

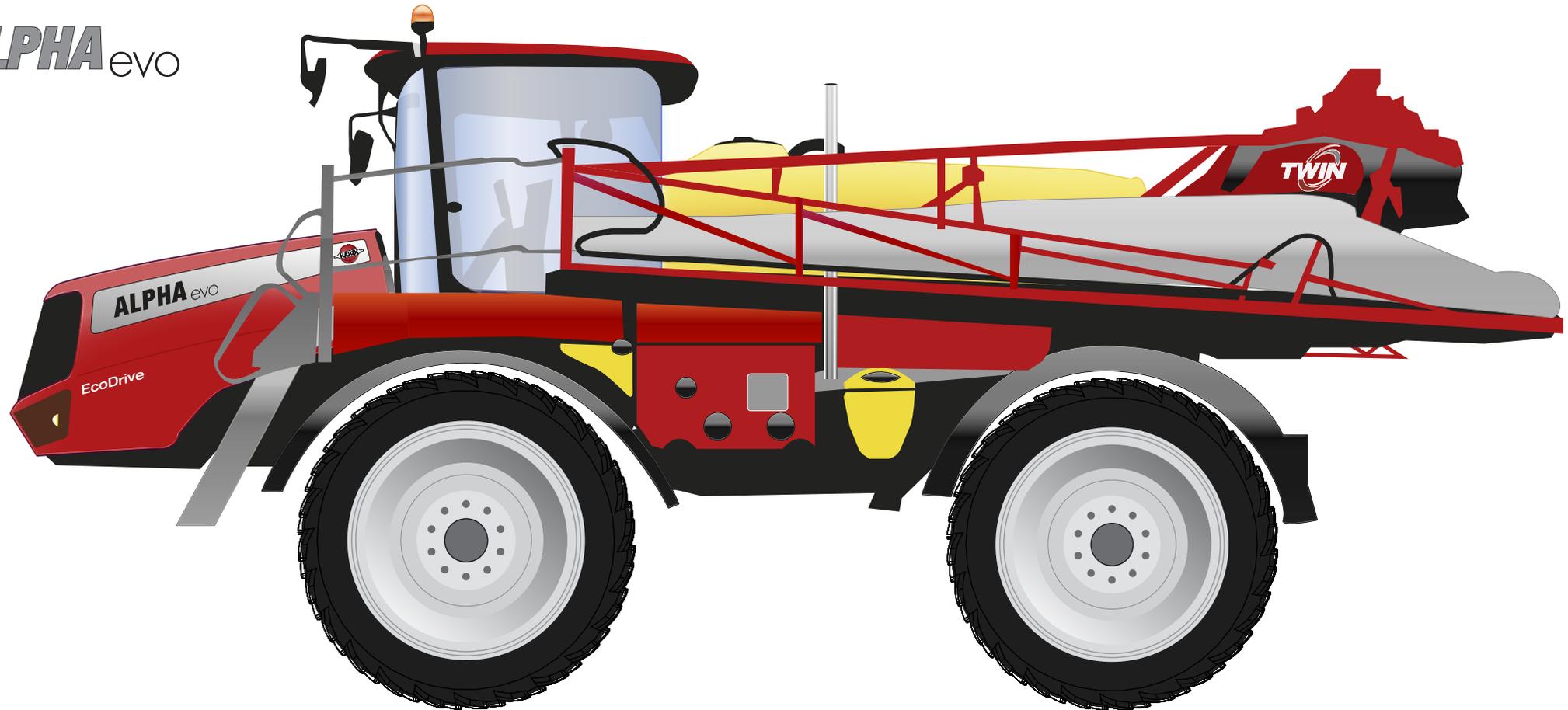
Intelligent capacity

Ergonomics, Visibility and Optimization



ALPHA
EVO

ALPHAevo



Comfort

Ease of use

Capacity

Performance

Tank: 3500 l / 4100 l

Engines:
EcoDrive: Deutz 6 cylinders TCD 6.1 Tier 3B
 129 kW (175 hp) / 160 kW (217 hp) / 180 kW (245 hp)
 - active DPF (Diesel Particulate Filter) meeting the European environmental standards.
 Transmission with 3 driving modes
 (29 km/h: 165 cc / 40 km/h: 2 x 115 cc)

Controller: HC 9600 12.1" touch screen

TurboFiller: High capacity, easy to operate

Liquid system: DynamicFluid4 - shorter response time and more precise application in the field

Clearance: 120 / 150 / 165 cm

Track width: 182 - 332 cm

ALU boom: 24 - 44 m

FORCE boom: 24 - 36 m

TWIN FORCE boom: 18 - 36 m

ALPHA evo – Ergonomics, Visibility and Optimization

Longer spraying days and nights and higher spraying speeds place heavier demands on comfort and easy operation.

HARDI renews the self-propelled sprayer ALPHA family to 3500 and 4100 l with ambitious specifications in terms of better performance, reliability and driving comfort.

ALPHA evo features a fine balance between front and rear and has a low total weight giving an optimal weight/capacity ratio and high performance even under wet field conditions. Also the high ground clearance from 120 to 165 cm gives a flexible usage from low to tall crops as sweet corn and sunflowers.



EcoDrive

The new EcoDrive management system with new engine types Tier 3B 175 hp, 217 hp or 245 hp gives more power flexibility, less noise and more than 30 % reduction of fuel consumption, especially in road transport.

HARDI SprayCenter

All functions are fully controlled from the cab and underline the level of optimization, the pilot can gain from this machine and operate all spray and hydraulic functions directly from the cab with the right hand located SprayCenter.

With fully integrated functions as automatic steering system and ASC, the HC 9600 is featuring an integration of all electronic functions as AutoHeight and AutoSectionControl and other intelligent features.

Furthermore, a new high segment GPS technology is available as an option.

Visibility – Best at the market “3-pillar design”

Developed with the “3-pillar concept”, this cab gives the operator an optimized view in all directions.

With more than 320° unobstructed view, operator keeps perfect control without dead angles.

Tinted safety glasses and slim front corner post give the spray pilot maximum comfort during long spraying days and nights.

DynamicFluid4 liquid system

The DynamicFluid4 liquid system on ALPHA evo sets new standards for precision and capacity. A technology based on 4 sensors built into the fluid system is feeding the spray computer with data needed to make the optimal regulation.



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 extreme low sound level in the EvoCab and the automatic climate control give the sprayer pilot an optimization of the overall performance of his machine. An air cooled lunch box and an extra seat to the left of the pilot support the idea of the optimized space this machine provides.

Ergonomics

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

All primary switch functions have been placed on the new SprayCenter following the seat and consequently the driver.

Secondary switch functions are grouped on the roof 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 as Automatic climate control, space, sound level or air carbon filtering have been developed to give maximum comfort and minimum stress to the driver.



HARDI SprayCenter

HARDI SprayCenter

The pilot can operate all spray and hydraulic functions directly from the cab with the right hand located arm rest SprayCenter. The HC 9600 12.1" touch screen controller is featuring an integration of all electronic functions as AutoTrack, AutoHeight, AutoSectionControl and other intelligent features as AutoFill, AutoWash, AutoAgitation etc.

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

3 driving modes: Comfort/Normal/Power

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



New FloatRide suspension

By equipping the ALPHA with the optional FloatRide, the standard coil spring suspension is replaced by airbags. This ensures even more boom stability and maintains balance of the ALPHA in strong slope. The chassis' height will be maintained whatever tank volume.

By allowing for individual wheel movement, the ALPHA provides a maximum comfort, even at high spraying speeds through a wheel travel of 185 mm.

Hydraulic track width adjustment

The ALPHA evo EcoDrive with FloatRide suspension can be equipped with Hydraulic Track Adjustment as an option for a smoother ride and maximum comfort. This hydraulic track width adjustment axle allows a track width from 1.80 to 2.80 m (depending on tire dimensions).

The driver will set his track width from the cab display and will be ready to drive. That will allow changing track width from the road to the field and from cereal crop to maize, row crop or vegetable with a variation of 1 m between minimum and maximum.



Comfortable seat

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 good comfort even in rough conditions.



Co-driver seat and lunch box

Left to the spray pilot, the trainer seat is located. Under this seat the lunch box is the facility.



AirRide suspension

For more stability, a smoother ride and maximum comfort, we are offering the optional AirRide suspension.

Full control - integrated electronics

HC 9600

All the main spraying functions are operated with the fingertip multifunction joystick in conjunction with the HC 9600 12.1" touch screen spray controller to provide the highest level of performance and application precision.

The HC 9600 controller provides the growers with a powerful, full-featured precision farming tool for guidance, data logging, split-screen for better overview, application report generation, automated steering and more.

ISOBUS compatibility

The HC 9600 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 9600 work screen, the driver can operate the AutoSection-Control, 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 programme 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

AutoFill

- Time saving so other tasks can be done
- Automatic safety OFF sensor prevents overfilling
- Agitation is automatically reduced for maximum fill effect
- Capacity: 600 to 800 l/min

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 9600 display

Set dosage

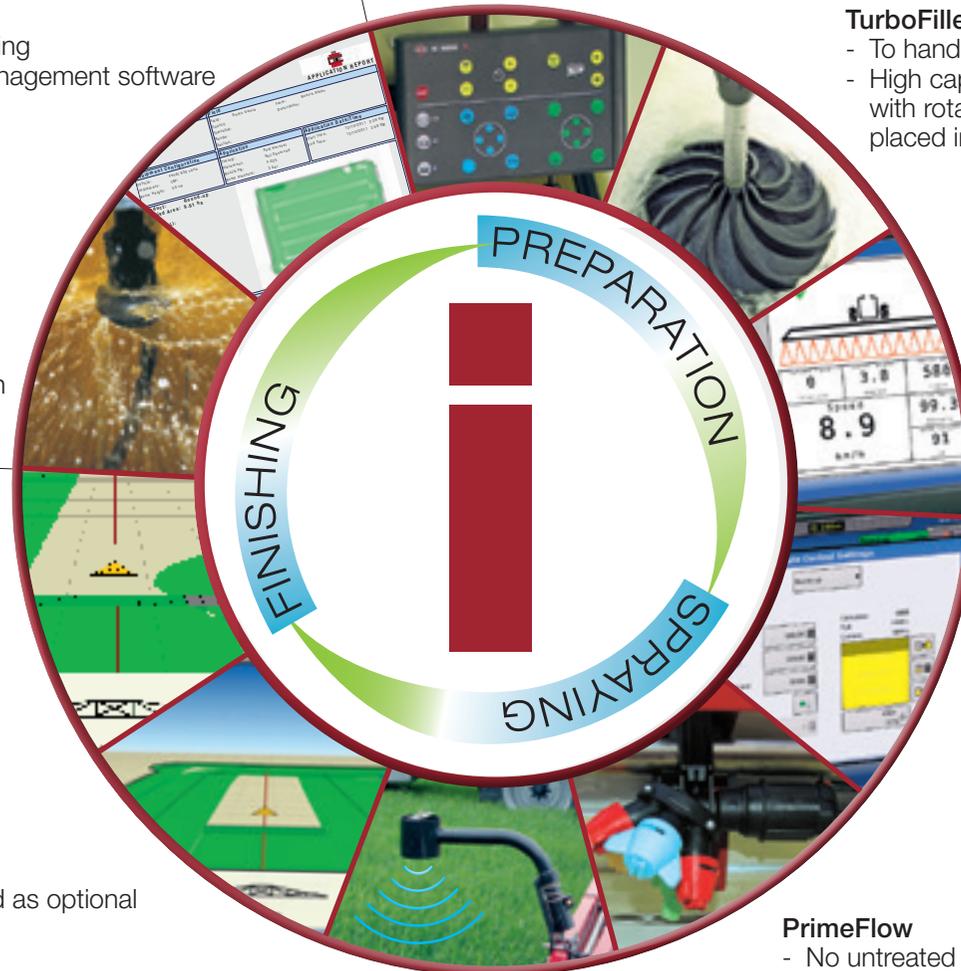
- 2 fixed application rates can be programmed
- Quick change in l/ha steps
- Usages of external dose rates possible

PrimeFlow

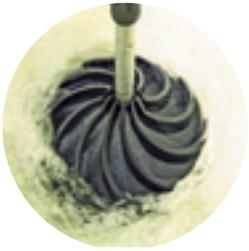
- No untreated areas at spraying start
- Flushing of boom lines without spraying possible
- Pressure system for safe and reliable work
- Individual section width can be programmed from 1 to 12 nozzles

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



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 95 cm 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 programme 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
- Residuals negligible at the end of the spray task



HARDI 464 Pump - 464/10 : 280 l/mn - 464/12 : 334 l/mn

To meet the requirements of bigger sprayers and to improve lifetime, we have introduced the HARDI 464 pump.

A reduction in pressure drop has been avoided by improving the flow in the diaphragm tops.

To easy service, we have integrated lifting hooks while moving two greasing points to the front, to easy lubrication of the front and the rear of the pump.

The casted conrod support ring has also been redesigned for improved mechanical life time.

The most visible change is the new covers designed to protect the pump from mud and water getting into the system.

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



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.

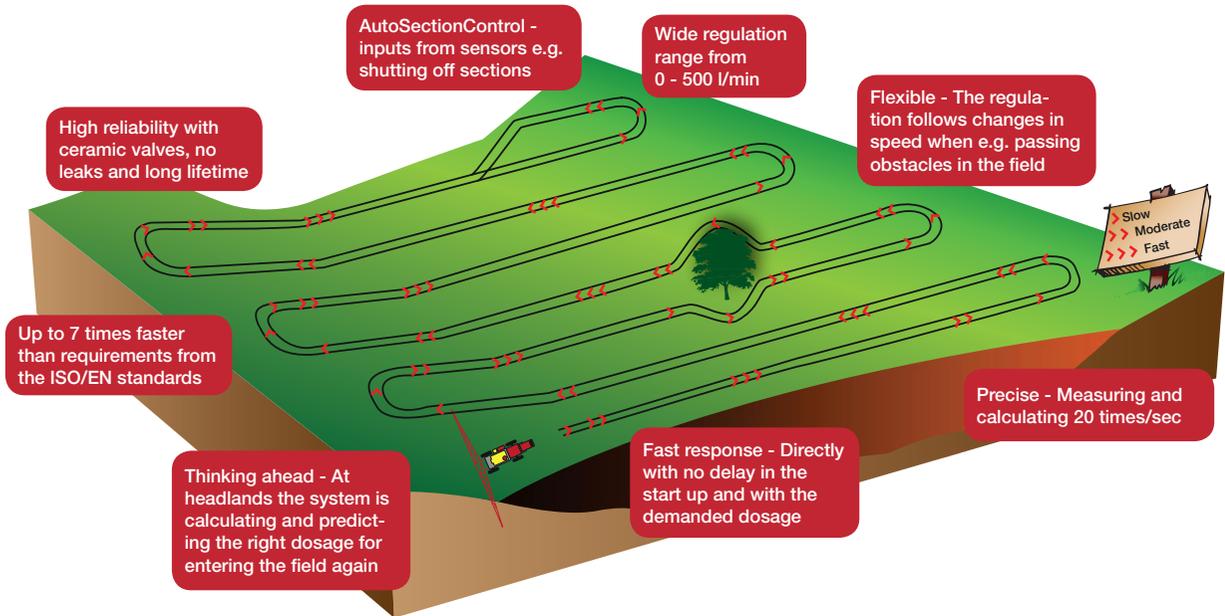
New powerful engines on the ALPHA evo and the hydrostatic transmission have given new driving patterns with more variance in the speed and faster acceleration, factors which together with the GPS controlled section control is challenging for the performance of the liquid system.

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.



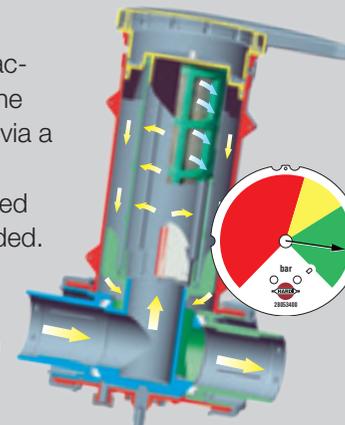
WorkZone

The liquid system can be operated from the cabin or from ground by a controller located next to the Turbo-Filler.



EasyClean filter

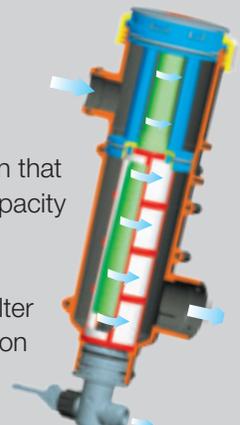
The EasyClean filter is a high capacity suction filter. The condition of the filter can be constantly monitored via a SafeSpray vacuum gauge. This ensures that the filter is cleaned when needed and only when needed. When cleaning the filter, all you have to do is to twist the lid 90°. This will close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



Steering

Ground clearance

The ground clearance on a standard machine is 120 cm.

A high ground clearance is available as an option. With this feature, clearance will be 150 or 165 cm with standard tyres.

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.



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

ALPHA evo 3500 / 4100

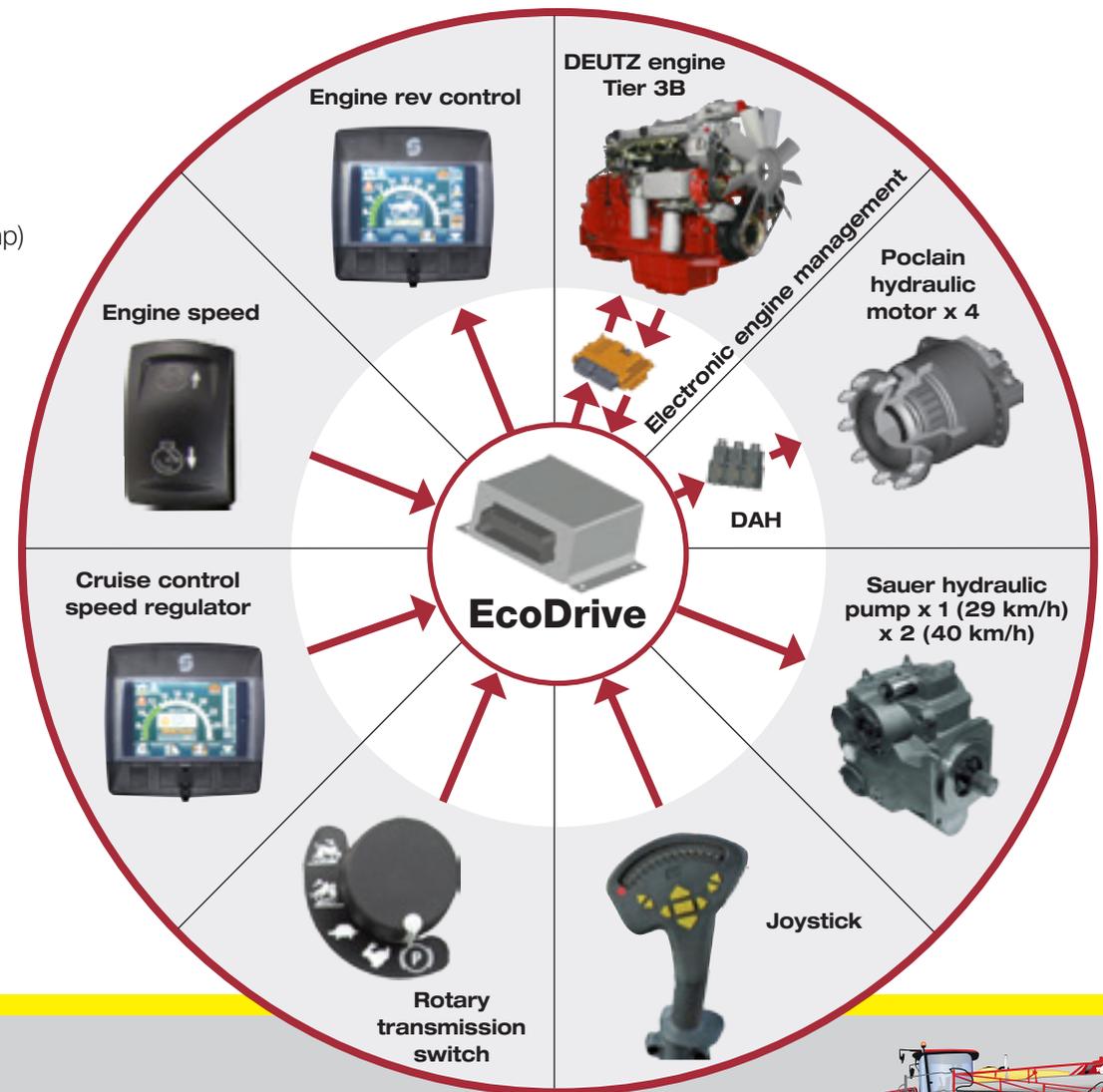
Axle size, cm	Axle S	Axle M	Axle L	Axle XL	
					Max speed possible
300/95 R52 option	182-205	201-237	225-276	266-317	40 km/h
340/85 R48 option	182-205	201-237	225-276	266-317	40 km/h
380/90 R46 standard	182-205	201-237	225-276	266-317	40 km/h
420/80 R46 option	182-205	201-237	225-276	266-317	40 km/h
460/85 R38 option	191-214	210-246	234-285	275-326	40 km/h
480/80 R42 option	191-214	210-246	234-285	275-326	40 km/h
520/85 R38 option	197-220	216-252	240-291	281-332	40 km/h

All track widths are measured with standard offset and clearance 1.20 m.

Engine TCD 2012 Tier 3A or TCD 6.1 Tier 3B

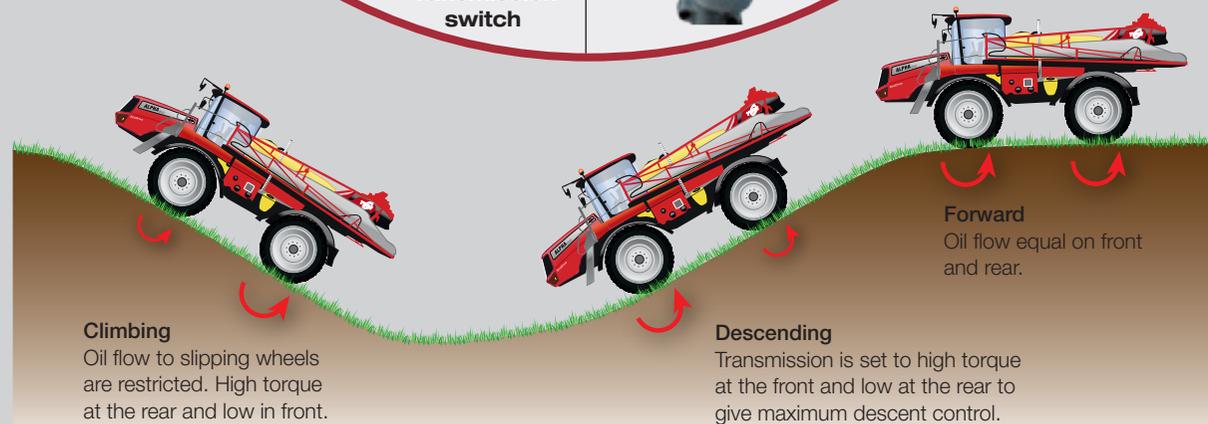
Deutz engine, 6 cylinders

- The ALPHA evo is fitted with TCD 2012 Tier 3A 129 kW (175 hp) / 155 kW (210 hp) or a new TCD 6.1 Tier 3B 129 kW (175 hp) / 160 kW (217 hp) / 180 kW (245 hp)
 - active DPF (Diesel Particulate Filter) meeting the European environmental standards
 - Turbo charged common rail, water cooled, 6 cylinders
 - 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 (1600 rpm at 40 km/h)
 - Sauer Danfoss hydraulic pump
- EcoDrive hydrostatic pump:*
- 29 km/h version: 165 cc
 - 40 km/h version: 2 x 115 cc
 - As option two versions of Hilly transmission:
 - +50% of torque and +25% of torque



Hilly Transmission

As option the transmission can be upgrade to a powerful transmission with bigger wheel motors at the rear to bring depending to the option +50% of torque or + 25% of torque in field mode.



Booms

FORCE

The ALPHA evo is available with a wide range of booms.

All booms are with the unique HARDI suspension system that dampens all possible impacts in fields and on roads.



The boom has a coil spring pendulum suspension with hydraulic damping.

The centre frame is fitted with an anti-yaw device and a damping device to avoid the boom movements.

The FORCE is available in sizes from 24 to 36 m.



The boom height is adjusted by means of the ParaLift controlled by two rams working in traction.

In transport position, the ParaLift is automatically locked, mechanically ensuring safety and long life.

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 18 to 36 m.

Make money on your spraying budget ...

Insert your input numbers at www.hardi-twin.com, and it will show you just how much money you can make on your spraying budget. 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



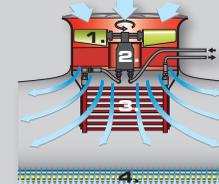
AIR OFF



AIR ON

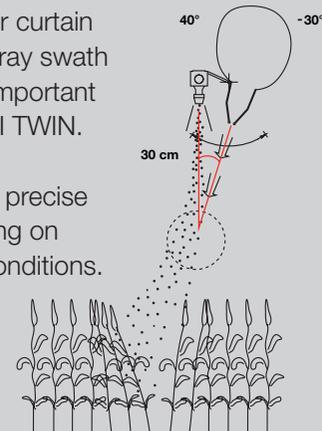
Two powerful blower units provide air to the left and right boom sides respectively. The large amount of air produced by the double fans allows for faster application speeds even under very difficult weather conditions. Each blower has an output of 2000 m³/h/m boom and a maximum air speed of 35 m/sec.

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



The angling of the air curtain together with the spray swath is a distinctive and important feature of the HARDI TWIN.

This allows for more precise application depending on crop and weather conditions.



Aluminium

Aluminium booms are constructed of 4 or 5 round tubes in a three-dimensional trellis structure. The profiles have internal ribs which reinforce the boom strength while keeping an incomparable resistance to corrosion.

The aluminium booms are equipped with PENTANOZZLES.

ALPHA evo is available with Pommier aluminium booms from 24 to 44 m.



A boom light kit is available as an option.



Cut of ribbed profiles



Aluminium boom structure
(TR4 24 to 33 m)



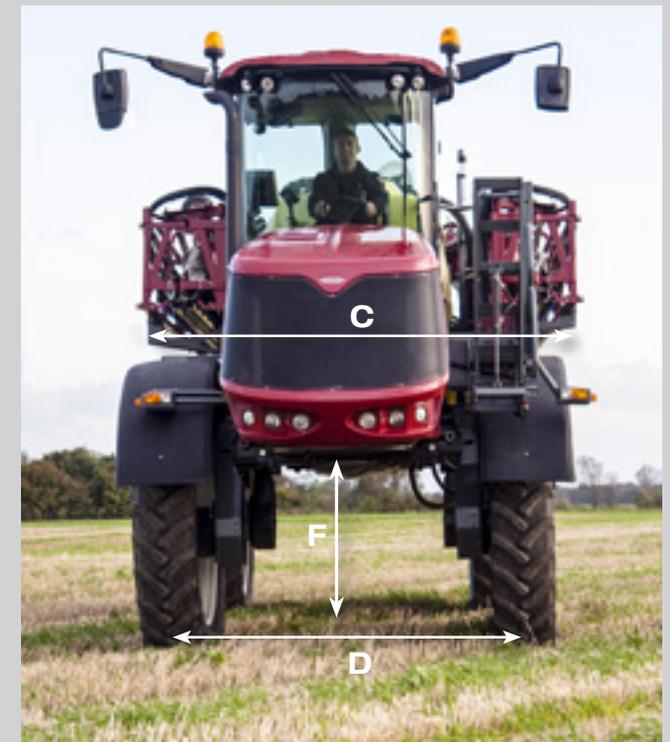
Aluminium boom structure
(RHA 36 to 40 m and RA 42 to 44 m)

Technical specifications

Tank	3500 I	4100 I
Pump type, r/min - l/min	464: 540-280 / 464H: 540-334	
Booms	FORCE / ALU / TWIN FORCE	
Controller	HC 9600	
Engine, Deutz 6 cylinders	TCD 2012 Tier 3A: 129 kW (175 hp)/155 kW (210 hp)* TCD 6.1 Tier 3B: 129 kW (175 hp)/160 kW (217 hp)/180 kW (245)	
Transmission	Hydrostatic 4-wheel transmission 29 or 40 km/h	
Suspension	Mechanical with shock absorber	
Steering	Hydrostatic 4-wheels	
Track adjustment	Mechanical 40 cm range	
Turning radius, m (200 cm track width)	4.62	
Weight EcoDrive (empty), kg**	9415	9435
Total length with TWIN FORCE 36, m	(A)	9.50
Total height, m (40 km/h, 380/90 R46)	(B)	3.90
Width with ALU boom, m (24-44 m)	(C)	2.55
Width with FORCE boom, m (24-36 m)	(C)	3.00
Width with FORCE & TWIN FORCE, m (< 30 m)	(C)	3.00
Width with FORCE & TWIN FORCE, m (32-36 m)	(C)	3.34
Track width, cm (300/95 R52)	(D)	182 – 332
Wheel base, cm	(E)	370
Clearance, cm (380/90 R46)	(F)	120 / 150 / 165
Rinse tank, l	410	
CleanWater tank, l	15	
ChemLocker, l	180	
Filling capacity, l/min	490	
Filling capacity TurboFiller, l/min	120	

* Tier 3A engine are only available out of EU and USA

** Weight is with 38 m aluminium boom





Nørre Alslev,
Denmark

Lleida,
Spain

Savigny,
France

Beaurainville,
France

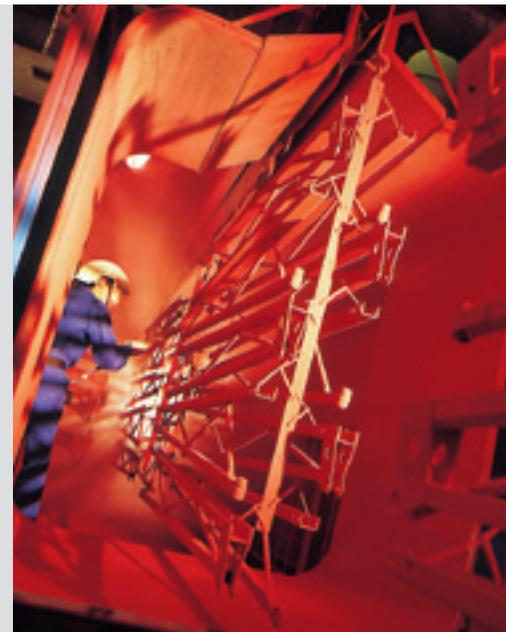
Davenport,
USA

Adelaide,
Australia

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 Sweden, Norway, Denmark, the UK, France, Spain, North America, 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.



Superb surface treatment

The high-technology surface treatment contains 13 treatments, including an Oxsilan pre-treatment and powder coat painting of all major components.

Together with the Delta/Magni treatment of nuts, bolts and other items, we supply high corrosion protection of our products. The chassis, the boom and all other steel parts have been pre-treated with Oxsilan followed by a high-quality coating of powder paint.

HARDI INTERNATIONAL A/S

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The Sprayer

Testing procedures

Sprayers leaving HARDI INTERNATIONAL A/S are tested according to the strictest quality standards.

The staff of the assembly line is accredited to match the demands from both NSTS (National Sprayer Testing Scheme), UK and JKI (Julius Kühn Institut), Germany. This ensures that the highest quality sprayers are delivered to farmers.



Read more at www.hardi-international.com

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