# Maximum capac ロ 用 ア







### **ActivAir**

ActivAir is a rapid, dripless nozzle switching system powered by reticulated air from an onboard compressor. Airflow is directed by solenoid switches on the boom, for an instant response at the nozzle.

The system uses constant mixture recirculation to keep the boom primed without risk of sedimentation in the lines. As soon as you start spraying, or AutoSection activates nozzles, spray is delivered at the correct rate and pressure.



### DynamicFluid4

DynamicFluid4 ensures fast, precise control of the spray rate.

Four proactive sensors instantly compensate for changes that will affect flow at the nozzles – including rpm changes, acceleration, turning, and AutoSection switching.

The system provides a SoftStart feature to prevent pressure peaks, and sensor backup so an electronics fault won't stop the spray job.



### **ISOBUS**

COMMANDER is offered with an ISOBUS terminal, so you can control the sprayer and its functions using your tractor's controller.

This means there is no need to install and learn a separate guidance system. Instead, you can simply take advantage of the GPS, Auto-Section and data logging features of your preferred platfrom.

It gives COMMANDER remarkable 'plug and spray' convenience.

### **SPECIFICATIONS**

- Tank: 6500 / 8500 / 10000 I
- Track: Adjustable 2.2 m to 3.0 m
- Axle Clearance: 0.795 m
- Controller: ISOBUS, HARDI HC9600/HC8600 or HC 5500
- Liquid system: DynamicFluid4 for precise application rates
- TurboFiller: Efficient handling of liquid and powder

### Booms:

TWIN FORCE: Powerful drift-beating air-assist booms 24 m to 36 m FORCE: Wide and strong for added speed and coverage 30 to 36 m TERRA FORCE: Large width in a proven steel boom, 36 m to 42 m PARAGON B3 MAXI: Premium aluminium booms 36.5 m to 42.5 m PARAGON B3 MEGA: Huge coverage without the weight at 48.5 m

- Huge capacity
- ▶ ISOBUS compatible
- Simple, logical workzone
- Superior boom ride





### SafetyLocker

A convenient on-board locker provides storage space for your personal safety clothing, hand cleaner and other items.

The adjacent 17 litre hand wash tank gives you plenty of water for cleaning up after filling.



### **Rinse Tank**

The 500 litre rinse tank ensures a good supply of clean water for flushing the sprayer and boom at the end of the job.

And because it is usually emptied last, the tank is located close to the axle, to reduce loads on the draw bar.



# Compact Hydraulic Suspension

Compact hydraulic cylinders carry COMMANDER's large loads smoothly and reliably – enhancing safety, comfort, stability and boom performance.



### HC 5500 DF4

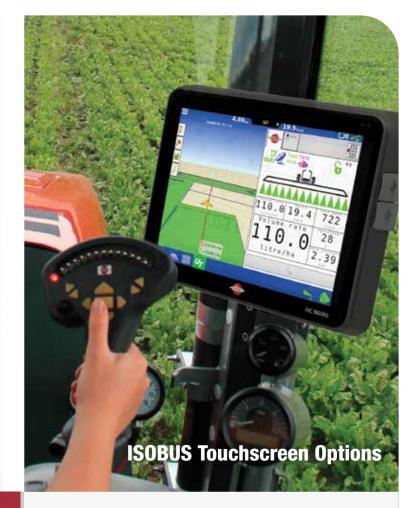
The standard HC 5500 is a purpose-built spray controller with excellent connectivity, reliability and performance.

The LogicMenu is easy to use, with simple navigation and dedicated shortcut keys. The display shows the spraying status, with warnings if vital parameters like pressure, speed and rate are incorrect.

HC 5500 integrates with our SprayBox III switch box and DynamicFluid4 pressure based fluid system for incredibly fast and accurate rate control without an onboard JobCom.

The set application rate can be adjusted on the move, with the press of a button.

The controller can be linked to advanced farming systems like site-specific application maps for variable rate application and auto section control. Remote sensors and a 12 volt printer can also be connected.





### HC 6400 SetBox

Secondary control functions are easily operated and managed from the HC 6400 SetBox console. Nozzle pressure, auto rate, foam marker and hydraulic boom fold functions are easily controlled here.

### HC 9600 & HC 8600

HARDI's optional HC 9600 and HC 8600 touchscreen controllers put performance and precision at your fingertips.

With the choice of an 12.1" or 8.6" display, these ISOBUS systems feature guidance mapping, auto steer, auto section, application rate, tank content, boom height, dual boom, direct injection, spray records, field notes, variable rates application and more.

Vital spraying and hydraulic control functions – spray on/off, sections, boom height and wing tilt – are managed via the system's multifunction grip.

# **Liquid system**

COMMANDER has been designed from the ground up as a maximum capacity sprayer with performance and handling to match. The integrated main tank, rinse tank, work zone and chassis deliver a sprayer with a low centre of gravity and excellent crop clearance.

Superior tank mixing and content distribution is achieved through multi-point venturi agitator nozzles which output four times their input volume while submerged.

### **SmartValve**

The COMMANDER WorkZone combines all the primary filling and cleaning functions into just two logically arranged handles, right beside the induction system, so everything can be managed from one place and at ground level.

These SmartValve handles and their easy-to-read icons make using the system very intuitive, and greatly reduce both set-up and operation time. One SmartValve controls the suction source - main or rinse tank - while the other directs pressure to the TurboFiller, nozzles or rinse system.





### Pump

The heart of the COMMANDER is its robust grease-lubricated HARDI diaphragm pump. The diaphragms keep the liquid separated from the pump's vital components, such as the bearings and crankshaft, ensuring reliable and durable service.

HARDI diaphragm pumps are:

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





### **Integrated TurboFiller**

COMMANDER's integrated TurboFiller provides high capacity chemical mixing and transfer. The TurboFiller lowers to waist height for safe operation, and the sturdy lid doubles as a convenient table.

The powerful TurboDeflector plate can handle large volumes of granules or powders with ease, while a venturi powers high volume chemical suction and transfer.

A hand gun and rotating drum nozzle are fitted for rinsing out used containers and the hopper.



## Vacuum VACnMIX option

HARDI's VACnMIX filler uses a powerful vortex mixing action, with a vacuum attachment for fast and safe closed chemical transfer.



### **Directional FastFill option**

For fast, easy water filling, the FastFill valve and coupling option provides a transfer pump connection with its own in-line filter.

Water can be directed to the Main Tank or Rinse Tank via the Smart Valve selector.



# DynamicFluid4 The fluid system

### **Proactive 4-sensor technology**

The DynamicFluid4 (DF4) rate control system was developed by HARDI International to achieve the fastest possible response times and more precise application rates in the field.

With its 4-sensor technology and leakage-free design, DF4 combines instant regulation with the highest possible accuracy.

The system uses 'feed forward' software to manage the many challenges of modern spraying – from tractors with stepless transmissions to speed changes.

Wide regulation range AutoSectionControl from 0-500 I/min inputs from sensors e.g. shutting off sections Flexible - The regulation follows High reliability with changes in speed when e.g. ceramic valves, no leaks passing obstacles in the field Up to 7 times faster than requirements from the Precise - Measuring and ISO/EN standards calculating 20 times/sec Fast response - Directly with no delay in the start up and with the demanded dosage Thinking ahead – At headlands the system is calculating and predict ing the right dosage for entering the field again

In traditional fluid systems, regulation is based on 'historical' feedback. If RPM is increased, for example, flow through the nozzles will increase shortly after. The spray computer will then detect the rise and regulate the pressure down again, but in the meantime, many square metres of crop have received an excess dosage.

With DynamicFluid4, the system detects the RPM increase immediately, calculates the effect, and corrects the pressure.

A unique valve design ensures precision and durability, to help drive the best fluid performance on the market.

### Stability and safety

The proactive technology of DynamicFluid4 is based on four sensors which monitor RPM, regulator valve position, flow rate and pressure. These sensors will work as back-ups for each other if necessary.

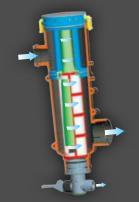
Should the system ever fail, regulation can also be managed manually.



### 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 only cleaned as needed. Twisting the filter lid 90° closes an inlet valve and opens the top so the filter screen can be inspected and cleaned without spills.



### CycloneFilter

The pressure-side CycloneFilter is a self-cleaning filter that uses high speed circulation to boost capacity and flush away solids.

The CycloneFilter also has a unique boost function for giving the screen a more powerful flush when needed.

# **Boom options**

Boom	Centre	Size	6500	8500	10 000	Partial Fold Width
HARDI PARAGON – <b>B3 Maxi</b>	AutoTerrain	36.5 m	✓	✓	✓	36.5 / 27.5 / 17.5
HARDI PARAGON – <b>B3 Maxi</b>	AutoTerrain	40.5 m	✓	✓	✓	40.5 / 31.5 / 17.5
HARDI PARAGON – <b>B3 Maxi</b>	AutoTerrain	42.5 m	✓	✓	✓	42.5 / 31.5 / 17.5
HARDI PARAGON – <b>B3 Mega</b>	AutoTerrain	48.5 m		✓	✓	48.5 / 34.5 / 19.5
HARDI TWIN – <b>Twin Force</b>	Trapeze	24 m	✓	✓		
HARDI TWIN – <b>Twin Force</b>	Trapeze	28 m	✓	✓		
HARDI TWIN – Twin Force	Trapeze	30 m	✓	✓		
HARDI TWIN – Twin Force	Trapeze	36 m	✓	✓		
HARDI – Force	Trapeze	30 m	✓	✓	✓	30 / 13
HARDI – Force	Trapeze	32 m	✓	✓	✓	32 / 15
HARDI – Force	Trapeze	36 m	✓	✓	✓	36 / 15
HARDI – Terra Force	AutoTerrain	36 m	✓	✓	✓	36 / 31 / 17
HARDI – Terra Force	AutoTerrain	42 m	✓	✓	✓	42 / 33 / 17



### Yaw Dampening Cylinder

Yaw forces on our wide aluminium booms are absorbed by a patented nitrogendampened plunge cylinder.



### **Nitrogen Accumulation**

Nitrogen accumulators absorb the movement energy of the boom under braking, acceleration and steering.

This reduces stress loads on the boom and sprayer, delivering greater control over handling and spray application.



ActivAir is a rapid nozzle on/off control system, that instantaneously opens and closes nozzles for spraying.

The system is fast and accurate, minimising overspray or missed sections whenever the nozzles are activated.

Pressurised air is carried along the boom in 8mm lines to a series of electrically activated solenoid valves. Short 4mm lines continue from each solenoid to the nozzle valves. This configuration ensures minimal pressure losses across the boom for fast, precise control.

When a solenoid is activated, the air pressure opens non-drip valves to start the nozzles spraying. When the solenoid is deactivated, the non-drip valves are held closed under spring tension.

While the nozzles are off, fluid is continuously recirculated through the boom tubes at high volume. This keeps the boom and nozzles primed for instant spraying without any sedimentation.

The boom can be managed in up to 13 sections (six sections is standard), making ActiveAir ideal for AutoSection control.



### **Constant Fluid Recirculation**

HARDI's recirculation system constantly moves fluid through the boom lines and back to the main tank.

This keeps the system primed without solids settling in the lines. It also returns rinse water to the tank after boom flushing, so there's no need to spray it out.



### **AutoSection control**

Working with your tractor's ISOBUS guidance, AutoSection automatically opens and closes boom sections to avoid over-dosing areas of boom overlap. It makes section control effortless, reduces chemical use and improves dosage accuracy.



### B3 Maxi and B3 Mega – width without the weight

HARDI PARAGON Aluminium booms deliver tip-tip-tip integration of the boom, centre and sprayer for optimal performance under Australian conditions.

Our B3 Maxi (36.5, 38.5, 40.5 and 42.5 m) and B3 Mega (48.5 m) booms are tri-fold aluminium-box section structures with mechanical locking and hydraulic unlocking. The wing tips have tri-directional breakaways to protect the main structure.

The B3 boom wings are half the weight of equivalent steel structures. Patented yaw-dampening cylinders with nitrogen accumulators significantly reduce the stresses of movement and inertia forces on the boom, centre and sprayer – for a smoother boom ride and long-lasting performance.



### **Engineered to endure**

Wing tilt, positive mechanical segment locking and tri-directional breakaways are standard on all B3 booms.

Aluminium's enduring properties ensure minimal maintenance and no need for protective coatings.

Steel is used in the hinge areas, pins, locks, and where adjustment is required.



### Superb boom ride

HARDI B3 booms use our advanced AutoTerrain centre, hydraulic dampening cyclinders and nitrogen accumulators to minimise and isolate boom movement, while actively maintaining accurate nozzle height above the crop or soil.

The result is smooth, stable and less stressful boom performance – that maintains precise nozzle height and spray delivery in any paddock.

# **FORCE FTZ Boom**

### **FORCE boom**

FORCE booms are available in 30m, 32m, 33m and 36m widths with inertia based boom suspension, yaw-dampening control and a distinctive three-dimensional steel truss structure for enhanced strength and rigidity.

The boom completely protects the nozzles — whether standard single snap-fit heads or the optional TRIPLET nozzle bodies.

A dynamically linked coil spring boom centre ensures smooth ride and excellent stability during spraying, while the hydraulic yaw dampening is fully adjustable for excellent performance in all but the most extreme field conditions.

Hydraulic wing tilt provides added flexibility when it comes to manoeuvering the boom over mounds, rock piles and fences.





### **Wing Tilt**

Individual wing tilt is a standard feature on FORCE booms.

It is especially valuable for lifting a wing over obstacles in the field, or over a fence while turning in headlands.



### Stable FORCE

A dynamically linked coil spring boom centre with trapeze suspension gives FORCE a consistently smooth boom ride and excellent stability, regardless of width.



### **FORCE folded**

For such large capacity booms, FORCE and TERRA-FORCE are both remarkably compact when folded.

The tri-fold design ensures excellent cab clearance, and keeps the full width of the folded boom within the dimensions of the paralift.



### **TERRA FORCE boom**

TERRA FORCE is built around a strong, heavyduty three-dimensional truss structure for high performance.

Available in 36m, 38,m 40m and 42m spans with AutoTerrain centre, TERRA FORCE meets the demand for wider booms and increased productivity.

When open, a positive locking mechanism keeps each side of the boom rigid and ensures the wing performs as one unit.

The boom is also designed to reduce turbulence over and around the nozzles.

Patented nitrogen accumulated plunge cylinders in the end of the fold cylinders absorb energy for a smoother boom ride while spraying and turning.

Optional BoomPrime and flush taps allow the boom to be primed with chemical before spraying is started, and flushed when spraying is finished.

### Wide line fluid system

TERRA FORCE uses a 25mm fluid system to provide a 30% increase in capacity over other booms, with minimal pressure loss between sections.

Easy to flush and clean saddles, external seals and slotted internal spigots all help the boom tubes to drain completely, reducing the chance of residue in the lines.



### Wide paralift

The TDZ boom is supported by a wide Paralift which enhances stability and is hydraulically dampened for smooth ride and performance.

Individual wing tilt is standard and they incorporate shock absorber elements to provide individual wing suspension.



### Height accuracy in the roughest paddocks

HARDI's unique AutoTerrain centre is the key to the smooth ride and height control of COMMANDER's B3 aluminium booms.

The centre uses hydraulically activated roll and built-in coil spring dampening with proportional hydraulics to continually adjust the boom in response to input from ultrasonic height sensors. The system proactively corrects the boom's relationship to ground contours by tilting the wings and angling the centre through the pendulum.

Offered as a standard set-up or six-sensor 'Rough Terrain' option, AutoTerrain takes the effort out of maintaining an accurate nozzle height, and makes ground strikes a thing of the past.

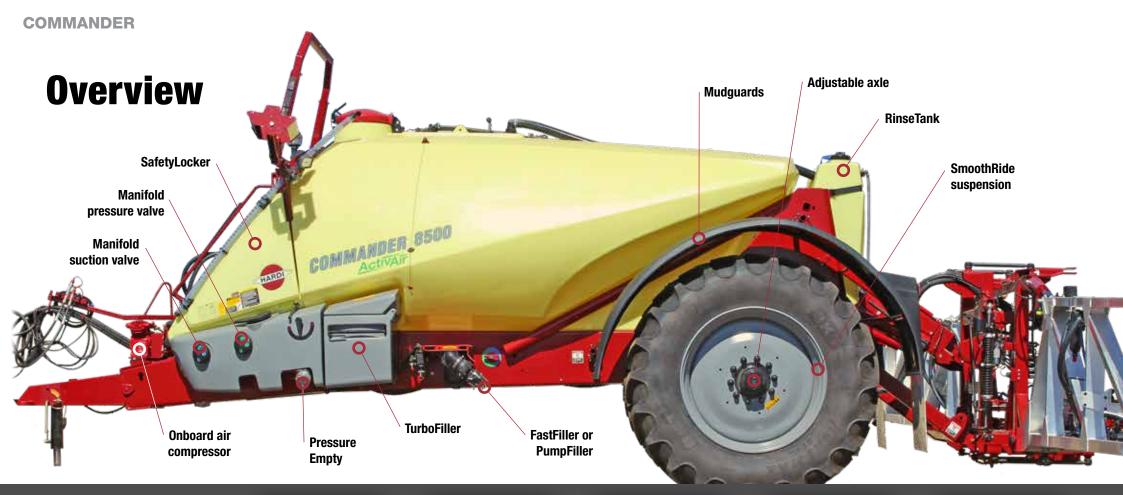
### **AutoTerrain benefits**

- ✓ Better boom stability
- ✓ Constant and uniform boom height
- ✓ Lower boom height
- ✓ Better drift control
- ✓ Reduced risk of boom damage
- ✓ Less reliance on operator accuracy
- ✓ Less tiring and stressful to operate
- ✓ Less time lost to breakages and wear
- Greater productivity

### Roll and height correction

AutoTerrain monitors the boom height 28 times per second while a roll sensor in the centre knows in advance when the boom is going to be tilted from its ideal position.

The AutoTerrain centre is able to correct the boom's height and relationship to the ground contour simultaneously, by tilting the wings and angling the centre through the pendulum.



Options



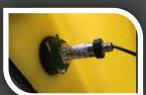




ISOBUS terminal



HARDI AutoTerrain



Electronic tank gauge



Block pattern tyres



Steel, Aluminium or TwinAir boom



Boom lighting



BoomPrime



Banjo FastFill



VACnMIX transfer hopper

# **Technical specifications**

Tank, litres	6,500	8,500	10,000			
Pump, type – I/min	HARDI 464, 6 diaphragm, 334 l/min at 540 rpm					
Booms, m	TWIN FORCE (Air Assist) 24, 28, 30 m FORCE FTZ (Steel) 30, 32, 36 TERRA FORCE TDZ (Steel), 36, 42 B3 MEGA (Aluminium) 36.5, 40.5, 42.5 B3 MAXI (Aluminium) 48.5	TWIN FORCE (Air Assist) 24, 28, 30 m FORCE FTZ (Steel) 30, 32, 36 TERRA FORCE TDZ (Steel), 36, 42 B3 MEGA (Aluminium) 36.5, 40.5, 42.5 B3 MAXI (Aluminium) 48.5	FORCE FTZ (Steel) 30, 32, 36 TERRA FORCE TDZ (Steel), 36, 42 B3 MEGA (Aluminium) 36.5, 40.5, 42.5 B3 MAXI (Aluminium) 48.5			
Rinse Tank	730	730	730			
Total length (A), m (TERRA FORCE boom, folded)	8.35	8.85	8.85			
Total height (B), m (TERRA FORCE boom, folded)	3.65	3.65	3.65			
Width (C) , m (TERRA FORCE boom, folded)	3.50	3.50	3.50			
Track width (D), m	2.20 – 3.00	2.20 – 3.00	2.30 – 3.00			
Length draw to axle (E), m	5.50	6.05	6.05			
Clearance (F), m	0.795	0.795	0.795			
Weight total (empty tank), kg	6,899	7,360	7,400			
Suspension	Hydraulic with nitrogen accumulator	Hydraulic with nitrogen accumulator	Hydraulic with nitrogen accumulator			

### **TYRE OPTIONS**

**COMMANDER 6500** 

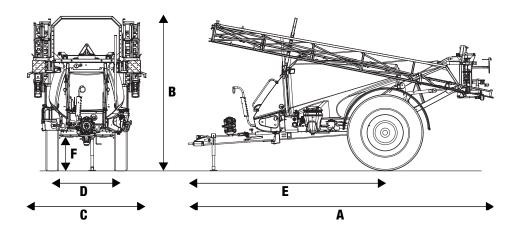
**Standard:** 520/85 R42 **Optional:** 520/85 R46, 620/70 R42

**COMMANDER 8500** 

**Standard:** 520/85 R42 **Optional:** 520/85 R46, 620/70 R42

**COMMANDER 10000** 

**Standard:** 710/70 R42 **Optional:** 620/70 R42, 650/70 R42









Savigny,





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# HARDI The Sprayer

### HARDI AUSTRALIA PTY LTD

is a subsidiary of HARDI INTERNATIONAL, a world leader in sprayer technology.

The majority of HARDI sprayers and booms sold in Australia and New Zealand are manufactured here. We employ more than 100 engineering, testing, distribution and support staff in 15,000 square metres of modern facilities, located on our 10-hectare site in Adelaide, South Australia.

### Leading the world

For over 60 years, HARDI INTERNATIONAL has single-mindedly dedicated itself to improving the efficiency and precision of sprayed plant protection. Now a world leader in the field, HARDI recognises its role in global food security through the safe and sustainable application of agricultural compounds.

The Australian product development centre works closely with five other HARDI development centres internationally, to share local innovations with the world and to streamline the delivery of global improvements at home.

### **Quality assurance**

All sprayers leaving the HARDI AUSTRALIA factory are thoroughly tested in our own test facilities. We then provide ongoing support through our extensive service and dealer networks.





### HARDI AUSTRALIA P/L









