

CHD EEFING B.V.

CROP SPRAYERS



CHD FG Series

CHD T Series



The following tank types are available:

- FG6300: Max. contents 6,700 litres with 1,000 litres of clean water
- FG7300: Max. contents 7,700 litres with 650 litres of clean water
- FG8000: Max. contents 8,300 litres with 1,000 litres of clean water
- FG9000: Max. contents 9,300 litres with 650 litres of clean water

The high-quality, S355 steel spray boom is available in working widths from 27 to 55 metres. In consultation with CHD almost all intermediate and unusual working widths can be supplied. All spray boom types up to 42 metres are 3-fold (4-fold optional). Spray booms with a working width of 42 metres or higher are 4-fold. The outer ends fold in and out simultaneously, as standard (optionally, left and right can be folded independently). Cable conduits are mounted on boom sections 1–3 to protect and carry all cables and hoses to the correct part of the spray boom.



The entire spray boom is mounted on a central roller (1). A cylinder (2) adjusts the boom's balance, while the potentiometer (4) is responsible for centring the balance. Two track rods (picture below) prevent machine movements from being transferred to the spray boom.

The balancing lock is activated and deactivated by two cylinders (3). This allows the balance to move freely even in the highest position. In turn this allows a spray height of 2,800 mm to be maintained below the spray nozzles.





The lift mast comprises two stainless steel box profiles. The intermediate frame (clad with high quality synthetic material), which raises and lowers the spray boom, runs on these profiles.

The lift cylinder, without a steel cable, provides a constant lifting speed and is equipped with an accumulator. This accumulator dampens movements through the vertical plane.

Hoses and cables that move with the lift mast are mounted protectively in a cable carrier.

The hydraulic balance adjustment mechanism with automatic centring immediately responds to commands from the driver or the DistanceControl II system (optional).

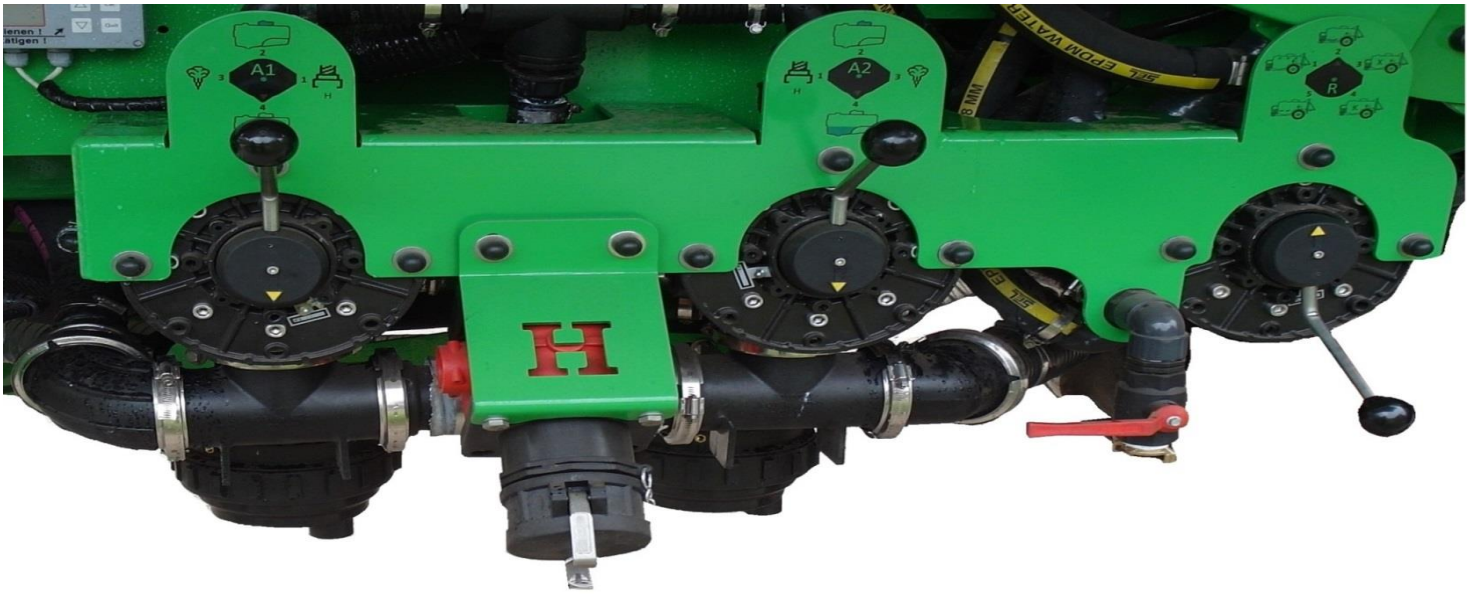
Fully folded, the FG series can drive on public roads with a transport width of 2.85 metres, depending on the tire size and track width.



The FG series is supplied as standard with a 10-pin steering axle, which is operated manually by means of a double-action valve on the tractor. The optional TRAIL-Control II system can fully automatically control this steering axle. This system registers the position of the tractor and the steering cylinder, the driving speed, the incline (optional) and the driver's commands. With this information, the TRAIL-Control II software will keep the machine on track through your crops. The (optional) electric-hydraulic boom functions and automatic steering axle can be supplied by open centre or load sensing hydraulics. The steering cylinder is mounted centrally behind the steering axle to guarantee maximum freedom of movement.



The main frame is only 60 cm wide at the point where the steering axle is mounted under it. This guarantees a maximum steering angle and therefore a machine that is path-tracking in almost all imaginable circumstances. The standard unit is delivered with a fixed-mounted axle and a dual-hose air brake system (optionally a single or dual hose hydraulic brake system). On request, the FG series can be equipped with hydraulic axle suspension with automatic level regulation (ALR). ALR is available if the machine has hydraulic suspension and air-brakes. The hydraulic axle suspension with automatic level regulation ensures comfortable road transport. If the (standard) low-hitch drawbar is fitted with (optional) full-automatic drawbar suspension, this will offer ultimate driving comfort. By combining axle suspension with drawbar suspension the entire machine can be adjusted to different heights. As standard equipment, the mechanically height-adjustable drawbar is equipped with a K80 ball tow hook fitting and a hydraulic trailer support leg.



The models in the FG series are equipped as standard with manual valves that are amply dimensioned for optimum yield. All functions are easily accessible on the left side of the machine. The two 3" suction filters are also located here and are easily accessible for any maintenance work. The (optional) TANK-Control I Display system can be mounted, to ensure optimal main tank filling. The displays on the machine and in the cab show the number of litres remaining in the main tank. You can also see how many hectares and metres you can still spray with the residual content.

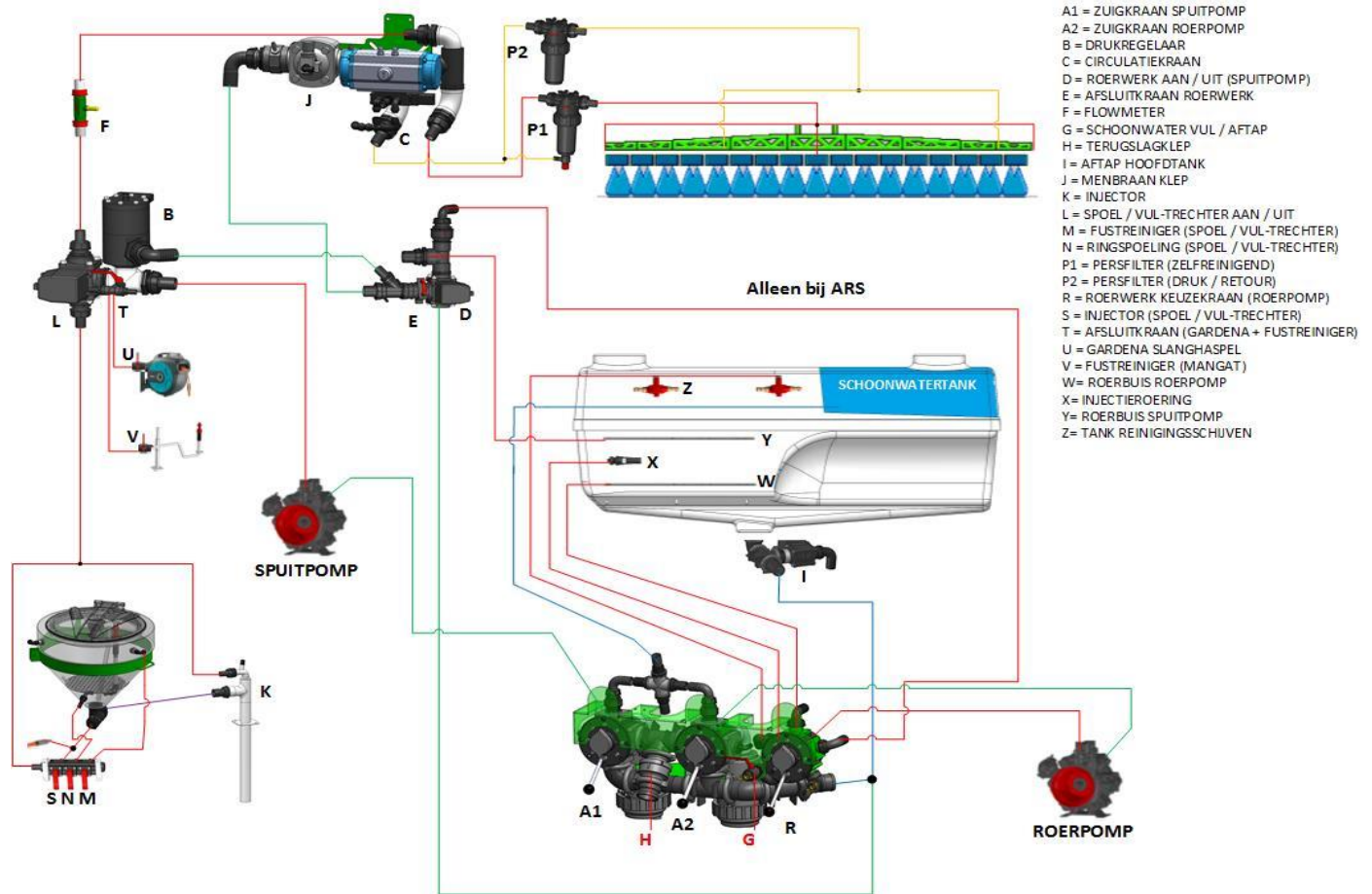


- 1: TankControl III Terminal
- 2: Spray pump suction valve
- 3: Agitation pump suction valve
- 4: Suction coupling
- 5: Agitator/purging valve
- 6: Clean water tank filling point
- 7: Return pump connection

Optionally, the FG series can be equipped with ACS. This **Automatic Cleaning System (ACS)** is operated by means of the TANK-Control III Display and provides fully automatic and complete cleaning, with the possibility of partial cleaning, manual valve control, agitator switching, and an automatic stop when full. The driver can operate all these functions from the cab Terminal or using the TANK-Control III Display on the machine.

The standard mounted exterior cleaning unit, the 'return pump connection' (7) and the optional hydrant filling connection are also easily accessible on the left side of the machine. The clean water tank can be filled or drained using a Geka coupling and ball valve (6).

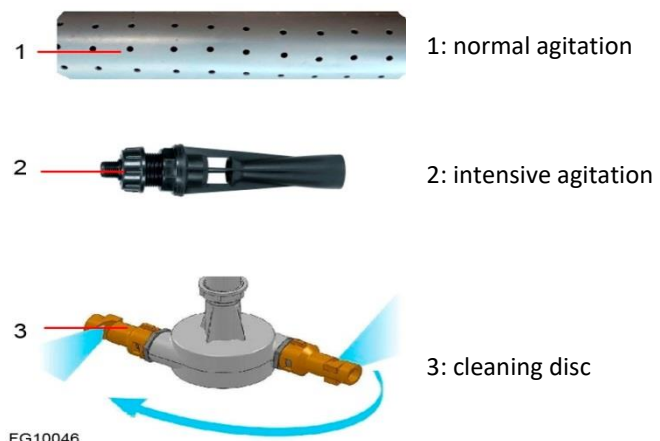
The suction hose is easily connected to the 3" Kamlock coupling (4) and has a stainless steel suction basket with float.



The FG series models are equipped with two reliable piston diaphragm pumps with a capacity of 2 x 280 to 2 x 320 litres per minute. In the water diagram above, the version with 2 pumps of 280 litres per minute each, the spray pump feeds the spray boom and is also responsible for the operation of the outside cleaning unit (U), the container cleaner in the filling opening (V) and the optional lower container cleaner (K). The agitator pump provides the stirring system with three available options (using valve 'R'): normal agitation, intensive agitation or off. In addition to the agitation system, the agitator pump supplies the tank cleaning discs (Z) and handles emptying the main tank to an external one.

The tank can be filled using the agitator pump, the spray pump or both at the same time. Optionally, a hydraulically-driven centrifugal pump can be mounted, which can fill the main tank and/or the clean water tank up to maximum capacity at low motor speed.

Each pump (in the water system) has its own suction and pressure system, which provides for an enormous increase in capacity. For example, the tank can be cleaned with the agitator pump, while the spray pump perfectly doses the residual fluid onto the field. This means you arrive home without any residual fluid, which reduces disposal at the farmyard to a minimum and you can easily change to another spray product.





BASIC-Terminal is standard on the FG series. Equipped with the ISOBUS-UT (Universal-Terminal) App, the terminal meets the ISOBUS standard. Possibilities for expansion include ISOBUS task card processing, DGPS parallel row system and SECTION control. The FG series also comes with intuitive joystick control, which gives you access to up to 24 functions.



The TOUCH800-Terminal is a compact TOUCH terminal. Its 8" touchscreen display guarantees ideal operation. As with the other terminals, the functions can be displayed clearly and well-organized in a main screen and in a Header. In addition, this terminal offers many extension possibilities, including various apps and the possibility of automatic control at RTK level.



The TOUCH1200 is the most comprehensive ISOBUS Terminal on the market. It is unbeatable in terms of flexibility and user-friendliness. The TOUCH1200 works in portrait as well as in landscape. Up to five different layouts can be displayed simultaneously. Furthermore, the terminal with precision agriculture functions is designed to handle the harsh conditions encountered in field. When enabled for ISOBUS-MULTI-Control, the terminal can control multiple machines simultaneously.

TankControl I:

- Precise tank content display
- Automatic filling stop (optional)
- Reduction of residual fluid
- Prevention of over-filling
- Automatic display of tank contents on the connected ISOBUS terminal.



Tank-Control III combined with ACS:

- Fill for Zero: fill exactly by calculating the remaining area.
- Operation of ACS system.
- Data is available at all times, including on cab terminal.
- Reduction of residual fluid
- Prevention of over-filling



APP & GO

APP & GO is the innovative licensing system based on the release of Software Applications (apps). Several apps are pre-installed on all ISOBUS terminals for this purpose.

TRACK-Leader

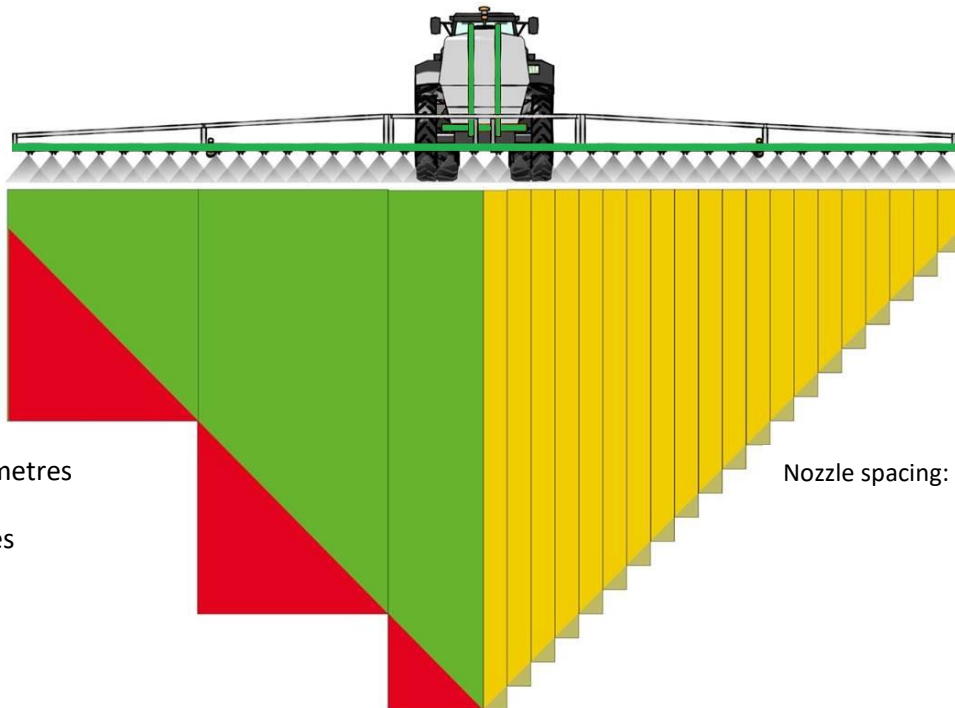
This app, combined with a DGPS receiver, enables exact parallel driving in A/B, A+, headland or contour mode, even with poor visibility. In addition, the app enables obstacles to be marked off and saved together with field data, such as field boundaries and A-B lines. In the upper part of the ISOBUS Terminals you can choose a lightbar, which will lead you very accurately along your desired line. The external lightbar is the perfect addition to the TRACK-Leader app. This external display is easy to mount on the window and displays the same operating commands as the on-screen lightbar.



SECTION-Control

(APP prerequisites: ISOBUS-UT and TRACK-Leader)

- This app provides GPS-controlled on and off switching of the main valve, section valves or individual nozzles. SECTION-Control can control up to 256 sections or single nozzles and ensures less overlap and non-sprayed areas.
- The SECTION-Control app offers average savings of 3% to 8% compared to manual section control.



Operating width: 15 metres

Sections: 5 at 3 metres

Nozzle spacing: 50 cm

SECTION-Control TOP with EDS: Single-Nozzle Switching

- The use of SECTION-Control TOP and 50 cm sections reduces overlaps to the minimum and crop protection agents are administered extremely effectively.

Sample calculation:

5 Sections at 3 m $\rightarrow 3 \text{ m} \times 3 \text{ m} / 2 \times 5$ = 22.5 m² surface area overlap

30 Sections at 0.5 m $\rightarrow 0.5 \text{ m} \times 0.5 \text{ m} / 2 \times 30$ = 3.75 m² surface area overlap

➤ \cong 83.3% reduction in overlap



The standard version of the spray boom is equipped with a ring circuit, with the section valves distributed along the boom. As soon as the PTO shaft is switched on, the spray fluid circulates in the upper part of the spray boom.

Optionally, the machine can be equipped with air-controlled nozzle holders, which creates a 100% ring circuit. The stainless steel spray line now functions as a ring circuit and no longer has any end caps where powdery substances can accumulate. The nozzles are closed by heavy spring pressure (comparable to 8 bar) and opened by air pressure. This system enables you to immediately reach the desired spray pressure.

The stainless steel spray line can be supplied with 25 cm nozzle spacing for trailing hose slurry fertilization or to be able to work with reduced boom height. The 25 cm nozzle spacing combined with air-controlled nozzle holders is equipped with 'A-B control'. On the Terminal you can choose whether you want to spray with nozzle 'A' (50 cm), nozzle 'B' (25 cm) or simultaneously with 'A' and 'B'.

The 'A-B control' can also be combined with a 2-fold pneumatic nozzle holder. With a pneumatic 4-fold nozzle holder you can even work with 'A-B-C-D control'.

Naturally, a wide variety of standard, side and wide fan nozzles is available. We are always happy to advise you on your choice of nozzles.



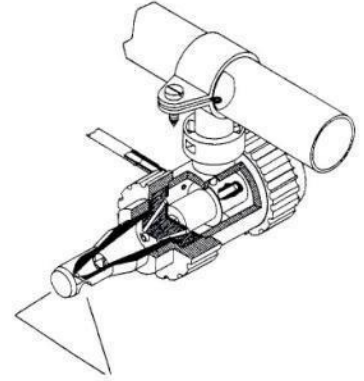
Airtec and Airjet



AIRJET-Nozzle



Hydraulically driven compressor



The Airtec/Airjet System incorporates its own hydraulic system, which drives a maintenance-free compressor. After passing through a pressure control system, the compressed air is forced into a second spray line under the spray boom. This second spray line feeds the Airjet or Airtec nozzle at a preset air pressure, which creates a set droplet size. When you - or the (optional) droplet size control software in the ISOBUS Terminal - increases this air pressure, the droplets become finer. When this pressure is reduced, the droplets become larger. This system makes it possible to maintain constant droplet size at different driving speeds and release rates. The droplet size can also be adjusted finer or coarser at a constant release rate and constant speed.

On average, very good results can be achieved with a release rate of 80 to 150 litres per hectare.

MagGrow

The MagGrow technology uses special permanent rare earth magnets.

Crop protection fluids flowing through the system are exposed to static non-uniform magnetic fields. This changes the liquid's physical properties, which causes the characteristic MagGrow droplet shape to acquire adhesive and surface tension properties. The MagGrow technology enables droplets to adhere much better to the plant's surface and significantly reduces run-off. Furthermore, the droplet palette is more homogeneous, which reduces drift.



Air support system



The air support system has its own hydraulic system that drives the maintenance-free fan. The fan supplies air to the left and right airbags. The air exits the airbag at the bottom behind the spraying nozzles. This way the droplets are carried along in the air flow, which limits drift to a minimum. In addition to the continuously variable adjustable airspeed, the exit angle also is continuously variable adjustable up to 45 degrees.

These settings provide you with perfect coverage and penetration during spraying. Crop protection in varieties with difficult foliage types, such as onions, for example, no longer will be a challenge for you.

The air support system is available up to a working width of 45 metres.

Wingsprayer



Crop protection and drift reduction go hand-in-hand, but how do you retain maximum possible efficiency? Wingsprayer is an innovative system that ensures optimal distribution of crop protection agents and achieves 99.8% drift reduction. Simple to operate and can be installed on all CHD machines.

DISTANCE-Control



Optionally, the FG series can be equipped with automatic boom height control. This DISTANCE-Control System is equipped with two ultrasonic height sensors as standard. These sensors determine the distance above the crop. Using this data, the DISTANCE-Control system will adjust the lift mast and/or the balance adjustment mechanism. This way the boom's preset height is constantly monitored and automatically corrected.

Four sensors can be mounted for use with crops with large height variations within the plot to be sprayed. The sensors are then connected in parallel on each half of the boom and the system will respond to the signal of the sensor located closest to the crop.

Options



A spacious box for consumables is included as standard. This stainless steel box is equipped with a lockable cover enabling you to safely carry your crop protection agents. The standard container cleaner is also mounted in this box. This container cleaner is easy to position above the manhole.

The box can be reached via the small collapsible ladder which leads to the spacious walkway.



Optionally, a pneumatically retractable canister cleaner is available at the bottom left of the machine. Using this container cleaner, you can comfortably dose the crop protection agents into the machine from the ground, after which you can rinse the product containers with the integrated flushing head. Folding and unfolding the filling funnel and turning the injector on and off are easy to do from the left side of the machine. Furthermore, the container cleaner has three functions, which are easy to enable and disable using the manual controls:

- Integrated flushing head
- Ring circuit
- Hose with spray gun

The FG Series is in the TOP-segment of crop protection equipment and its dimensions make it a compact high-capacity machine.

An NQ (Normal Quality) or a HQ (High Quality) camera can be mounted at the rear of the machine to give you 'eyes in the back of your head' and allow safe driving on public roads. Of course, you are consulted about its desired position, before the cameras are installed.



LED spotlights, LED BLEULIGHT spotlights behind the nozzles, full boom illumination with an LED tube and/or a rotating beacon on the machine

all are among the available options!

Let us know what you are looking for; we are happy to fulfil your wishes!



TANDEM MODEL: T11000 and T13000



The FG series TOP technology is also available in a Tandem axle version. Naturally, the T series can also be customised in accordance with your wishes with all of the available options described in this brochure.

The T series is available in two tank sizes:

- T11000: 11,500 litre main tank with 800 litre capacity for clean water
- T13000: 13,800 litre main tank with 800 litre capacity for clean water

The T series version is supplied as standard with hydraulic axle suspension, automatic double-axle steering, low-hitch drawbar with a K80 ball tow hook fitting and electric hydraulic LS boom functions.

The electronic active steering on both axles reduces crop damage to a minimum. The front axle follows the track of the tractor's rear wheels, while the rear axle follows the track of the tractor's front wheels. This ensures the tractor is accurately path-tracked and that the spray boom is not adversely affected by steering movements.

You can select one of three steering modes on the compact control terminal:

- Street mode
- Field mode
- Manual mode

For road transport above 15 km/h, the steering response speed is reduced to ensure a safe journey.





MD-O axle suspension

The unique MD-O hydro-pneumatic axle suspension is extremely well-suited for severe conditions in difficult terrain. In contrast to most conventional 4-point off-road suspensions, the robust MD-O 3-point suspension does not generate any internal torsional forces. As a result, ripped suspensions are a thing of the past and a long service life is guaranteed. Due to the large suspension travel and swivel movement, the wheels always remain in contact with the terrain, even with heavy loads and axle loads of up to 10 tonnes. A smart crosswise hydraulic connection provides for unprecedented roll stability enabling fully loaded trailers to be safely driven at high speeds.



FG and T series specifications

MODEL	FG6300	FG7300	FG8000	FG9000	T11500	T13000
Tank contents: max. (l)	6,700	7,700	8,300	9,300	11,500	13,800
Clean water tank (l)	1,000	650	1,000	650	800	800
Working width (m)	27 - 55	27 - 55	27 - 55	27 - 55	27 - 55	27 - 55
Sections: max.	18	18	18	18	18	18
EDS in AUTO mode	220	220	220	220	220	220
Transport height (m) (Tyres Ø 1,805 mm)	3.60 - 3.80	3.60 - 3.80	3.60 - 3.80	3.60 - 3.80	3.60 - 3.80	3.60 - 3.80
Transport length (m) (depending on boom type)	8.30	8.30	8.30	8.30	10.60	10.60
Transport width (m)	2.85	2.85	2.85	2.85	2.85	2.85
Tare weight (kg)	4,800	4,870	5,120	5,190	7,990	8,360
Ground clearance (Tyres Ø 1,805 mm)	830	830	830	830	830	830
Spraying height (m) (Tyres Ø 1,805 mm)	2.8	2.8	2.8	2.8	2.8	2.8
Operating pressure: max. (bar)	10	10	10	10	10	10
Pumps (l/m)	2 x 280	2 x 280	2 x 280	2 x 280	2 x 320	2 x 320
BASIC Terminal	S	S	S	S	S	S
Comfort, Touch800, Touch1200	O	O	O	O	O	O
Joystick	S	S	S	S	S	S
TankControl	O	O	O	O	O	O
TrackLeader	O	O	O	O	O	O
SectionControl	O	O	O	O	O	O
Steering axle	1 x DA	1 x DA	1 x DA	1 x DA	2 x Auto.	2 x Auto.
Elec. Hyd. + TrailContr.	O	O	O	O	S	S
LS connection	O	O	O	O	S	S
Axle suspension	O	O	O	O	S	S
Low-hitch drawbar with K80	S	S	S	S	S	S
drawbar suspension	O	O	O	O	O	O

S: Standard version

O: Optional

DA: Double-action tractor control valve



The family business CHD Eefting Landbouwspruitmachines B.V. is domiciled in Ter Apel, the Netherlands.

Customer satisfaction is our top priority. That is why we work with a network of highly motivated and capable dealers. These dealers also are a reliable after-sales partner for you. Naturally, the CHD service team is always available to support both you and our dealers. If there is no CHD dealership in your area, you can of course contact us directly.

We also offer an excellent spare parts service. Parts ordered before 17:00 leave the warehouse the same day.

CHD Eefting Landbouwspruitmachines B.V.

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