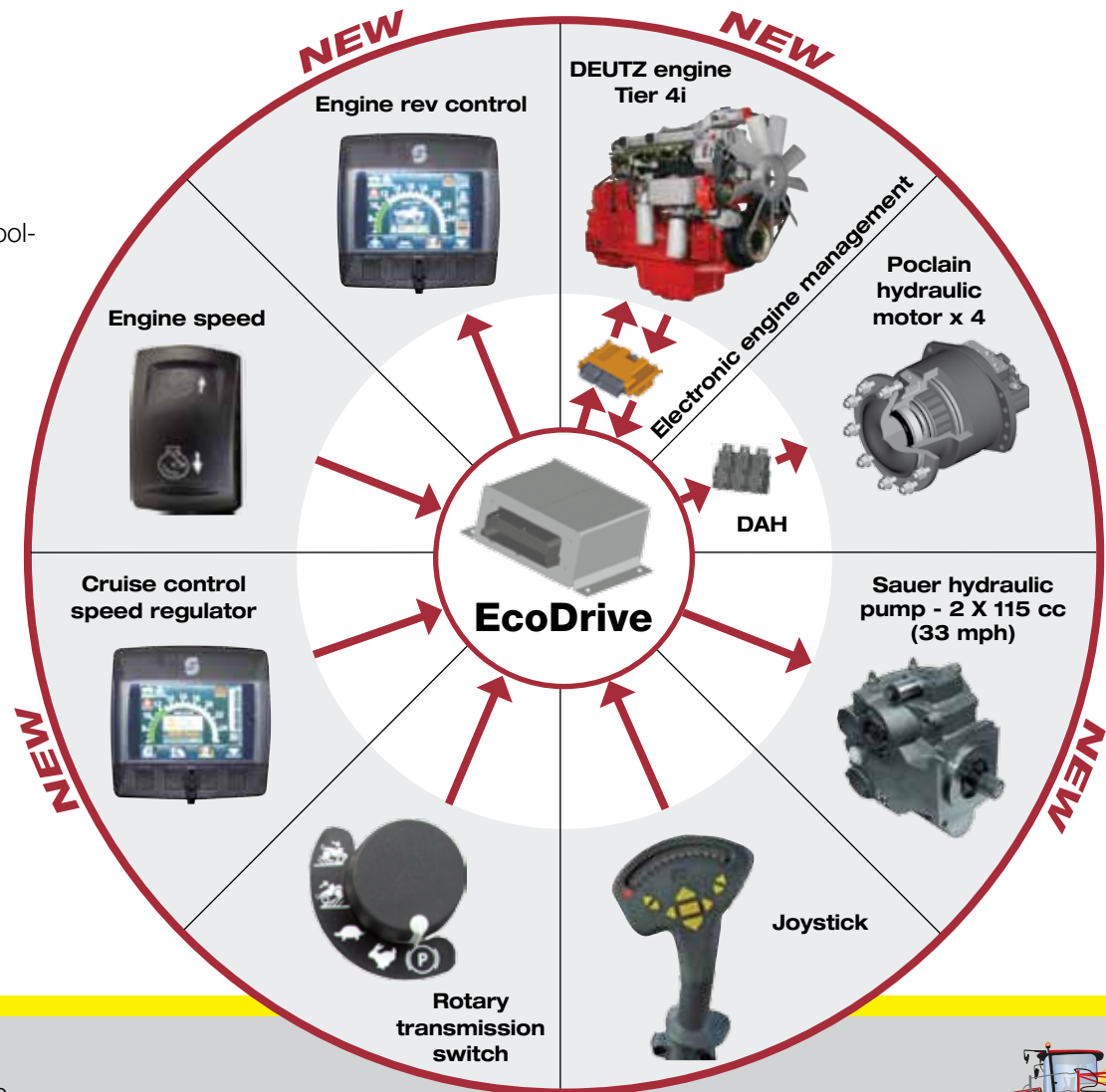
Crab steering - in difficult conditions and manoeuvring



## Engine TCD 6.1 Tier 4i

### Deutz engine, 6 cylinders

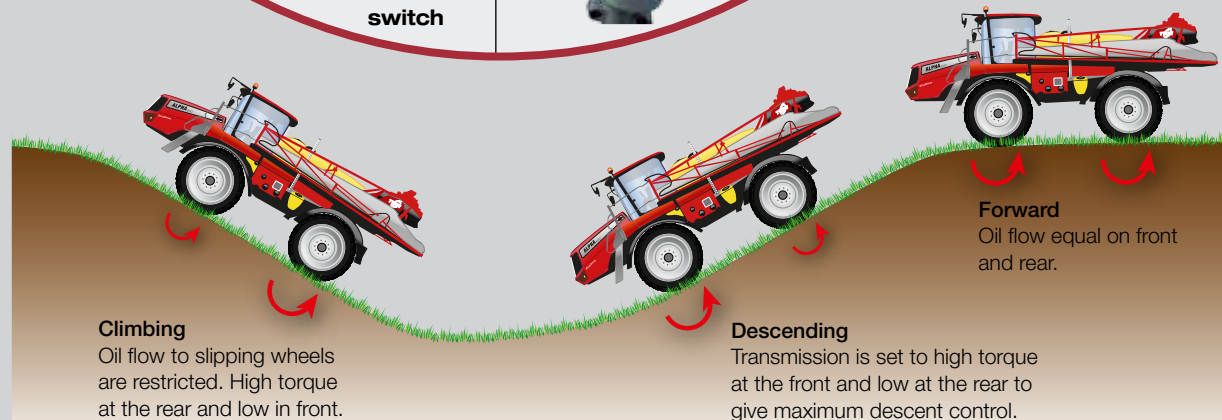
- The ALPHA evo is fitted with the TCD 6.1 Tier 4i 245 hp
    - active DPF (Diesel Particulate Filter)
  - Turbo charged common rail, water cooled, 6 cylinder
  - The fan is driven by a visco-coupler which ensures strong cooling and significantly reduces the sound level in the cab
  - Cruise control, economic road mode
  - Sauer Danfoss hydraulic pump
- EcoDrive hydrostatic pump:*
- 33 mph version: 2 x 115 cc



### EcoDrive

The new Tier 4i engine type with 245 hp and with the new drive management system EcoDrive gives:

- Less fuel consumption - reduction of more than 30 %
- More power flexibility
- Less noise



**HARDI TWIN** - the ultimate in capacity, weather independence and application technology

The ideal high capacity solution. Spray drift from conventional sprayer can be so strong that the operator has to stop before having the spray job done. With efficient drift control it is much easier for the operator to be able to spray the entire field.

Under most conditions the farmers get at least twice as many hours for a safe and efficient spray job with the TWIN sprayer compared to conventional spraying.

The TWIN FORCE is available in sizes from 90 and 118 ft.

Make money on your spraying budget ... Insert your input numbers at [www.hardi-twin.com](http://www.hardi-twin.com), and it will show you just how much money you can make on your spraying budget.

[www.hardi-twin.com](http://www.hardi-twin.com)

**TWIN advantages:**

- Spray faster - increase capacity up to 100%
- Save up to 30% in chemical consumption
- Optimal field timing
- Drift reduction



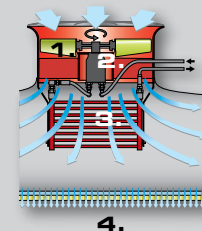
AIR OFF



AIR ON

Two powerful blower units provide air to the left and right boom sides respectively. The large amount of air produced by the double fans allows for faster application speeds even under very difficult weather conditions. Each blower has an output of 21,533 ft.<sup>3</sup>/h/ft. boom and a maximum air speed of 65 mph.

1. TWIN fan
2. Hydraulic motor
3. Hydraulic cooler
4. TWIN air slot





## Technical specifications

Tank		<b>1100 gal</b>
Pump type, rpm. - gpm.		463H: 540-85
Booms		90' and 118' TWIN FORCE
Controller		HC 9500
Engine, Deutz 6 cylinders		TCD 6.1 Tier 4i: 245 hp
Transmission		Hydrostatic 4-wheel transmission (33 mph)
Suspension		Mechanical with shock absorber
Steering		Hydrostatic 4-wheels
Track adjustment		Mechanical 16 inch range
Turning radius, ft. (80 in track width)		16
Weight EcoDrive (empty), lb.*		21,164
Total length, inches	(A)	335
Total height, inches (25 mph, 320/90 R46)	(B)	154
Width with TWIN, inches (90 ft.)	(C)	118
Width with TWIN, inches (118 ft.)	(C)	136
Track width, inches (320/90 R46)	(D)	87 - 101 / M axle 112 - 133 / XL axle
Wheel base, inches	(E)	148
Clearance, inches (380/90 R46)	(F)	47 - M axle / 59 - XL axle
Rinse tank, gal.		108
CleanWater tank, gal.		4
ChemLocker, gal.		48
Filling capacity TurboFiller, gpm.		33

\* Weight is with 118 ft. TWIN FORCE boom





### Superb surface treatment

The high-technology surface treatment contains a multiple step process, including an Oxsilan pre-treatment prior to powder coat painting of all major components.

Together with the Delta/Magni treatment of nuts, bolts and other hardware, HARDI supplies high corrosion protection of our products. Prior to the treatment of steel in HARDI North America, an automated metal finishing booth uses steel shot to remove debris and physically clean the steel before it is visually inspected and sent to the surface treatment process.

### Testing procedures

Sprayers leaving HARDI North America are tested according to the strictest quality standards. This ensures that the highest quality sprayers are delivered to farmers.



### HARDI - The Sprayer

HARDI INTERNATIONAL A/S is an international group whose basic idea is to satisfy the user's requirements for quality products which ensure efficient, punctual and precise application of crop protection products. Our world-wide distribution and sales network comprise more than 100 countries where we are represented by importers, agents and sales subsidiaries. These are situated in North America, Sweden, Norway, Denmark, the UK, France, Spain, Germany and Australia.

Since 1957 HARDI has committed to the ever-increasing demands for efficient and precise plant protection. HARDI is the trendsetter within application of crop protection products. To achieve this position continued developments and innovation are essential. HARDI is committed to the long term future of plant protection.



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HARDI Test Center, Davenport, IA



HARDI North America, London, ON

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The Sprayer

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