

# THE FUTURE OF CROP CARE

Tanks 4200 / 5200 I Booms DELTA FORCE 24-39 m / TWIN FORCE 24-30 m



# THE FUTURE OF CROP CARE



### Presenting the latest in sprayer innovation

The all-new HARDI AEON CENTURAline is a high-tech sprayer guided by the principles of lean farming — to do more with less. We have used the latest technology and the newest automation solutions to allow farmers to improve productivity while reducing waste. The AEON CENTURAline sets a new benchmark for increasing food production in the face of growing environmental and climatic concerns.

Our starting point is always the farmer. The AEON CENTURAline is designed with user-friendliness and safety in mind. It is built to

last, but without compromising on design. It is a dazzling machine with a sleek and dynamic outline that conceals a newly developed chassis and a unique tank design for maximum stability.

The AEON CENTURAline offers perfect tracking, full suspension and a fully remote-operated spraying system. Combine this with incredibly fast fluid regulation, pressurised boom circulation and an exceptional boom management system, and the result is outstand-

ing boom stability, spraying precision and drift control — which translate into real savings for the farmer.

In the quest to put the right dose in the right place at the right time, we are driven by data, and the AEON CENTURAline offers cutting-edge connectivity for field mapping and remote diagnostics. With an AEON CENTURAline you are prepared for the future!







### Designed to last

### **Full suspension**

Sprayers often operate in rough terrains and conditions — and the AEON CENTURAline is the epitome of toughness. It is standard supplied with full suspension for protection of all mechanical components and for incomparable operator comfort and safety, even at high speed. A completely new addition is hydraulic suspension of the axle centre to ensure steady boom movements.

### **Drawbar leaf-spring suspension**

- Minimal transfer of trailer movements to the tractor
- Strong design for loads of up to 4 tonnes
- Easy coupling with patented, vertical hydraulic jack to lift drawbar (fully integrated in drawbar during transport)
- Bolted K80 coupling

### Hydraulic axle suspension

- Cutting-edge suspension for full absorption of movements during transport and fieldwork
- Integrated frame and axle design for reduction and deflection of obstacle impact
- A single, strong cylinder secures perfect suspension, also on slopes
- Reliable and easy to service

### **Suspended ParaLift**

- Protection of the boom during transport and fieldwork
- Push-type cylinder position for perfect damping
- Consistent damping regardless of boom height
- AutoTerrain boom management optimises height at all times

### **FARMER FOCUS**

#### CycloneFilter (pressure)

# Your working companion for all conditions

The AEON CENTURAline has been developed with the operator in mind. No detail has been left to chance in the search to optimise user-friendliness and operator safety. With its sleek design, smooth surfaces and covers to protect all vital parts, the AEON CENTURAline is your working companion for all conditions.

Both the TechZone and the WorkZone have protective covers that swing upwards to provide the operator with an illuminated, covered space for work in all kinds of weather.

# CENTURA line HARDI



### The TechZone — easy to control and service

The TechZone, on the right side of the sprayer, gives easy access to the isolated spray circuit, its large-dimension filters and the second pump.

### FlexCapacity pump

This extra pump boosts the combined flow capacity to 450 l/min, allowing for high application rates without impairing agitation. Similar to the main pump, it is a HARDI trademark diaphragm pump — robust and easy to service.

### **Large-dimension filters**

- The HARDI EasyClean filter is a high-capacity suction filter.
- The HARDI CycloneFilter is a unique, self-cleaning pressure filter, providing high efficiency without limiting flow. Combined with standard 22 mm stainless steel boom lines, it ensures optimum spray distribution at high application speeds or volumes.



FluidBox 8000

# The WorkZone – Intuitive operation

The WorkZone on the left hand side of the sprayer provides the operator with safe control of all sprayer functions – filling, mixing, agitation and spraying.

- Comfortable, large and secure WorkZone
- FluidBox 8000 groups main sprayer functions on one screen
- TurboFiller with integrated work table
- Waterproof 40-litre SafetyLocker

#### FluidBox 8000

The intelligent FluidBox 8000 gives quick and direct access to common operations on one screen, including AutoFill, AutoAgitation and AutoWash.

- Intuitive colour interface
- Simplified, integrated calculator for sprayer preparation
- Main ON/OFF and emergency stop for all functions
- Nozzle test
- Calculates pesticide and water volume





### AutoFill - Fast and accurate filling

Set the volume, connect the hose — leave the rest to AutoFill, allowing the operator to carry out other tasks simultaneously.

- No overfilling AutoFill stops at programmed volume
- Choose between maximum content or volume added
- Start/stop control at the FluidBox in the WorkZone
- Agitation is reduced automatically for maximum fill effect

### **AutoAgitation – Agitation at its best**

Fully automatic agitation for minimal filling time.

- Ensures even agitation as the tank empties
- Maximum agitation without foaming
- Minimal tank residues upon completion of spray job
- Automatic readouts of tank contents on terminal
- Manual override available through the FluidBox

### AutoWash - Easy, accurate and safe cleaning

Reduces residues to best in class – using only 400 litres of rinsing water.

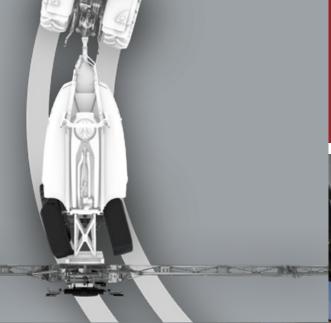
- Operated from the tractor cabin
- No contamination of operator and tractor cabin
- No pesticide cross-contamination
- Choose one of three rinse programme the rest is automatic
- In-field washing using multiple rinse operations
- Five rotating rinse nozzles in main tank for a thorough wash











### ComfortTrack wheel steering

Equipped with ComfortTrack wheel steering, the AEON CENTURAline will always track the tractor's rear wheels, even on tight turns, eliminating excess crop damage. The sprayer's compact design allows for a large steering angle of 27°. The combination of ComfortTrack and full suspension secures a small turning radius of only 6.3 m along with perfect boom position, also when turning on the headland.

- Large steering angle
- Automatic or manual operation
- Effective regardless of tractor speed
- Reverse gear with automatic re-centering
- Steering possible with boom in transport position

ComfortTrack turns the wheels, not the axle, and the long mudguards follow the wheels, keeping the nozzles clean in dry and wet conditions.

The AEON CENTURAline allows for large-diameter wheels with big footprints for better load distribution and less soil compaction. With 520/85R46 tyres, the axle clearance is 81 cm.

### **CROP CARE**



## **INSTANT SPRAY CONTROL**



The AEON CENTURAline is standard equipped with PrimeFlow, a pressure-fed boom fluid system that guarantees rapid priming and prevents sedimentation and clogging. When spraying is started, liquid has already been distributed in the entire boom, circulating at the requested pressure through the spray lines. When spraying is stopped, the liquid will continue to circulate at a standby pressure.

Even when spraying at low pressure, the spray lines are completely drained, leaving only a small residual volume, which means less liquid is required for cleaning.

#### **PrimeFlow**

- Electrically operated motor at each nozzle body
- No untreated areas at spray start
- No chemical sedimentation in the spray lines
- Flushing of boom lines without spraying
- Dynamic setup of sections from 1 to 12 nozzles
- HARDI PENTALET holders for five nozzles

AutoSelect Duohigher flexiblity

Increase work rates with automatic nozzle change on the go in response to changing field and weather conditions — all operated from the cabin.

- Three combinations of two sets of nozzles
- Applicable for speed variations of e.g. 8-15 km/h depending on nozzle type and pressure
- Change application rate at constant speed and pressure
- Maintain optimal droplet size
- Particularly useful at the headland or other slowdown zones

### **ULTRA PRECISE SPRAYING**



The compact, remote-controlled fluid system is placed close to the boom. Coupled with HARDI's trusted diaphragm pumps and the EasyClean filtration system, it ensures optimum flow regardless of pressure.





### DELTA FORCE - A BIG BOOM FOR BIG JOBS

### Flexibility, productivity and performance

The DELTA FORCE is HARDI's newest family of conventional booms. It is a functional boom designed with future farming requirements in mind

### Wide in field – compact on the road

The DELTA FORCE is a large boom of 24 to 39 m with a unique three-dimensional design and features meant for perfect boom control at high speed. HARDI's boom-folding system allows the operator to spray at different widths — with or without folding the last section. Despite its width, the DELTA FORCE is compact in transport and storage. It folds into an elegant 2.55 m.

#### Market's best stability

The boom's simple yet effective pendulum suspension controls boom movements. Together with the boom's low centre of gravity, the suspension guarantees perfect boom balance in flat as well as hilly terrains — and enables fast headland turns. With just two parameters to adjust (pendulum and damping), the DELTA FORCE boom is easy to customise and maintain.

#### **Minimal boom movement**

The DELTA FORCE boom is standard equipped with a hydraulic AntiYaw damping system between the centre section and the boom wings.

- High-tensile steel and fishtail welding
- Mechanical locking of the boom segments
- SoftOpen/SoftClose thanks to cylinders with end-of-stroke damping
- Nozzles protected for lower boom height and better drift control
- Superb boom stability with AutoTerrain and NegativeTilt
- Precise application with hydraulic AntiYaw damping





## TWIN FORCE - A BOOM FOR ULTIMATE CAPACITY

### Save time, money and environmental impact

The TWIN FORCE boom employs the world's best system for spray control. Using an adjustable curtain of air to entrain and direct the spray, TWIN FORCE can reduce drift by an astounding 80%. The result is close to no loss of plant protection products or contamination of adjacent areas.

Air-assisted spraying also guarantees better spray penetration and coverage than conventional applications. All this translates into real savings for the farmer of at least 50% on water usage and up to 30% on plant protection products.

TWIN FORCE gets the job done faster. Efficient drift control means more spraying days – up from 31 to 76 days in one study – as well as higher application speeds and fewer filling stops. The result is higher sprayer productivity. In fact, TWIN FORCE will increase your spray capacity by up to 100%.



#### **HARDI TWIN FORCE is available in:**

**2-fold:** 24/12 m, 27/14 m, 28/14 m, 30/15 m



24-30 m







AutoTerrain

NegativeTilt

AntiYaw



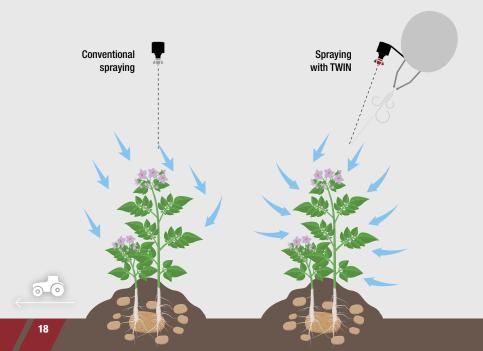




## THE TWIN CONCEPT







The concurrent angling of air and spray is a distinctive and important feature of TWIN FORCE

30 cm

#### **Better than competitors**

TWIN FORCE gives the operator more options for spray control than other air-assisted sprayers. By adjusting the air curtain's speed and angle, from no air to full air, in effect producing two sprayers in one (hence the name — TWIN), the operator can guide all droplets, irrespective of size, to the target.

Two powerful blower units provide air to the left and right boom sides. Each blower can be stepless adjusted to a maximum output of  $2,000 \, \text{m}^3\text{/h}$  per metre of boom and a maximum air speed of  $35 \, \text{m/sec}$ .



TWIN FORCE offers the market's best return on your investment — on both your bank account and your environmental account

### **High impact – high capacity**

Weather dictates most everything a farmer does, and spraying is no exception. Wind in particular can force a farmer to interrupt or postpone spraying due to drift. With efficient drift control, this is virtually a thing of the past.

Not only does air-assisted spraying prevent small droplets from drifting by blowing them downwards. It also opens the crop to their penetration. The air curtain parts and rustles the crop to expose all surfaces to the spray, and the droplets' extra momentum created by the air propels them into the crop.

As a result, TWIN FORCE improves crop penetration, distribution and coverage over conventional applications, even in dense crops.

#### **Proven and tested**

The outstanding performance of TWIN FORCE has been confirmed by numerous case stories from around the world along with field trials and studies.

One independent, scientific study from the Research Centre Flakkebjerg/Aarhus University, Denmark, demonstrated that the spray application quality of a HARDI TWIN sprayer with a 24 m boom was unaffected by high wind at driving speeds of 8 to 12 km/h.

The researchers concluded that TWIN gives a more uniform deposition and significantly lower drift than conventional applications, especially in windy conditions. The study confirmed that TWIN can reduce spray drift by up to 80% — translating into a reduction in use of chemical products of up to 30%.



### **OUTSTANDING BOOM STABILITY**

AutoTerrain is a fully automatic boom control system that regulates height, slant, tilt and yaw for superb boom stability

This unrivalled boom management system distinguishes itself from others by preventing rather than correcting unintended boom movements. Using ultrasonic sensors on the boom wings and roll sensors at the centre, it monitors and corrects the boom's movements before the boom is disturbed.

The AutoTerrain system has been tested under rigorous field conditions, showing excellent performance when spraying with low boom heights at high driving speeds of more than 15 km/h. When turning on the headland, the system will counter the boom's natural pendulum tendency to dip on the inner side. The result is a level boom throughout the turn. AutoTerrain all but eliminates the risk of the boom hitting the ground.

A stable boom means less wear and tear on the sprayer as well as its operator. The sprayer will have a longer lifespan, and the operator will experience less fatigue and stress from having to constantly monitor the boom.

AutoTerrain also reduces the risk of drift to the benefit of the farmer and the environment.



**AutoTerrain** 







- AutoTerrainBoom height
- Hydraulic slant
- Yaw counteracted by hydraulic accumulators
- Individual tilt of boom wings and negative tilt
- 5 ultrasonic sensors with integrated roll sensors
- Temperature-controlled proportional valves
- Standard on DELTA FORCE and TWIN FORCE booms

### **SmartCom – PREPARED FOR THE FUTURE**



# HC 9700 - STATE-OF-THE-ART TERMINAL

The HC 9700 terminal integrates all important information on one screen to give you a complete overview of a spray job. The 12.1" multicolour HD touch screen allows for 2D and 3D as well as split screen viewing.

#### Easy data transfer

Fitted with USB ports and WiFi adapter, the HC 9700 allows for easy data exchange with the objective to simplify application reporting and record keeping. Data can be transferred to most farm management software.

#### Work from your phone or tablet

Use your mobile device or tablet to perform calibration, diagnostics, tank refilling and many other sprayer activities. The XTEND technology uses WiFi to extend the user interface to any iOS or Android device.

#### **Ready for field maps**

The HC 9700 terminal offers the possibility to import/export parcel maps in ISOXML format. Hereafter, you can use AutoSectionControl to shut off boom sections automatically in accordance with the map — applying the right dose to the right place at the right time. Avoiding excessive spraying reduces expenses and greens your business.

#### HC 9700

- High application precision
- Less usage of chemicals
- No overlapping areas















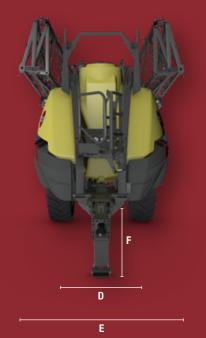
## **TECHNICAL SPECIFICATIONS**

Tanks **4200 / 5200 I** Booms **DELTA FORCE 24-39 m / TWIN FORCE 24-30 m** 

#### **AEON CENTURAline**

Booms	DELTA FORCE 24-39 m	TWIN FORCE 24-30 m
Tank, nominal volume	4200 / 5200	4200 / 5200
Pump type - I/min	464-280 / 464H-334	464-280 / 464H-334
RinseTank (I)	560	560
Clean water tank (I)	40	40
Height (m) * A	3.70	3.80
Total length (m) B	8.35	8.35
Length draw to axle, (m) C	5.5	5.5
Track width (m) D	1.70-2.30	1.70-2.30
Transport width (m) * E	2.55	3.00
Ground clearance axle (m) * F	0.78	0.76
Turning radius at 200 cm track width (m)	6.3	6.3
Working height (m)	0.43-2.73	0.43-2.73
Total weight empty (kg)	6100	6400
Total weight full (kg)	11860	12160
Drawbar load empty (kg)	980	1000
Drawbar load full (kg)	2950	3000
ComfortTrack wheel steering	Standard	Standard
Hydraulic axle suspension	Standard	Standard
Drawbar leaf-spring suspension	Standard	Standard

<sup>\* 5200 – 36</sup> m DELTA FORCE – 520/85 R42 / \* 5200 – 30 m TWIN FORCE – 380/90 R46







We believe in a future where our products will be able to take care of plants one by one.

The HARDI Group is a division in the Agricultural Spraying segment of Exel Industries S.A.



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