



3000 / 4000 / 5000 / 6000

The Obvious Choice
NAVIGATOR



The Obvious Choice NAVIGATOR

3000 / 4000 / 5000 / 6000



The Obvious Choice

Synonymous with high quality and functional design, NAVIGATOR delivers outstanding value on farms around the world.

Versatile options, including different tank capacities and advanced electronics, makes NAVIGATOR the obvious choice in countless operations – from row cropping to small broadacre.

It is an enduring success among mid-size sprayers.

Concept

The NAVIGATOR range is built on a platform of simple, reliable solutions combined with ease of use and excellent serviceability.

With a proven HARDI diaphragm pump and a choice of strong, wide booms in steel or aluminium, NAVIGATOR is the key to accuracy, efficiency and productivity.



IntelliTrack

IntelliTrack is a high-end steering drawbar concept that combines an excellent chassis design with advanced electronics.

The tracking concept is easy to connect and operate, ensuring safe tracking even in difficult field conditions.

IntelliTrack has an integrated safety feature which prevents the cylinders from steering the drawbar when the driving speed is too high for the given track width.



HC 8600 and HC 9600 with AutoSectionControl

The HC 8600 and HC 9600 controllers provide operators a powerful, full-featured precision farming tool.

AutoSectionControl, guidance, data logging and AutoHeight are integrated into one ISOBUS touchscreen. The colour display has excellent readability, even in bright sunlight.

All primary spray functions are controlled by the intuitive grip.



DynamicFluid4

DynamicFluid4 ensures fast, precise control of the spray rate.

The system instantly compensates for changes that will affect flow at the nozzles such as rpm changes, acceleration, turning, and AutoSection switching.

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

SPECIFICATIONS

- ▶ **Tank:** 3000 / 4000 / 5000 / 6000 l
- ▶ **Track:** IntelliTrack, high performing and stable drawbar steering
- ▶ **Controller:** HC 5500, HC 8600, HC 9600 or ISOBUS
- ▶ **TurboFiller:** Efficient handling of liquid and powder
- ▶ **Liquid system:** DynamicFluid4 for precise application in all conditions
- ▶ **Axle:** Fixed 1.8 / 2.0 m or adjustable 1.5–2.25 m (3000 & 4000)
Fixed 3.0 m or adjustable 1.8–2.25 (5000 & 6000)
- ▶ **Booms:**
 - EAGLE: Simple, robust booms from 18 to 30 m
 - FORCE: Wide and strong for added speed and coverage 30 to 36 m
 - TWIN STREAM: Compact, single-fan air assisted boom 12 m, 15 m
 - FLEXFORCE TWIN: Advanced, proven air spraying system 18 m
 - PARAGON TR4: High performance aluminium booms 24 to 30 m
 - PARAGON B3 MAJOR: Extra width without weight at 30.5 m to 36.5 m

- ▶ Precise
- ▶ Customisable
- ▶ Easy to operate
- ▶ ISOBUS compatible

Chassis

Designed for high-speed driving

The heavy-duty NAVIGATOR chassis and axles are designed for high-speed driving under the most demanding field and road conditions. The robust frame is made of high-tensile steel and is ready to meet the tough demands of the frequent use.

The design gives the best compromise between excellent clearance and low centre of gravity.

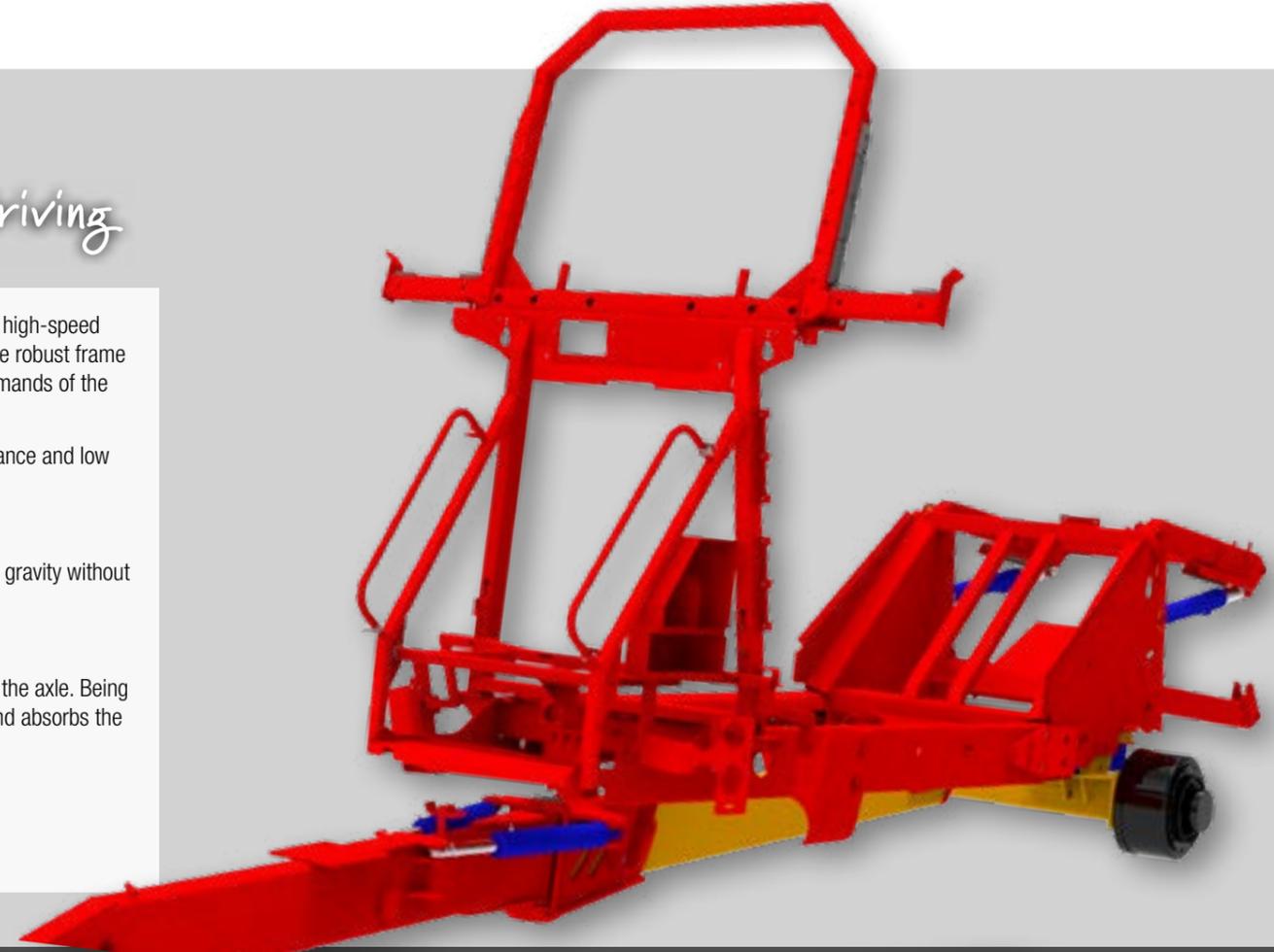
Low centre of gravity

The entire NAVIGATOR design has the lowest possible centre of gravity without compromising clearance under the sprayer.

Unique design with long drawbar

The long drawbar is one straight line from the coupling point to the axle. Being bolted underneath the frame, it ensures good driving stability and absorbs the up-and-down forces of crossing uneven paddocks at speed.

The drawbar is available as a fixed or as a steering drawbar



Perfect clearance

The unique design of axle and frame ensures excellent crop clearance.

No brake rods or steering components are lower than the axle, to keep the risk of crop drag or damage at an absolute minimum.



SmoothRide

The optional SmoothRide suspension system is uncomplicated, reliable and requires little or no service.

The suspension gives the sprayer a more even ride to help support higher capacity, accuracy and operator comfort.



Hydraulic Suspension

NAVIGATOR 5000 and 6000 can be fitted with optional hydraulic axle suspension, for even smoother boom ride and improved operator comfort. This option is ideal for AutoHeight control and a range of load ratings.

IntelliTrack

This high-end steering drawbar concept enables tighter, safer turning in the field. A combination of advanced electronics, proportional valve and two large hydraulic cylinders provide accurate tracking with user-friendly operation.

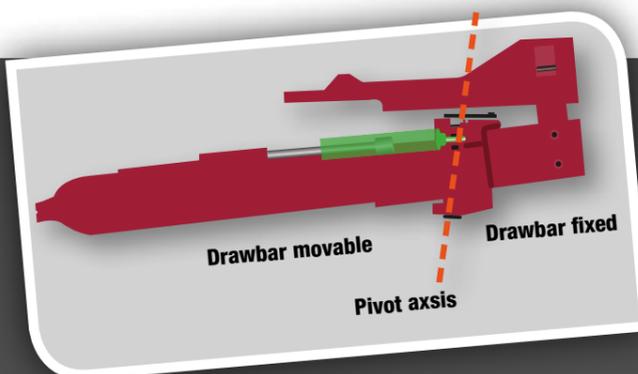
Dynamic Electronic Control (DEC) preventing tilt over

IntelliTrack has an integrated safety feature which prevents the cylinders from over-steering the drawbar if the driving speed is too high for the given turning radius.

The controller constantly monitors the forward speed and steering angle to make sure the tracking is not engaged if it is not safe. Should the driver attempt a 90° turn at 15 km/h for example, the IntelliTrack system will automatically compute the data and straighten up the drawbar. The settings are user defined.

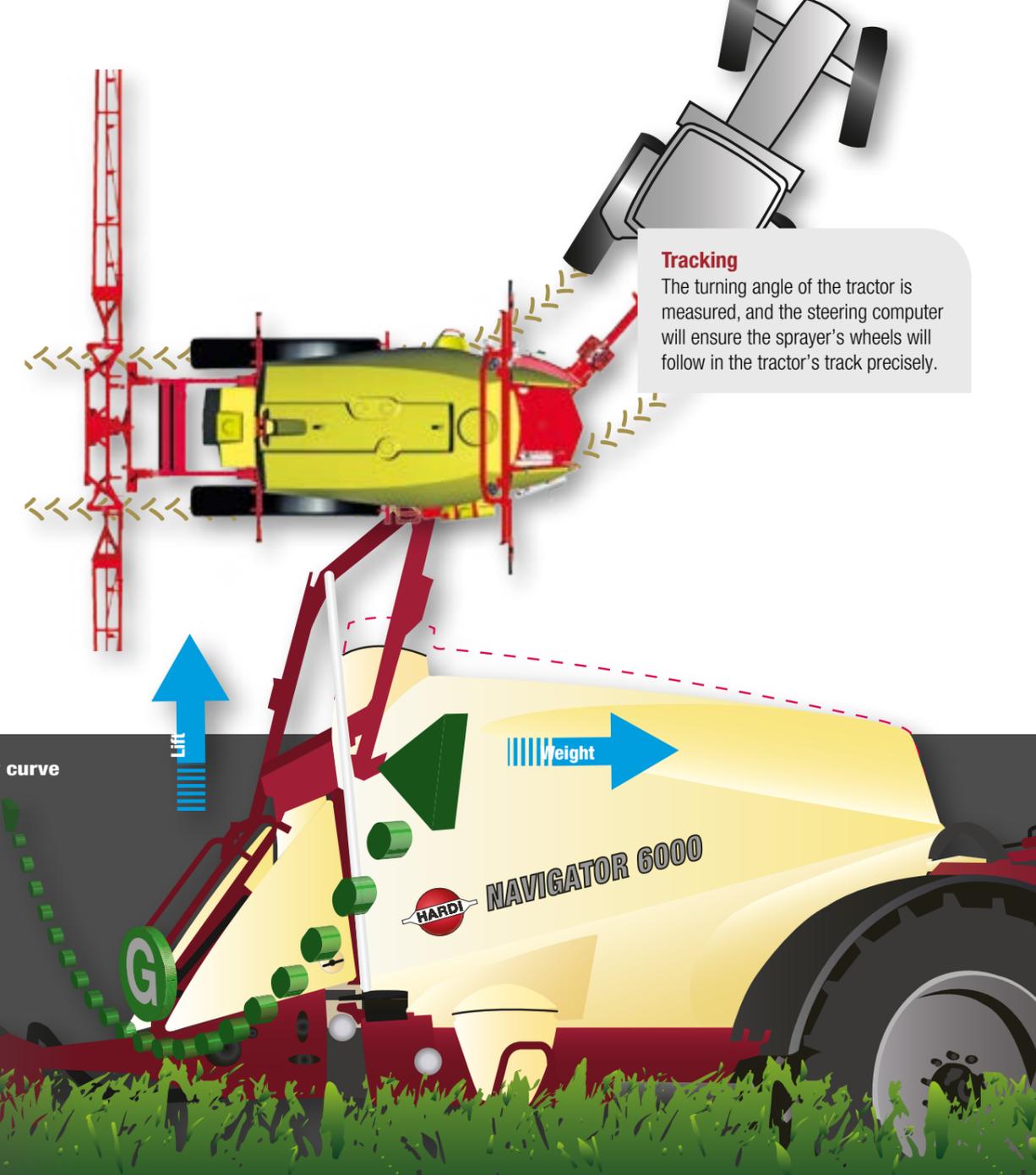
Once IntelliTrack has been calibrated, connection only requires the attachment of two small chains to the tractor. Together with the brackets, the two connection chains build a trapeze which compensates for any slack or drawbar torsion.

For even better stability while turning, the pivot point between trailer and drawbar is angled. This feature means the turning radius can be just 6.0 m on NAVIGATOR 3000 and 4000 or 8.5 m on NAVIGATOR 5000 and 6000.



Steering geometry

The steering geometry and angled pivot axis of IntelliTrack ensure that the trailer's centre of gravity is always on the gravity curve, to minimize the risk of tipping.



Tracking

The turning angle of the tractor is measured, and the steering computer will ensure the sprayer's wheels will follow in the tractor's track precisely.

Gravity curve

Lift

Weight

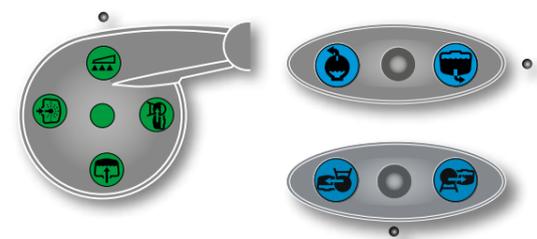
HARDI NAVIGATOR 6000

Liquid system

To be able to handle large volumes of liquid with a minimum of pressure loss, the NAVIGATOR uses high capacity valves, filters and tubes throughout.

SmartValve

All primary functions needed for filling and cleaning the sprayer are built into two logically arranged handles in the centre of the Work Zone. These handles and their easy-to-read icons make using the system very intuitive, and greatly reduce both set-up and operation time for the sprayer.



Pump

The heart of the NAVIGATOR 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 pump features:

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



DynamicFluid4

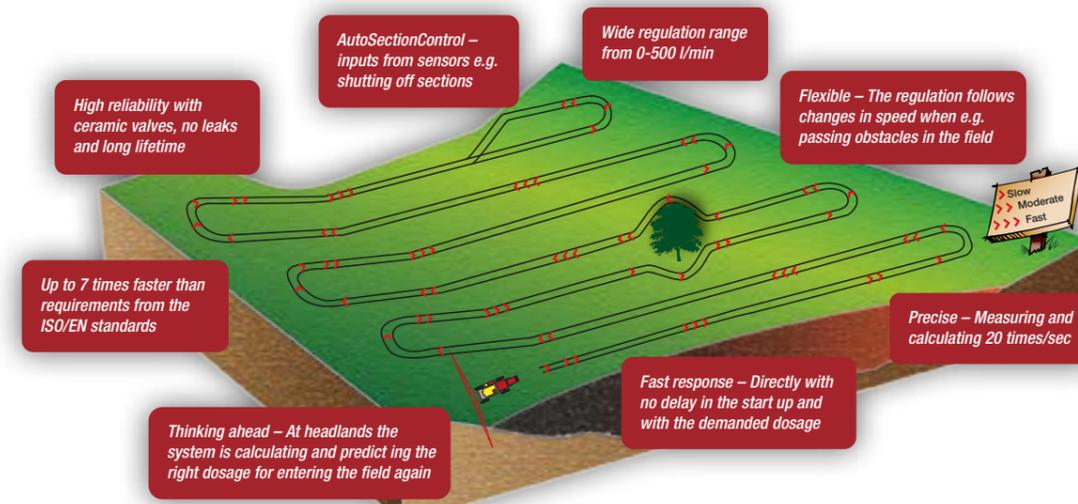
The fluid system

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 resulting from turning and terrain.



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.

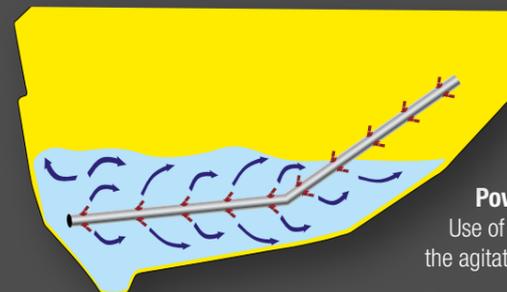


TurboFiller

The HARDI TurboFiller is developed to handle both liquids and powders in large quantities. The key to its capacity is the combination of high speed rotation driven by a Turbo-Deflector in the bottom of the hopper, coupled with a strong suction through the induction line.

Chemical filling is made easy and efficient with a multifunctional 3-valve operating unit and cleaning pipe. Cleaning of containers and the TurboFiller itself is managed by a rotating rinse nozzle.

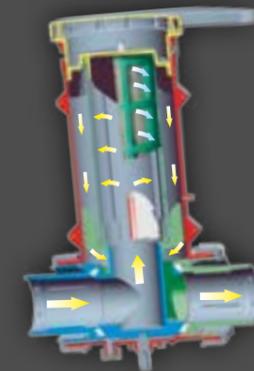
Moving the TurboFiller from the stowed position to its 95 cm working height is aided by a spring loaded bracket with automatic transport lock



Powerful agitation

Use of Venturi nozzles increases the effectiveness of the agitation by approximately four times.

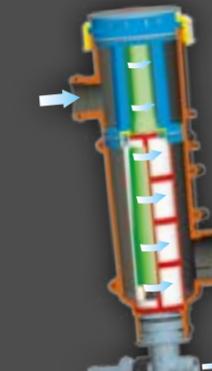
These nozzles are positioned to ensure there are no blind spots in the tank. This system has proven to be extremely efficient for both liquid and powder.



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 management

AutoHeight control



The HARDI AutoHeight system delivers unrivalled boom ride and more accurate spraying

The AutoHeight control for NAVIGATOR is available as an option with the FORCE, TR4 and B3 booms. It uses ultrasonic height sensors to deliver stress-free boom height control, for better application delivery and drift reduction.

AutoHeight can maintain a preselected boom height above the ground or the crop:

The system ensures proper nozzle overlap and spray deposition without constant monitoring and adjustment by the operator.

It also saves the stress of having to constantly monitor the boom position while watching for upcoming terrain changes and making manual boom adjustments at the ideal time..



AUTOHEIGHT FEATURES

- ▶ Three robust and precise ultrasonic sensors
- ▶ Option of five sensors
- ▶ Choice of crop, soil or hybrid mode
- ▶ Proportional valve control for smooth adjustments
- ▶ Spraying speeds up to 20 km/h



AutoHeight Controller

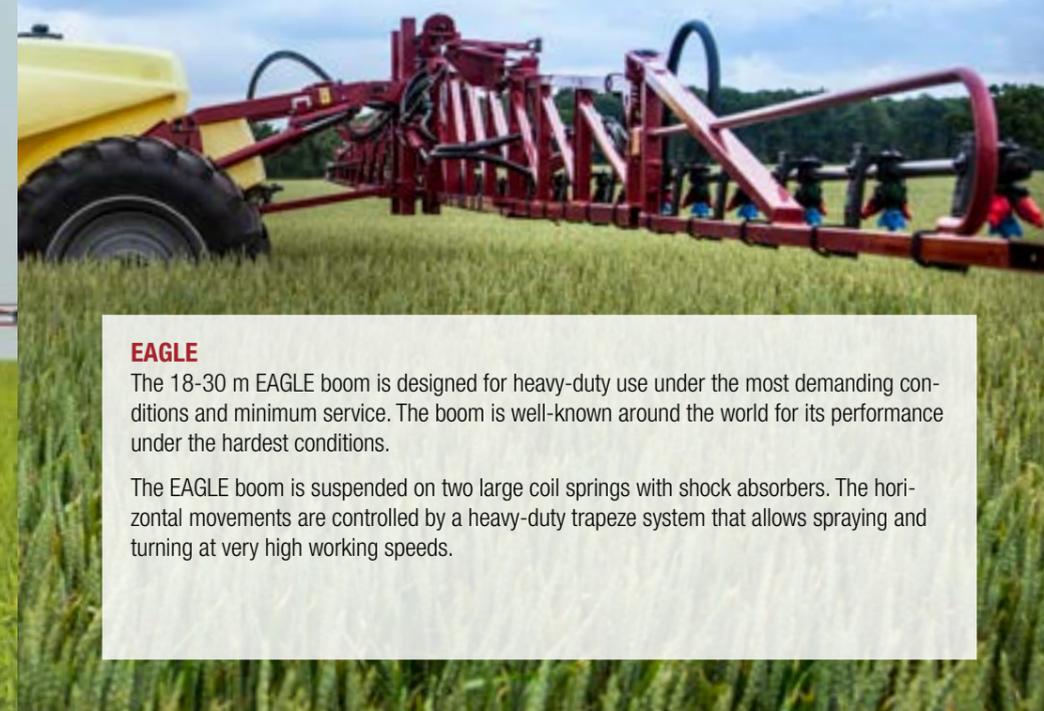
The AutoHeight touch screen controller makes it easy to set and adjust the boom height relative to the soil or the crop canopy.

Ultrasonic sensors

AutoHeight uses ultrasonic sensors fitted to the boom centre and wings to measure and maintain the preset boom height.

The sensors have been developed for farming conditions, are robust and precise, and are mounted with shock-absorbing pads.

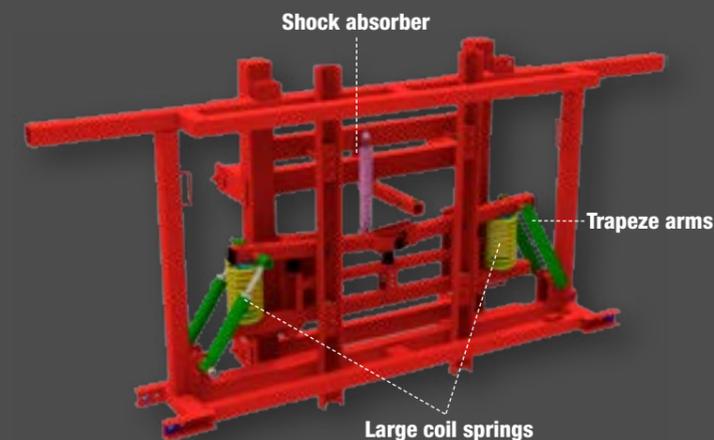
EAGLE boom



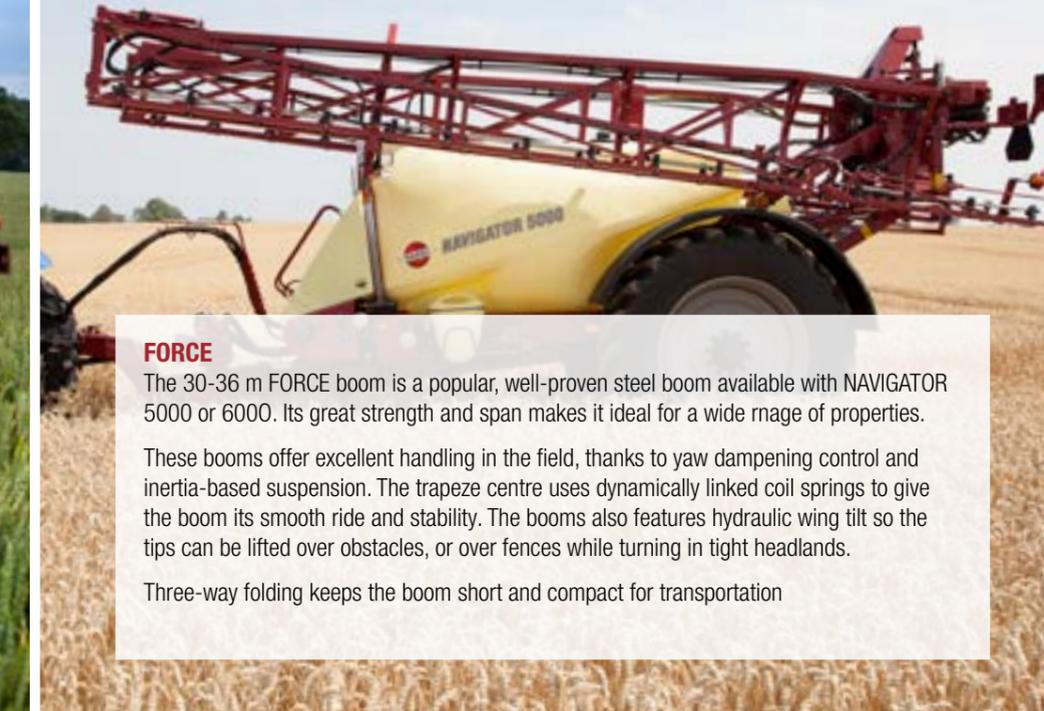
EAGLE

The 18-30 m EAGLE boom is designed for heavy-duty use under the most demanding conditions and minimum service. The boom is well-known around the world for its performance under the hardest conditions.

The EAGLE boom is suspended on two large coil springs with shock absorbers. The horizontal movements are controlled by a heavy-duty trapeze system that allows spraying and turning at very high working speeds.



FORCE boom

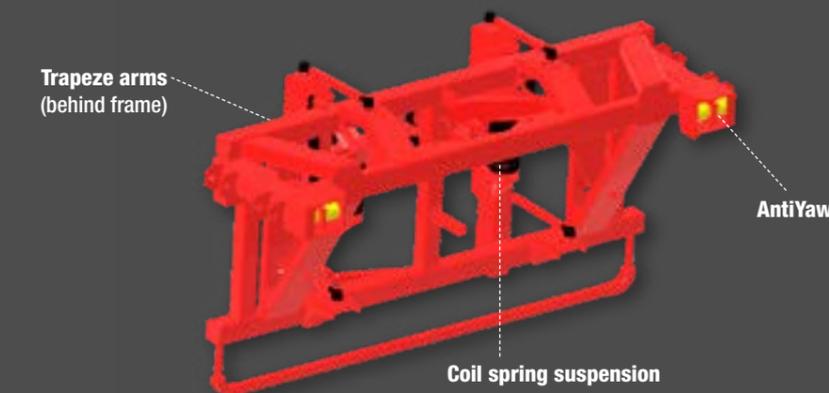


FORCE

The 30-36 m FORCE boom is a popular, well-proven steel boom available with NAVIGATOR 5000 or 6000. Its great strength and span makes it ideal for a wide range of properties.

These booms offer excellent handling in the field, thanks to yaw dampening control and inertia-based suspension. The trapeze centre uses dynamically linked coil springs to give the boom its smooth ride and stability. The booms also features hydraulic wing tilt so the tips can be lifted over obstacles, or over fences while turning in tight headlands.

Three-way folding keeps the boom short and compact for transportation



HARDI PARAGON Aluminium

Width without weight

Expert integration of boom, centre and sprayer.
 With over 30 years of know-how in aluminium boom set-up, HARDI has unmatched experience in making the most of wider, lighter booms.

Every time you spray with a HARDI PARAGON Aluminium boom, our expertise will be hard at work protecting your investment in equipment and chemical.

Delivering more than just a different material, the HARDI PARAGON Aluminium boom set-up ensures:

- ▶ Consistent nozzle height control
- ▶ Improved spray accuracy
- ▶ Lower forces on the boom, centre, sprayer and tractor



There's a lot more to boom performance than aluminium
 HARDI PARAGON booms are integrated with our advanced boom centres to achieve unbeatable stability, ride control and target height maintenance.

Our unrivalled AutoHeight technology delivers a smoother ride that extends boom life, while ensuring more accurate contour following and crop clearance – for precise, effective spray application.



PendEze boom centre
 The PendEze boom centre for NAVIGATOR aluminium booms incorporates both pendulum and trapeze elements to effectively deal with pitch, roll and inertia forces on the boom.

The PendEze centre is mounted to a wide Paralift, ensuring a very stable attachment that adds significantly to the ride quality and performance of the boom.

TR4 boom



TR4
 The TR4 is a bi-fold aluminium boom available in 24, 28 and 30 m widths. Folding the outer wings reduces the 24 or 28 m booms to a width of 15 m, and the 30 m boom to 18 m.

Wing tilts are included as standard and are equipped with nitrogen accumulators for a smoother ride and superior height control. The breakaways are tri-directional and can break back, forwards or up. Yaw forces are absorbed through a patented yaw dampening system, configured for Australian conditions by HARDI Australia.

The unique properties of aluminium provide built-in flexibility, performance and endurance with minimal maintenance. Nozzles are protected within the boom structure.

B3 MAJOR boom



B3 MAJOR
 The tri-fold B3 'MAJOR' boom brings the added productivity of up to 36.5 m coverage to the NAVIGATOR 5000 and 6000. Specially designed for trailed sprayers, the B3 is a very strong and robust alternative to steel at half the comparable weight.

Three uniquely profiled box sections running the length of the boom and connected by triangulated elements form a very strong truss that also protects the nozzles. Wing tilt and nitrogen accumulator dampened suspension are both standard features.

The improved ride and reduced weight means the pitch, roll and inertia forces generated while spraying and turning are significantly less – for better ride, performance and durability.



HARDI TWIN Air

The world's best application system

Take control of spray drift and the weather

For more than 30 years, HARDI's TWIN system has been the world leader in air-assisted spraying. The powerful, productive system uses a curtain of air to control spray, directing the full dosage into the crop and creating turbulence to give good coverage below the canopy.

Ajustable air to suit your spraying

TWIN AIR's unique forced air curtain works to contain the spray in adverse wind conditions and has been proven to minimise drift in demanding European field trials.

On TWIN FORCE and TWIN STREAM booms this air curtain can be adjusted anywhere from 40° forward to 30° back, to suit the spraying speed and conditions.

Save up to 30% on chemicals

Numerous trials have shown better chemical efficiency using TWIN. The more accurate, penetrating spray application makes it possible to reduce dosage rates by up to 30% without compromising efficacy.



FLEXFORCE TWIN

A powerful blower unit provides air to the air jets across both sides of the boom. The tapered air bag ensures even, consistent pressure distribution right to the boom tips.

FLEX FORCE TWIN is available for NAVIGATOR with an 18 m boom width.



TWIN STREAM

A light TWIN AIR system designed for our smaller booms, TWIN STREAM uses a single blower unit to provide pressure across the boom. The same tapered air bag and special directional air curtain ensures consistent TWIN performance.

TWIN STREAM is available with a 12 m or 15 m boom width.

Controllers

Accuracy on your terms

HC 8600 and HC 9600

The HC 8600 and HC 9600 present all vital spraying information on a single multicolour touch screen. Both are easy to operate and provide an optimal overview of the spray job, for maximum control with minimum stress.

Integrated electronics

From the working screen the driver can manage AutoHeight, AutoSectionControl, steering and dose rate. The view can be switched between 2D and 3D when guidance is active. The HC 9600 even supports a split screen mode.

Data management and data transfer

The HC 8600 and HC 9600 both have USB ports and a WiFi adapters for easy, efficient application reporting. Data on location, product, application details, field boundaries and more can be transferred into other software for farm and government reports.

The HC 9600 can automatically generate PDF application reports that can be saved, emailed or printed. Information on weather, soil conditions, products, etc. can also be added.

HC 8600 and HC 9600 both comply with the ISO 11783 ISOBUS Universal Terminal standard.



HC 5500

The HC 5500 is a powerful computer that makes basic spraying simple and safe, and provides easy access to more information when needed.

The system provides instant alerts if vital parameters like pressure, speed, etc. are incorrect.

The LogicMenu makes it easy to get vital information quickly, using pre-set keys which double as short cut keys for common functions. Volume rate can be changed on the go as a percentage or as a volume value.

The controller is able to link as many as 98 register and connection parameters to a site-specific application map or remote sensor.

The HC 5500 can be extended with SprayBox III (see below) as well as an electronic tank gauge and 12V printer.



ISOBUS terminal

The HARDI NAVIGATOR can be operated via a universal ISOBUS terminal connection. Customers can order their sprayer without a standard controller and then use their tractor's ISOBUS terminal to manage the intelligent functions like AutoSectionControl.

To make operating the sprayer easier, the proven HARDI JoyStick will be delivered with the NAVIGATOR.



SprayBox III

The HARDI SprayBox III integrates with the popular HC 5500 spray controller and makes it easy to manage functions like spray pressure and boom section activation from the driver's seat. The system features a manual override in case of electrical failure.

The combination of HC 5500 and SprayBox III is an economical way to have a wider range of spray functions at your fingertips, from monitoring tank contents and flow rates to managing boom sections.

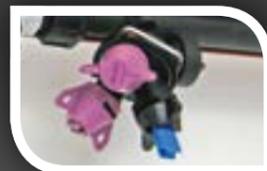
Overview



Options



In-Line filter



Triplet nozzle holders



BoomFlush taps



ChemSuction coupling



ActivAir switching & recirculation



Hydraulic pump drive



HARDI AutoHeight



BoomPrime



Night spraying lights



Brakes

Technical specifications

Tank, litres	3000	4000	5000	6000
Pumps, type – l/min	364-194 / 464-334			
Booms, m	EAGLE (Steel) 18, 20, 21, 24, 28, 30 m TR4 (Aluminium) 24, 28, 30 m	EAGLE (Steel) 18, 20, 21, 24, 28, 30 m TR4 (Aluminium) 24, 28, 30 m	EAGLE (Steel) 18, 20, 21, 24, 28, 30 m FORCE (Steel) 30, 32, 33, 36 m TR4 (Aluminium) 24, 28, 30 m B3 MAJOR (Aluminium) 36.5 m	EAGLE (Steel) 18, 20, 21, 24, 28, 30 m FORCE (Steel) 30, 32, 33, 36 m TR4 (Aluminium) 24, 28, 30 m B3 MAJOR (Aluminium) 36.5 m
RinseTank	500	500	500	500
Total length (A), m	7.21	7.21	8.00	8.00
Total height (B), m	3.80 (13.6x48)	3.80 (13.6x48)	3.80 (20.8x42)	3.80 (20.8x42)
Width (C), m (EAGLE boom)	3.00	3.00	3.00	3.00
Track width (D), m	1.50-2.25	1.50-2.25	1.80-2.25	1.80-2.25
Length draw to axle (E), m	4.80	5.30	6.05	6.05
Clearance (F), m	0.8 (340/85R48)	0.8 (340/85R48)	0.81 (520/85R42)	0.81 (520/85R42)
Weight total (empty tank), kg	3300-3600	3400-4700	4950-5850	5000-5900
Turning radius IntelliTrack, m	6.00	6.0	8.5	8.5
Suspension	Smoothride Optional	Smoothride	Smoothride / Hydraulic Optional	Smoothride / Hydraulic Optional

BOOM OPTIONS

EAGLE 18-30 m

Strong and well-proven, giving unequalled performance in rough conditions.

FORCE 30-36 m

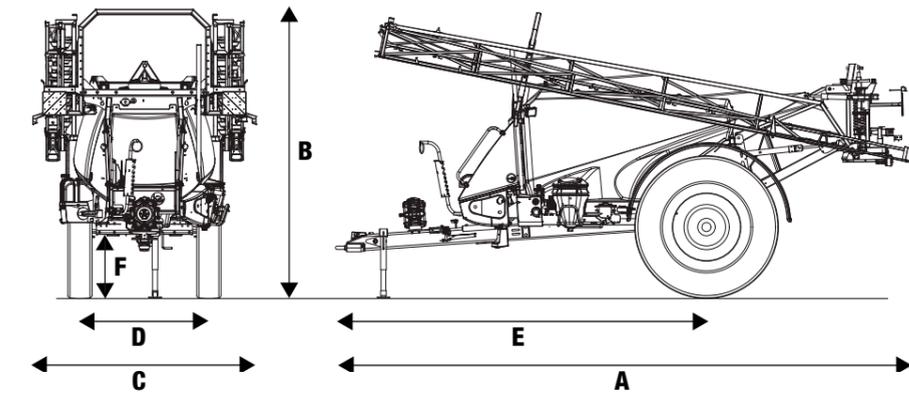
Strong, durable design and construction, compact in transport and storage. (Navigator 5000, 6000 only.)

TR4 ALUMINIUM 24-30 m

Light and strong HARDI PARAGON AL boom offering superior ride and height control.

B3 MAJOR ALUMINIUM 36.5 m

High productivity HARDI PARAGON AL boom of 36.5 m. (Navigator 5000, 6000 only)





Nørre Alslev,
Denmark



Leida,
Spain



Savigny,
France



Beaurainville,
France



Davenport,
USA



Adelaide,
Australia

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.



Built to last

Together with the Delta/Magni treatment of nuts, bolts and other items, we finish all our products with comprehensive water and chemical protection.

The high-technology surface treatment involves five processes, including a zinc-phosphate pre-treatment and oven-baked polyester powder coating of all major components.

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



HARDI AUSTRALIA P/L

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#HARDIsprayers

HARDI MARKETING 04/2019