

## MASTER plus – with larger tank and new features



### MASTER plus - proven technology with larger tank and new features

HARDI introduces the MASTER plus - an updated tractor mounted sprayer which is top of the range of machines for the farmer who does not want to compromise when high capacity and safe operation are highly demanded.

#### 1800 litre tank capacity

The new larger 1500 and 1800 l tank design increases the spraying capacity, and, with the vertically folding boom, provides a compact transport size ensuring good visibility and manoeuvrability, both while spraying and when driving on the road. The 1500 and 1800 litre tanks complement the existing tank sizes of 800, 1000 and 1200 litres.

TurboFiller for faster and safer handling of chemicals.

The new 25 l TurboFiller is a high-capacity induction hopper, which makes the filling of chemicals fast and easy. The unique TurboDeflector creates a powerful liquid circulation in the hopper and mixes all types of chemicals including powder quickly and safely. The capacity will set a new standard in the market.

1

The built-in rotating nozzle will clean any chemical container. After use, the same nozzle will clean out the complete hopper. The nozzle has a spike that can penetrate the seal on most chemical containers.

A cleaning pipe is fitted as standard on the TurboFiller. This trigger valve with 1 m hose can be used for flushing the hopper or filling liquid into a container.

The MASTER plus is easily mounted to the tractor with a quick hitch and foldaway parking supports. When mounted on the tractor, the MASTER has excellent ground clearance with a smooth snag free underside.

#### New booms up to 24 metres

The MASTER plus will be available with vertically folded PRO booms from 12 to 24 metres. The booms are constructed in steel with a lattice design optimizing weight with the greatest possible strength. The self-levelling suspension incorporates a heavy duty coil spring to absorb any sudden movements of the boom. An antiyaw device is incorporated into the boom centre to minimise any movement of the boom. The excellent performance of the PRO boom ensures precision spray applications even in the most challenging of field conditions.

All boom functions on the PRO boom are electro-hydraulically operated, from a compact conveniently located control panel. The primary controls, those which are most used in the field, are grouped together for ease of use, such as boom height, independent tilting of either boom section and complete boom slanting. With all other controls conveniently placed to hand, the MASTER PRO is easy to operate.

The spray controls are the well proven EVC electronic unit with an optional HC 2500 or HC 5500 Automatic Spray Controller. With sensors for speed and flow, the HC Controller is easy to programme and ensures constant application rates, and records are kept.

HARDI INTERNATIONAL A/S presents this new MASTER plus sprayer at Agritechnica and look forward to meeting this customer segment's demands for larger capacity with up to a 1800 litres tank capacity and new booms up to 24 metres.

2

## RANGER – with even more possibilities



### RANGER - class leading design with even more possibilities

The HARDI RANGER trailed series will be shown at Agritechnica with a larger optional list. The RANGER combines a stylish look with easy operation, proven components, and an economical price.

The RANGER has a 2500 l polyethylene tank which is sloped forward for excellent weight distribution and effective agitation.

Booms up to 24 metres

With the RANGER, you can choose between two boom types, the very robust and reliable EAGLE boom with 18, 20 and 21 m and the flexible PRO boom with 12 to 18 m with a transport width of only 2.5 m. The PRO boom can be delivered in a Z-hydraulic version which offers single side folding and reduced working width. The vertically folded PRO booms will now also be available in 20, 21 and 24 metres.

The conveniently located manifold fluid system makes operation of the RANGER easy. All valves are located in a working zone on the left side of the sprayer. With the Spraybox II, pressure regulation and boom sections can easily

3

be turned on and off from the tractor seat. With upgrades like the HC2500 or controller, precise application rates can be maintained regardless of application speed.

The high clearance axle on the RANGER allows a track adjustment between 1.50 and 2.00 m, this along with the available 11.2 X 38" wheels and tyres gives the RANGER a clearance of 70 cm underneath the axle.

The ParaLift boom height adjustment gives a wide range of height adjustment with better crop clearance and is unique in this product segment. Furthermore, the RANGER can be adapted specifically according to customer wishes with a wide variety of optional extras. A 250 litre integrated rinse tank and rinse system allow quick and easy clean out in the field. A ChemFiller can be added for safe handling of crop protection products.

#### TurboFiller for faster and safer handling of chemicals

The new 25 l TurboFiller is a high-capacity induction hopper, which makes the filling of chemicals fast and easy. The unique TurboDeflector creates a powerful liquid circulation in the hopper and mixes all types of chemicals including powder quickly and safely. The capacity will set a new standard in the market.

#### New SelfSteer drawbar

A new SelfSteer drawbar will be launched so the RANGER can be coupled on the tractor's 3-point hitch, giving a better tracking on headland. Further a slope correction for the SelfSteer can be added.

#### The RANGER is now also available with:

- External cleaning
- Brakes - Hydraulic or pneumatic
- HC5500 Powerful controller with large 4 line display

These new features really put the RANGER in its own class with even more possibilities for vegetable and special crop growers.

4

## HARDI NAVIGATOR – 3 new features



The NAVIGATOR will be presented with new comfortable optional features. These features give a higher operational comfort and make easier the daily work. As new options, an electric remote controlled cleaning equipment named DilutionKit, a new electro-hydraulic boom control named DELTA V and an automatic boom angling system named AutoSlant can be ordered.

### DilutionKit

The DilutionKit is an electric remote controlled liquid system, which allows the operator to flush and rinse the liquid system from the driver's seat. The operator can choose from the cab whether he wants to flush the boom lines or rinse the tank rinse with tank rinse nozzles.

The standard SmartValve liquid system can still be operated from the working zone. The agitation valve and the return from the CycloneFilter will automatically be switched off, when the DilutionKit is activated. By this, the demand for rinse water is reduced. All return lines and the agitation will be cleaned when spraying out the diluted liquid from the main tank.

The number of dilution steps is under the operator's control; with every extra dilution step the chemical concentration in the residues is diluted.

5

The DilutionKit makes cleaning easy, effective, quick and safe. Also the operator contamination is reduced because he does not have to leave the cab for cleaning the sprayer.

### DELTA V boom – easy and comfortable

All sprayers with DELTA booms can now be ordered with the V hydraulic set-up. The operator can control the different hydraulic functions by just using the toggle switches in the operation box. The direct hydraulic system has 5 functions: ParaLift, folding inner boom segments, individual folding outer boom segments as well as pendulum lock. For all functions, only one double acting outlet is needed. The DELTA V booms can be used in folded position, and an asymmetric folding is also possible.

### AutoSlant for better boom performance

The AutoSlant system is a simpler system of the proven HARDI AutoHeight System. The AutoSlant is controlling the slant and lift of the DELTA-Z and DELTA V booms on NAVIGATOR.

The AutoSlant System relieves the operator from the stress making constant boom height and slant adjustments. The system frees the sprayer pilot from the most stress-ful part of the job, especially in hilly terrain, and he no longer has to move his head from side to side for many hours. This also allows the operator to increase the working speed and extend application time late in the night to take advantage of low wind conditions.

The ultrasonic sensors have been developed for field conditions and are therefore very robust and precise. The sprayer pilot can choose to set the boom height according to the crop or to the ground with a single button on the controller in the cabin. So AutoSlant can also be used in open crops or row crops.

On headlands the boom is lifted to a programmed height and after turning lowered to the wished automatic set-up.

6

## HARDI COMMANDER i – now ISOBUS compatible



From AGRITECHNICA 2009, the HARDI COMMANDER i sprayer can be operated with a virtual ISOBUS terminal. The customer can order an intelligent HARDI sprayer and use the intelligent functions like AutoWash and PrimeFlow direct from his own ISOBUS terminal.

To make easier the complex sprayer operation, the proven HARDI GRIP will be delivered with the COMMANDER i sprayer so all primary spray functions such as on/off and section switches as well as the hydraulic operation can easily and safely take place by means of a joystick. Also a SetBox will be used to operate sprayer specific equipment as TWIN air assistants or SafeTrack steering directly.

7

## HARDI ALPHA i – self-propelled sprayer with Intel



The HARDI self-propelled sprayer is now offered as an ALPHA i. This means that the intelligent features will make the daily work easier for the operator. 7 ultimate advantages can be chosen as modules, so the user can adapt the sprayer for his needs and all in all optimize the overall capacity of the sprayer.

**HeadlandAssist** controls the boom when turning on the headland, and the automatic boom levelling system **AutoHeight** take care that the boom is parallel to the ground. The **PrimeFlow** system makes it possible to prime the spray lines with plant protection products before the spraying starts. **AutoWash** makes the internal cleaning of the sprayer easy as the cleaning can take place from the driver's seat. The features **Auto-Fill** and **AutoAgitation** simplify the filling and provide an optimal setting of the agitation. Furthermore there is the possibility to use **AutoSectionControl**, automatic operation of the section valves, so double spraying will be avoided. The ALPHA i sprayers are equipped with the new HC 6500 Controller as standard.

**PrimeFlow - circulation and priming the boom before spraying is controlled by single nozzle on/off for maximum flexibility**  
PrimeFlow is an electromotor single nozzle on/off which offers the farmer a lot of advantages. The priming of the boom before the actual spraying starts is managed by the system. It prevents sedimentation and permits flushing of the

8

boom lines without spray-ing the liquid onto the ground. The system works with up to 13 sections, which can be freely configured. The unique system works with new electromotor valves at each nozzle body which open and close the nozzles. These compact motors are also used in the automotive industry.

#### **AutoWash**

Fully automatic cleaning operation done from the tractor cabin. The ALPHA i sprayers can be equipped with AutoWash, a fully automatic internal cleaning system. From a press button on the HC 6500 Terminal, the operator can choose one of the three cleaning programmes to be used. He has the choice between BoomFlush for flushing the boom tube at work interruption, FastFlush for a fast basic cleaning, if the next spray job will be in an identical crop or MultiRinse, if the next spray job is in different crops and the sprayer must be completely clean. With the MultiRinse programme, the tank and the spray lines are cleaned in 7 steps, so that the remaining concentration declines to a minimum.

#### **AutoSectionControl**

The HARDI AutoSectionControl system switches the sections on and off automatically. It records the already treated areas by means of a GPS receiver, and switches off automatically the sections if the sprayer boom comes over these areas again - thus avoiding double spraying. AutoSectionControl has been tested in Australia and been in practical use for 4 years with great success, even at high spraying speeds.

#### **TurboFiller**

The new TurboFiller is a high-capacity induction hopper, which makes the filling of chemicals fast and easy. The unique TurboDeflector creates a powerful liquid circulation in the hopper and mixes all types of chemicals including powder quickly and safely. The capacity will set a new standard in the market. The built-in rotating nozzle will clean any chemical container. After use, the same nozzle will clean out the complete hopper. The nozzle has a spike that can penetrate the seal on most chemical containers. A cleaning pipe is fitted as standard on the TurboFiller. This trigger valve with 1 m hose can be used for flushing the hopper or filling liquid into a container.