KRONE
THE POWER OF GREEN

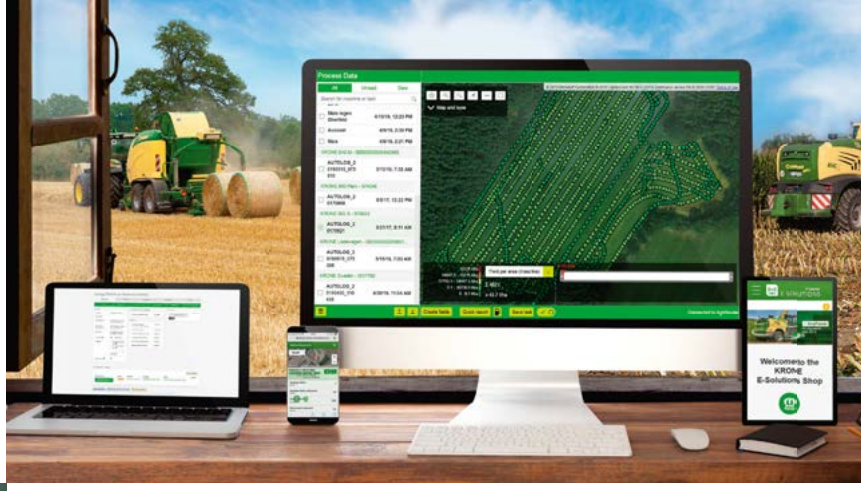
KRONE Digital

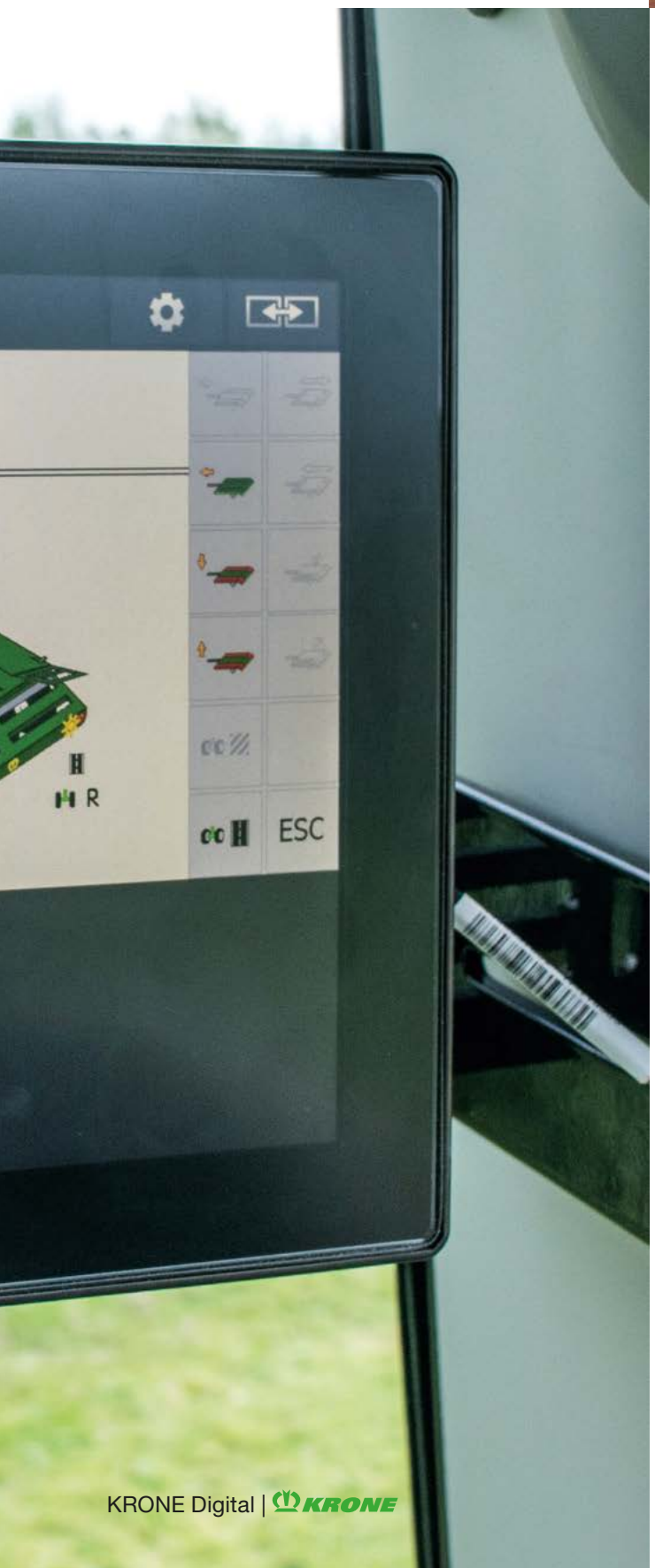
Machine terminals and
data management

KRONE Digital

- Machine terminals with intuitive user interfaces optimized to KRONE machines
- Optional AUX joystick and cameras
- SectionControl for convenient mowing and swathing
- TIM tractor implement management

- KRONE Smart Telematics – a bird's-eye view of the fleet and fleet data analysis
- agrirouter – data communication across 'borders' and down the value chain
- NEXT Machine Management data evaluation





KRONE Digital offers a full range of operator terminals – from entry-level control units to ISOBUS-compatible terminals to suit every application.
Numerous practical solutions are also available in the field of data management, including the KRONE Smart Telematics machine monitoring system and the universal data management platform, the agrirouter.

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DS 100 control unit

- Membrane keypad
- Individual layout depending on product group
- Intuitive machine operation without having to look
- Can be integrated into the ISOBUS

The DS 100 control unit offers individual user interfaces that provide the most convenient control by machine group – rakes, round balers or forage wagons. The special arrangement of the keys makes controlling all machine features especially convenient. The control unit can be integrated into the ISOBUS system for use in combination with an ISOBUS UT.

Intuitive use
Operate any machine function simply by pressing a key. The special arrangement of the keys allows you to use the unit intuitively and without looking so you can focus on the machine itself.

The ergonomic design
The DS 100 unit offers an ergonomic design for convenient right-handed use and fatigue free operation during long working days.

DS 100 control unit
Original size

The **DS 500** Terminal

- Colour 5.7" touchscreen display
- 12 function keys
- Scroll wheel on the back
- Handle grip for convenient use

The compact DS 500 terminal has a 5.7" colour display screen and can be operated with 12 function keys, the touchscreen or the scroll wheel on the back. The keys give you a haptic feel, so you can operate them without looking. More comfort comes from the optional AUX joystick that is available for this control unit.

Convenient use
The moulded handle grip on the back of the unit falls conveniently to hand for comfortable use during long working days. The scroll wheel is also located on the back of the device for optimized use and reduced terminal size.

Adding an AUX joystick
You can complement this terminal with a KRONE AUX joystick for easier use and optimized ergonomics.

The DS 500 terminal
Original size


KRONE
SWADRO


36
11.6m
+0.4
-9.9
1.3m
+0.4
AUTO
85%
0
ha
0.0
1.5s
1.5s
1
2
3
4
5
6
7
8
9
10
11
12
KRONE

CCI 800 ISOBUS terminal

UT

TC-BAS

TC-SC

AUX-N

- 8" colour touchscreen
- ISOBUS compatible
- Displays one function at maximum zoom level and further functions in a mini viewer
- Combines with AUX joysticks, cameras and SectionControl licence
- Help system

With an 8" touchscreen, the CCI 800 ISOBUS terminal offers maximum user comfort. The screen displays one function at maximum zoom level and two further functions in a mini viewer, giving you full control of all features. In addition, it combines with AUX joysticks, cameras and SectionControl licence.

Terminal with camera view
Because it shows both the machine's user interface and the camera feeds, the CCI 800 does not require an extra screen in the cab, saving costs and keeping the cab clutter-free for unhampered visibility all round.

The CCI 800 with AUX joystick
Even more comfort comes from the AUX joystick that is available as an addition to the CCI 800. Offering enhanced ergonomics, it provides intuitive use so you can focus on watching the machine.

Convenient ergonomics
The hand rest on the back of the unit provides a firm grip, so your hand stays in position – even on bumpy rides – which means you will always select the correct function on the touchscreen.

The CCI 800 ISOBUS in original size

CCI 1200 ISOBUS terminal

UT

TC-BAS

TC-SC

AUX-N

- Colour 12.1" touchscreen display
- ISOBUS compatibility
- Controls two machines at the same time
- Shows the machine graphics and camera feeds on the same screen
- Combines with AUX joysticks, cameras and SectionControl licence

The CCI 1200 ISOBUS terminal with colour 12.1" touchscreen is the optimum control unit for operating complex combinations. The terminal displays two machines and feeds from one camera on the same screen, providing a complete overview of all relevant information, which saves costs by eliminating the need for additional control units or camera screens.

Two machines controlled from one screen
The CCI 1200 controls two machines at the same time, so you can operate the BiG Pack and the bale accumulator from the same terminal! The advantage – easier use and cost savings as no extra terminal is necessary.

View machine data and camera feeds on the same screen
As another option, the operator can also view the images from one camera without installing another screen, saving costs and keeping the cab clutter-free for an all round view.

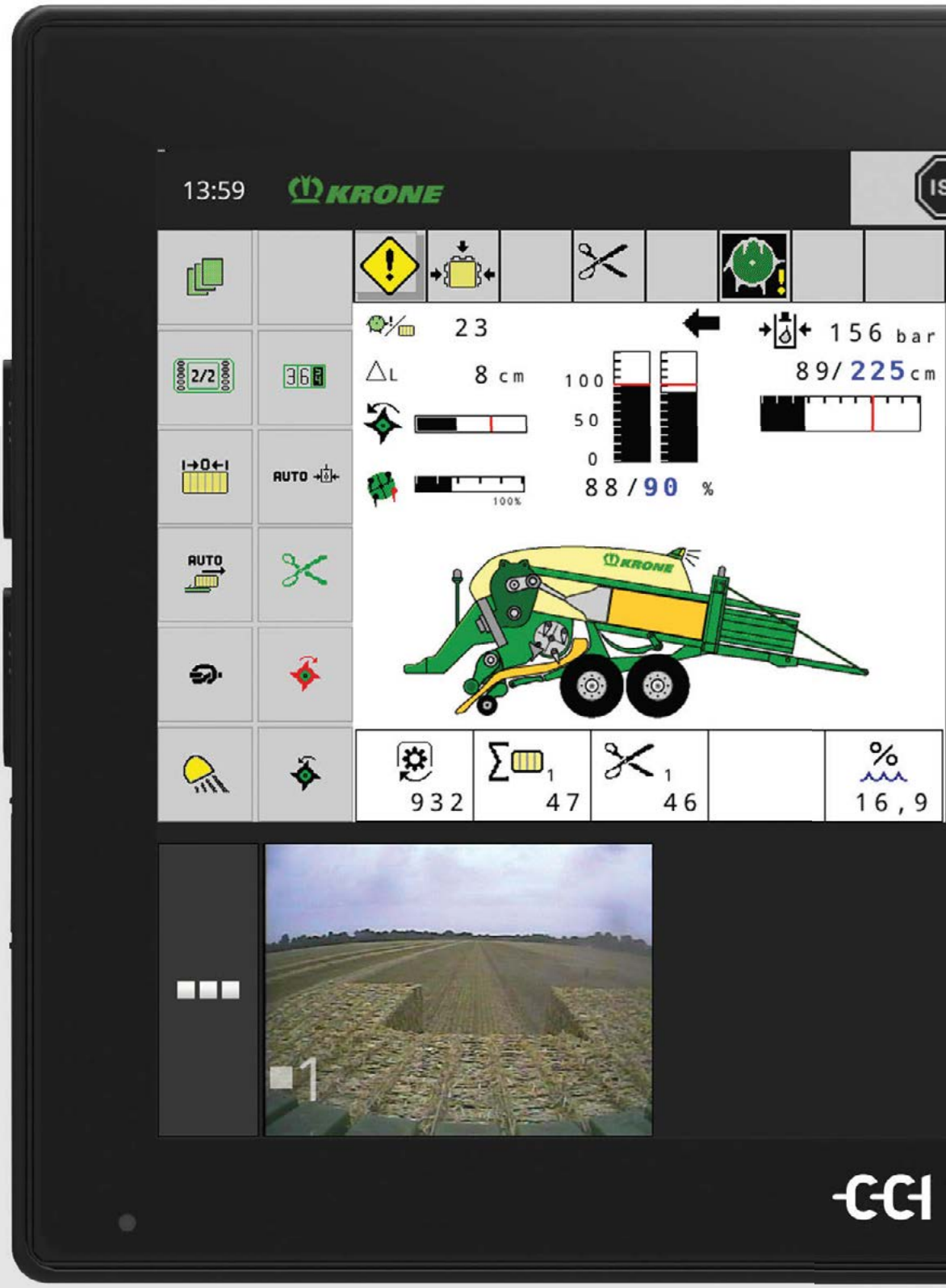
Customizable layout
The CCI 1200 can be mounted for landscape or vertical view to suit individual preferences and cab specifications.

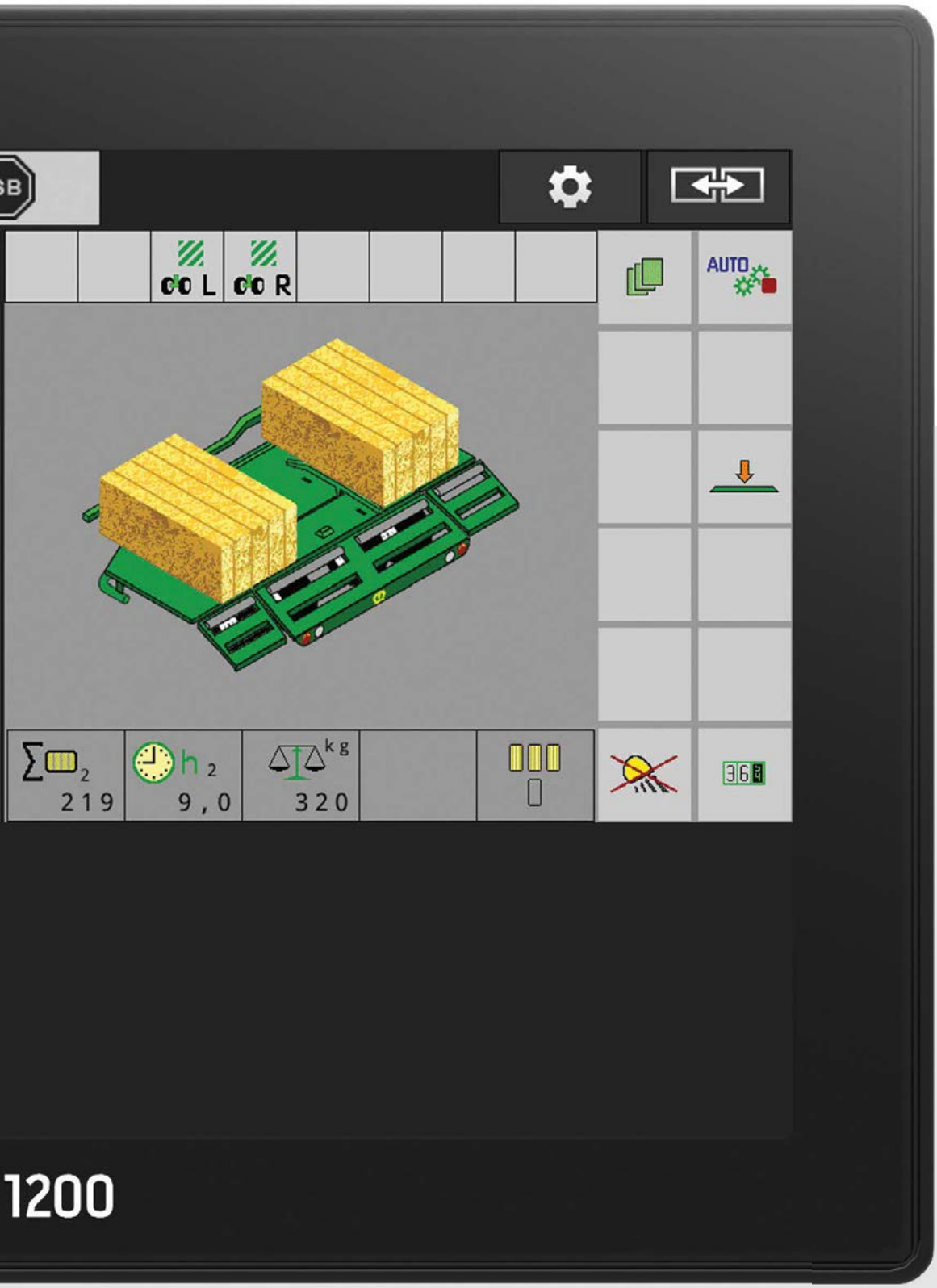
SectionControl
CCI 1200 also supports SectionControl, which eases operator strain. The unit can display the field map and the machine functions at once.

Great protection
The CCI 1200 terminal has a rubber shroud as standard, which protects it from shock loads and makes it easier to use.

The CCI 1200 with AUX joystick
Even more comfort comes from the AUX joystick that is available as an addition to the CCI 1200 for enhanced ergonomics and intuitive use.

CCI 1200 ISOBUS terminal





CCI 1200 ISOBUS terminal Original size

AUX joystick **WTK**

AUX-N

- Joystick for convenient machine control
- Up to 24 customizable functions on three different levels
- Physical controls for use without looking
- Integrated in the ISOBUS or the terminal

The AUX joystick WTK offers optimized ergonomics. Three menu levels are navigated from eight buttons, offering as many as 24 customizable functions. Providing haptic feedback, this control unit allows operators to use it without looking at it. Also, thanks to its ergonomic design, the unit falls easily to hand for fatigue-free use on long working days.

Single-handed use
The keys give haptic feedback, so operators can control the machine without looking at the terminal. This way, they can operate even complex combinations single-handed.

Key functions
The terminal screen shows the functions that are assigned to the keys. The red, yellow or green LED on the keypad indicates which level is currently selected, making sure errors are avoided.

AUX joystick WTK
Original size

CCI A3 AUX Joystick

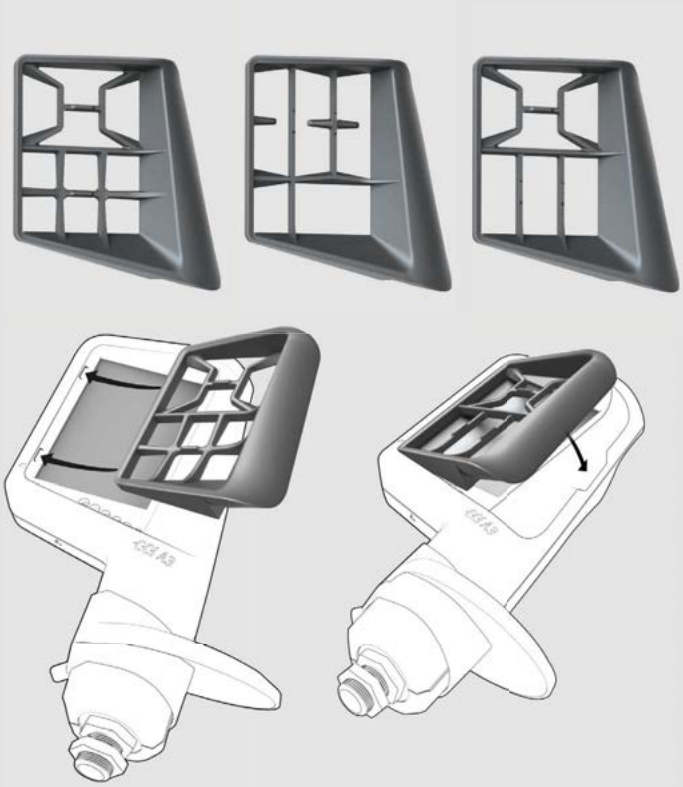
AUX-N

- Addition to a CCI terminal
- Pictorial user interface is duplicated on the touchscreen
- Various grids are available for rearranging the keys
- Three navigation levels allow you to program up to 30 functions on the joystick

The CCI A3 AUX joystick optimizes user comfort and machine control The pictorial function keys on the joystick's touchscreen ensure that you always see what you are doing. Several grids are available, so you can choose the grid that best suits the work at hand.

Pictorial keys
The icons show the individual functions on the joystick itself, so you can also see which function you are activating. The keys provide colour and acoustic/vibration feedback, if programmed, to indicate exactly which function was just pressed.

Flexible layout
KRONE supplies various grids which allow you to arrange the keys to create the most convenient layout for the job at hand. This provides optimum user comfort as you use the same joystick for all machines.



CCI A3 AUX Joystick
Original size

ISOBUS **tractor** terminal

- All controls are integrated in the terminal
- All ISOBUS terminals are suitable for all KRONE machines with ISOBUS software
- No extra terminal needed in the cab
- An AUX joystick can be added

As the KRONE machines have ISOBUS software, they can be operated from the ISOBUS terminal. Likewise, the AUX joystick on a tractor can be combined with the tractor terminal as well as with the KRONE terminal. This makes it possible to customize machine control to the current conditions.

Compatibility, thanks to ISOBUS
As KRONE machines are AEF-certified to the ISOBUS standard, they can also be operated from the terminals of other manufacturers. Using the existing tractor terminal to operate your KRONE machine leaves your cab clutter-free and and you enjoy an uninterrupted view on all sides.

Using the tractor terminal
Using the multi-functional ISOBUS terminal saves costs as it eliminates the need for a separate control unit for each implement. In addition, it saves time when swapping machines, because the terminal does not have to be transferred.
Moreover, operators use just one universal software. All these benefits make your work day easy and smooth.

Camera systems

- A camera for heavy-duty agricultural applications
- Water-tight and pressure-washer-proof (IP68 and IP69K)
- The 2.5 W lens heater ensures clear camera feeds in all types of weather
- Feeds are displayed either on the CCI 800 or CCI 1200 terminal or on a separate display screen

The camera systems give operators a full overview of the individual machine features and the immediate surroundings. This makes it possible to monitor sensitive processes like knotting or bale transfer and also view dead angles during road travel for improved safety.

Choose the display screen
The camera feeds are viewed on either a separate screen or the CCI 800 and 1200 terminals. Or, as a fourth option, on the tractor terminal. This gives users the choice of using the camera as a stand-alone device or as part of an integrated system.

The heavy-duty camera
The cameras are water-tight and pressure-washer-proof (IP68 and IP69K). The 4 mm window is heat-tempered and resistant to shock loads for longevity and reliability.
The integral 2.5 W lens heater prevents fogging and icing. The heater comes on automatically when temperatures drop beneath 5 °C which prevents condensation. This specification ensures that the camera is functional even in changing conditions.

SectionControl

TC-SC

- Lift and lower mowers and rotors automatically
- Enjoy better operator comfort
- Don’t cover the same area twice and keep the forage clean
- Avoid collisions with objects in the field

The SectionControl feature automatically raises an individual rotor within a rake or an individual mower in a combination, thereby reducing operator strain and increasing ease of machine use. As the same area is not covered twice, the forage is not unnecessarily contaminated with crude ash. Consequently, SectionControl increases machine reliability and forage quality.

Lifting and raising rotors and mowers automatically
SectionControl raises the individual rotors of a rake or individual mowers of a combination automatically and at the best point in time, which eases operator strain. SectionControl raises the individual rotors of a rake or individual mowers of a combination automatically and at the best point in time,

The terminal
The CCI 800 and CCI 1200 ISOBUS terminals provide a field map view. But you can also use the terminals of other manufacturers and have SectionControl activated such that you can use it on these terminals to operate your KRONE machine.

Improved digestibility
SectionControl reduces the amount of crude ash that is introduced to the forage. It ensures that an area is not covered twice, preventing the forage from being contaminated with soil.
This reduces the percentage of crude ash and increases palatability and digestibility.

Enhanced reliability
Obstacles in tall crops are usually difficult to see. These obstacles can be pinpointed in the map for SectionControl so that the machines are raised automatically to avoid collision with these objects and eliminate any risk of machine damage.

TIM – Traktor Implement Management

- With TIM, the implement controls the tractor
- Optimum sequence control reduces downtime and boosts efficiency
- Increased operator comfort as the combination carries out all sequences automatically
- Process consistency results in uniform bales

The Tractor Implement Management system enables the implement to control the tractor. As such, it eases operator strain and makes it much easier to operate the combination. At the same time, by optimizing the individual procedures, it reduces downtime while increasing throughputs and productivity.

Optimum machine control
With TIM, the round baler is operated automatically, which increases operator comfort and reduces operator fatigue. The automatic system ensures that machine productivity never declines during the long working day.

Improved productivity
Optimizing the processes reduces downtime, increases throughput, and boosts machine productivity. At the same time, consistent procedures ensure that the bales are uniform.

Automatic stops
When the baler signals that the target bale size has been reached, the tractor stops automatically. Then the net or film wrapping cycle is started automatically.

Automatic wrapping
After the net is applied, the rear door opens, the bale is ejected, and the door closes. The only thing the operator has to do is pull off the tractor. This is a safety provision.

More time for the important things

Farming 4.0 with KRONE

KRONE customers can choose between a number of practical solutions for managing their machine data. These include the KRONE Smart Telematics machine monitoring system and the universal data management platform agrirouter. Machine and fleet data are evaluated by NEXT Machine Management or AgForce. Another new offering is the E-Solutions Shop where you can download software applications and book extra engine output on demand and in real time.


agrirouter
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8:11 AM
Connected to AgriRouter
E-SOLUTIONS
XtraPower
Welcome to the
KRONE
E-Solutions Shop
Portal

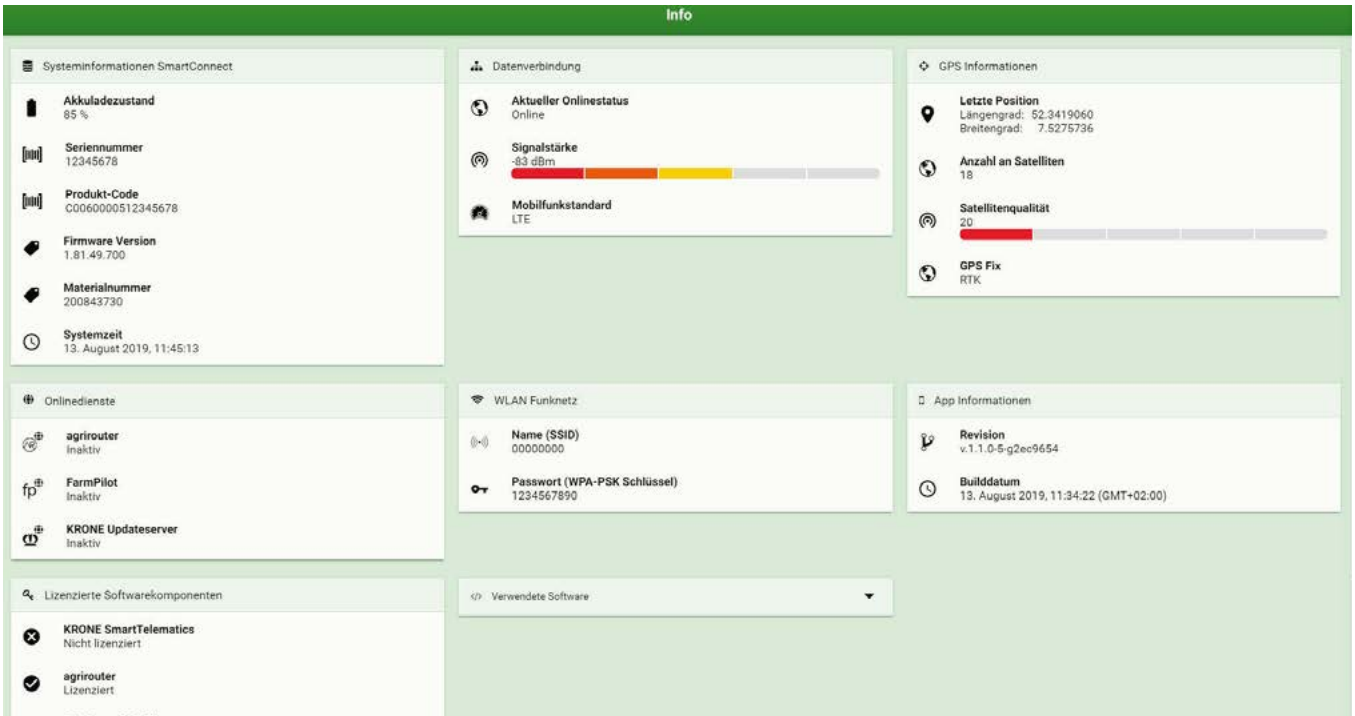
KRONE **SmartConnect** – the telemetrics unit

- This is the data management hardware
- Equipment includes cell phone, Wi-Fi and GPS signals, vibration logger
- Data sharing via agrirouter
- Data transmission to KRONE **Smart Telematics**
- Data sharing during **AutoCalibrate**

The KRONE SmartConnect telemetrics unit is the hardware element of the KRONE data management system. The unit has a multiple-network SIM card that connects automatically to the best network for the current location.

Autologging
The autologging feature frees operators from any tasks concerning data management, allowing them to concentrate on the job at hand. Autologging means that the machine data are logged automatically for use in the documentation.

Connecting to any network
A multiple-network SIM card allows SmartConnect to connect to the network currently offering the best signal. If no network is available, the data are temporarily stored to the SmartConnect box for reliable, loss-free data communication.



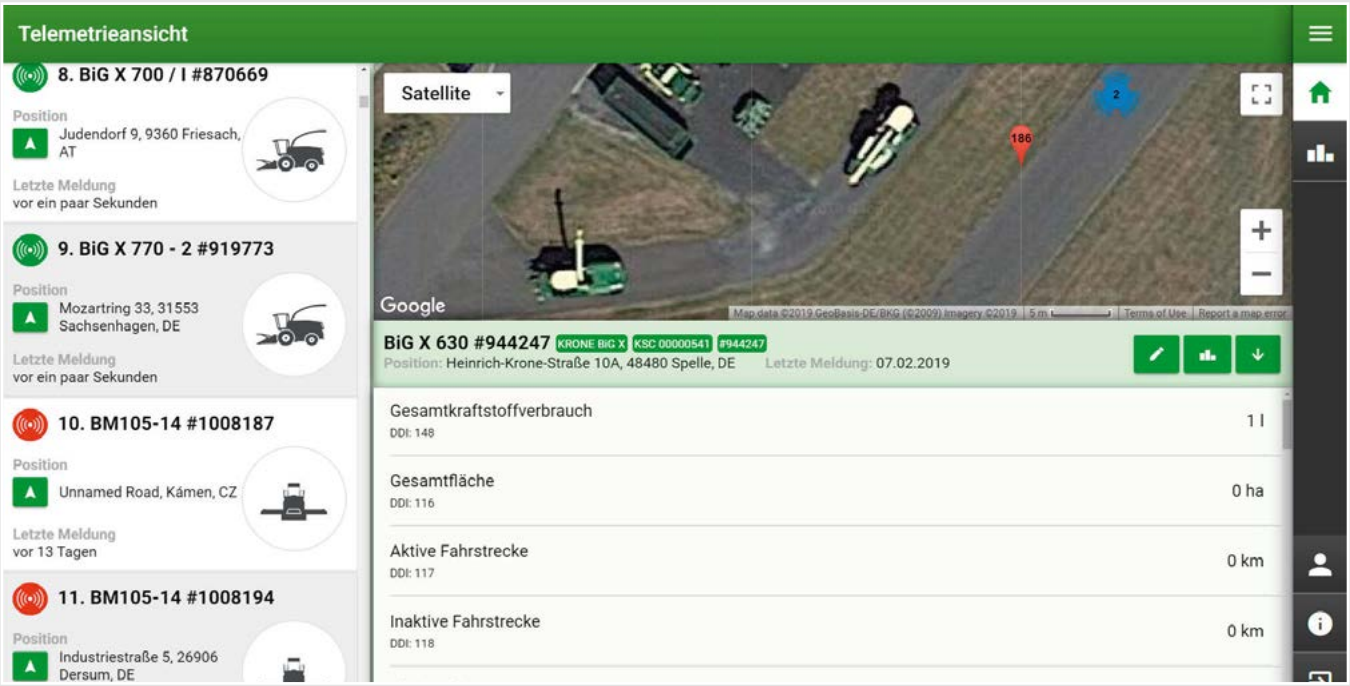
Settings

The KRONE SmartConnect telemetrics unit can be set up conveniently from any type of electronic device, such as a PC, smartphone or tablet. The connection is made using the KRONE SmartConnect-Box and Wi-Fi.

KRONE **Smart Telematics**

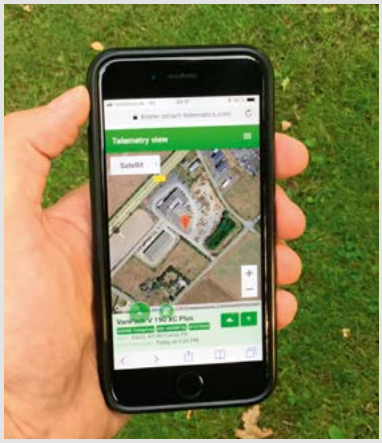
- Monitor work progress without a single phone call.
- Have data transmitted automatically and stay focused on the machine
- View machine data on a smartphone, tablet or PC
- Real-time data communication via KRONE **SmartConnect**

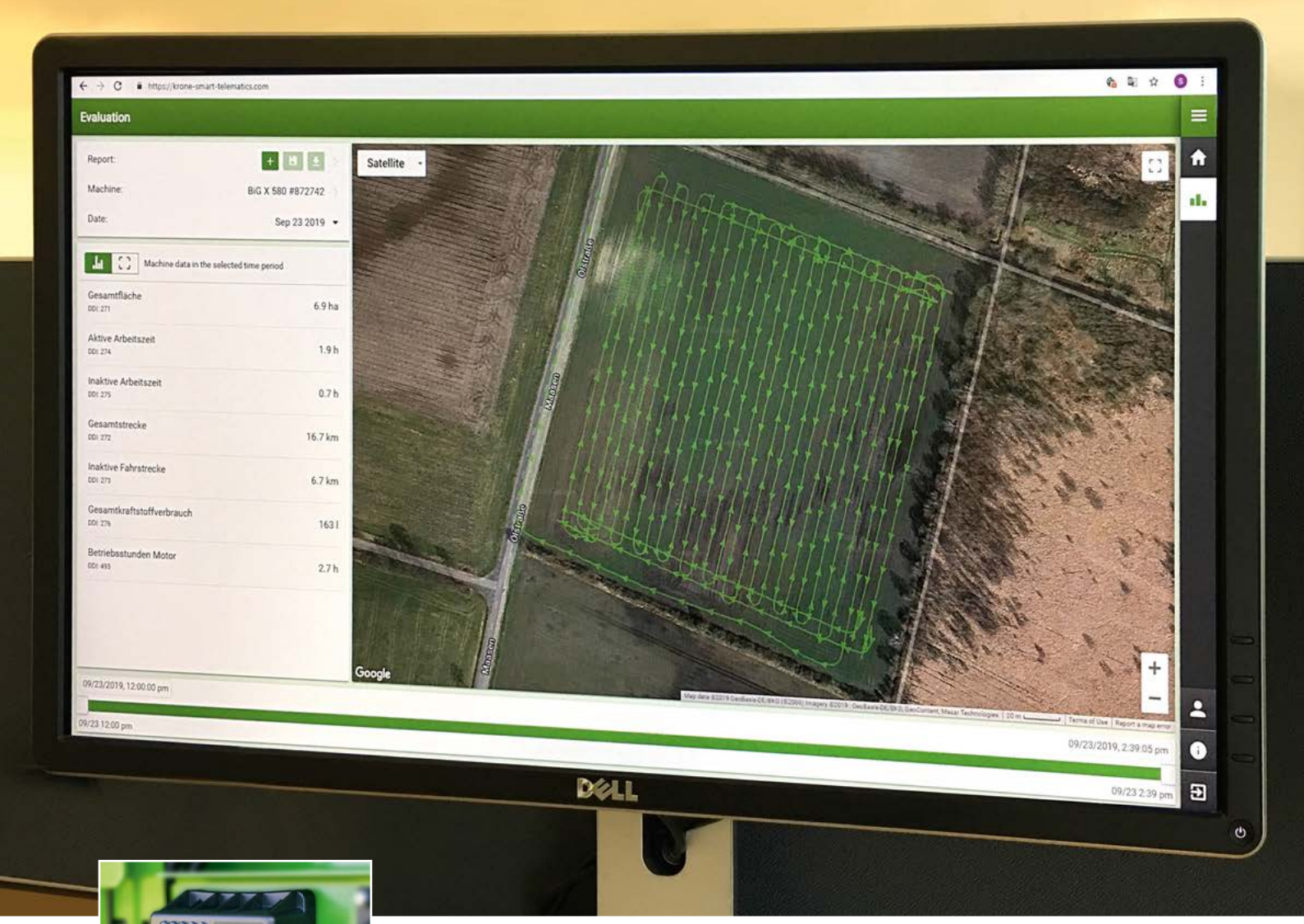
KRONE Smart Telematics offer fleet managers a bird's-eye view of all machines and their data, keeping them on top of what's going on in the harvest chain without having to make a single phone call. Tractor drivers know exactly where the forage harvester is and cross talk on the phone is history.



A bird's-eye view of the machine
KRONE Smart Telematics offer fleet managers a bird's-eye, real-time view of all machines and their data. Because all machine data are communicated in real time, managers are always informed about the machine and its performance, condition and position.

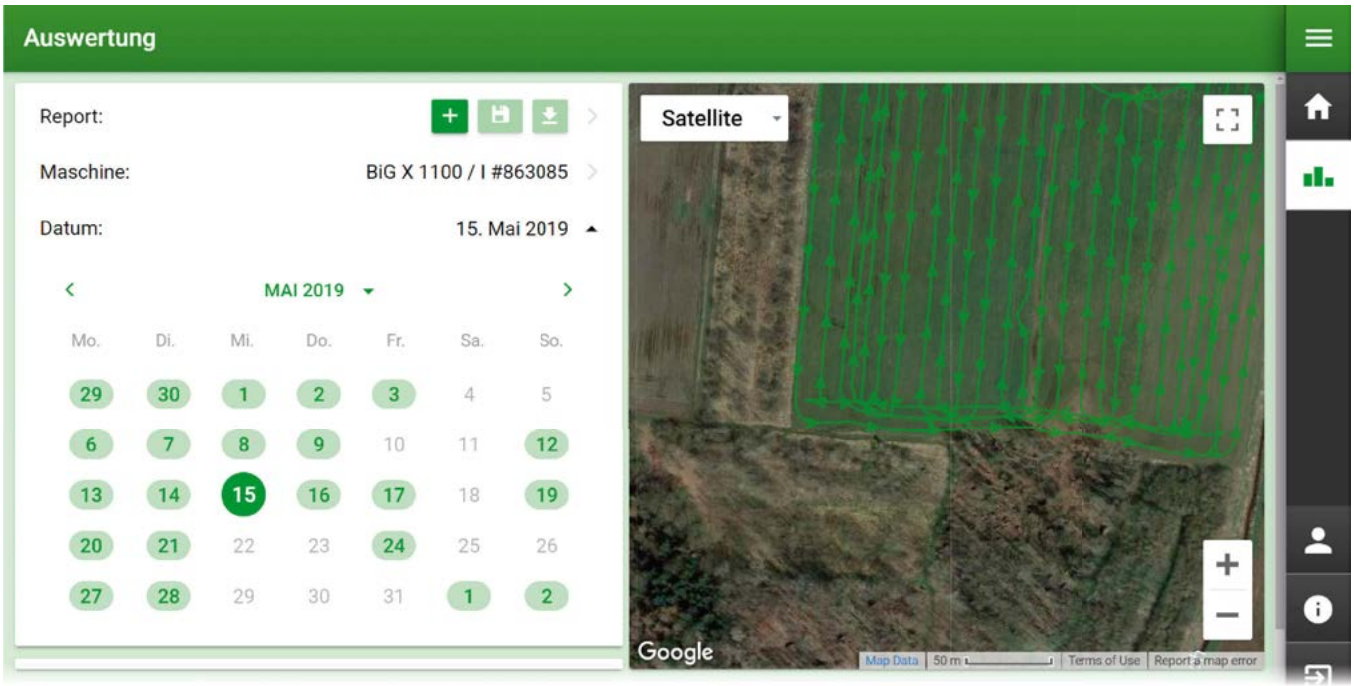
Available on all devices
The KRONE Smart Telematics application works equally well on a PC, smartphone or tablet in both the Android and iOS worlds, so you've always got your machine data in your pocket.





Data communication

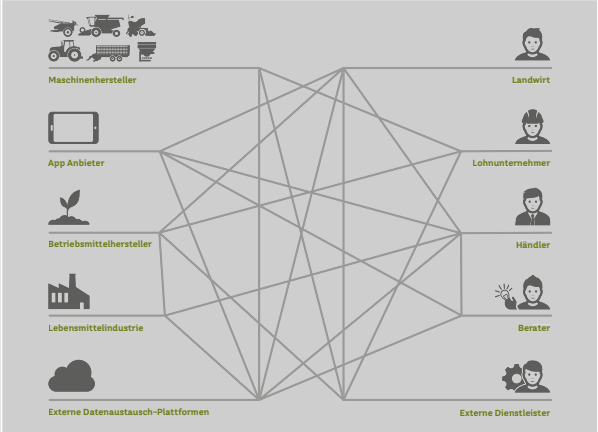
The KRONE SmartConnect controller sends the machine data directly to KRONE Smart Telematics. The data are stored and historical data can be retrieved and analyzed.



agrirouter – the data sharing hub

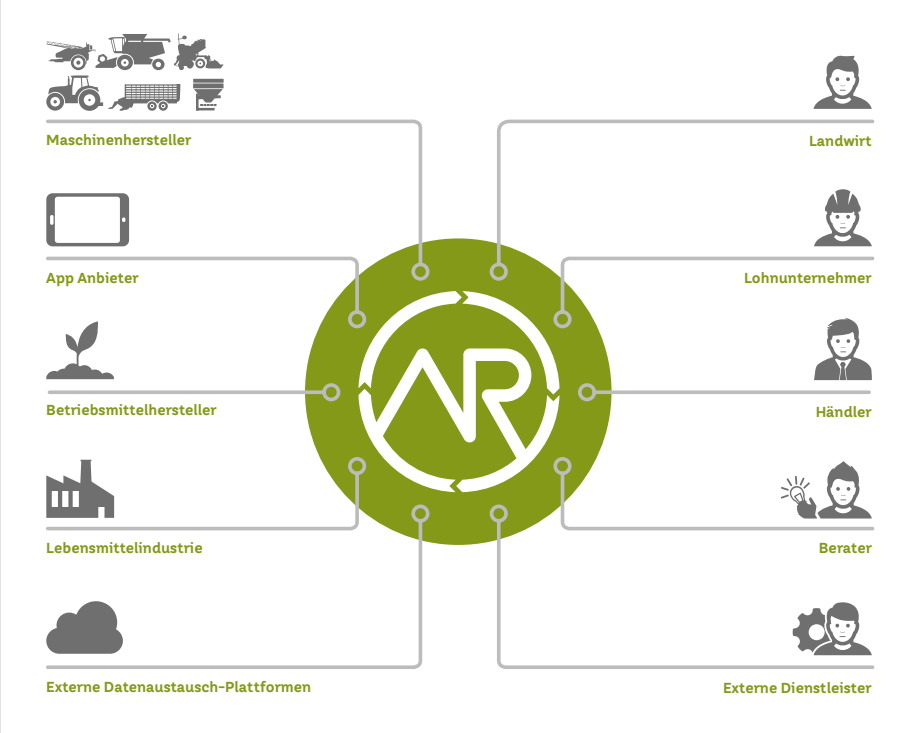
- Universal data sharing platform for farmers and contractors
- Universal interface for machines and farm software
- Data privacy stays in the hands of farmers and contractors
- agrirouter accepts mixed-brand fleets

agrirouter is an internet-based and universal data sharing hub for farmers and contractors that connects machines and farm software applications no matter the brand or developer. The universal approach allows owners of mixed fleets to use and share the data of all their machines – a huge benefit that saves time and increases productivity.



The world without agrirouter
Before agrirouter was invented, everybody had to set up, configure and update their data communication system individually – which was complicated, time-consuming and prone to error. To put an end to this situation, several agricultural manufacturers teamed up to develop the agrirouter.

The world with agrirouter
agrirouter offers everybody concerned with a specific machine one single and shared interface. This means everybody configures and updates only one data sharing system. This makes the system simple and straightforward to use. It reduces the time spent on updates and improves the reliability of the system. agrirouter also eliminates any compatibility issues. Every farmer and every contractor can now use the best particular software on the best particular machine to satisfy their individual needs.



Who is behind agrirouter

There are currently 13 farm equipment manufacturers in the project. In addition to these, further software and hardware providers offer agrirouter solutions. So it's worthwhile to enquire whether the manufacturer of your machine or software developer supports the agrirouter even if they are not in the list.

Wireless data communication

The machine data are wirelessly uploaded to the agrirouter via the KRONE SmartConnect telemetrics box. This is the hardware required to implement data management for KRONE machines.

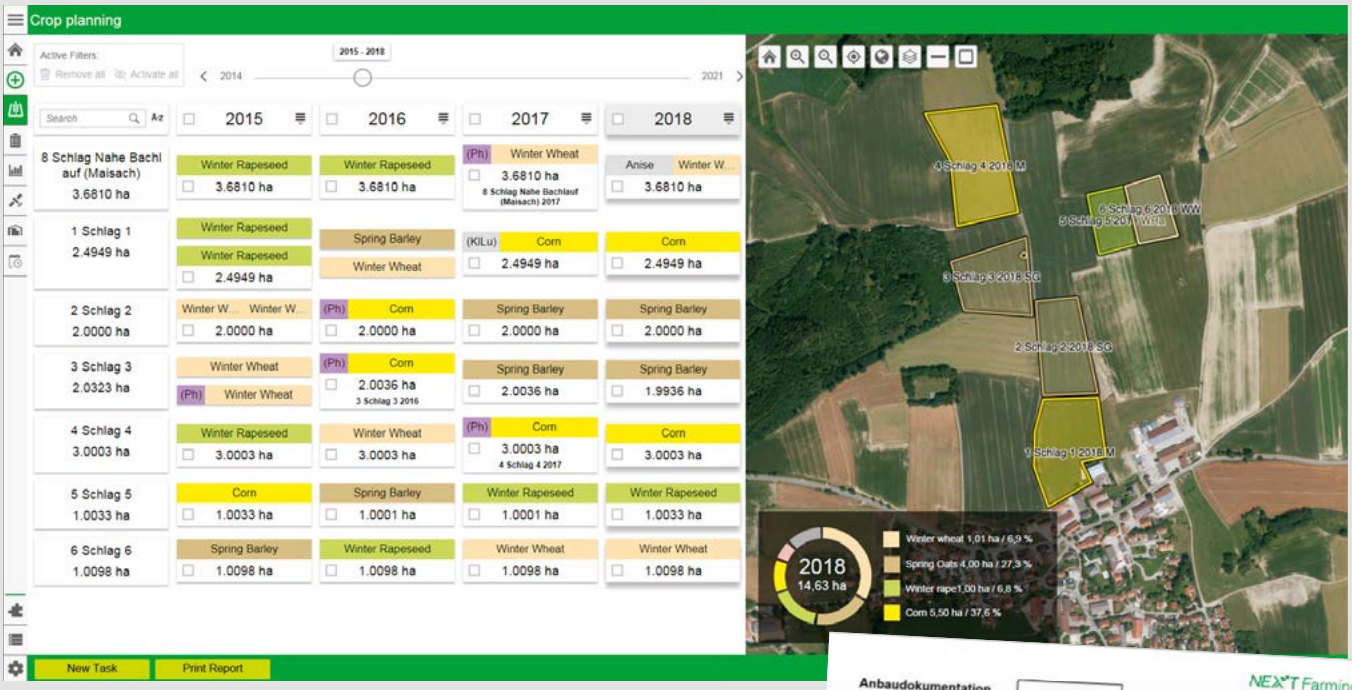
www.my-agrirouter.com

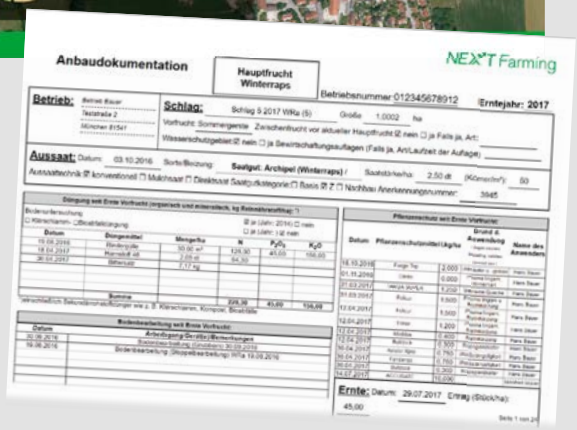
For more information on agrirouter, visit www.my-agrirouter.com. Here, you can set up your own agrirouter account free of charge.

The **NEXT Machine Management**

- Use and process mixed fleet data for your documentation
- Send job assignments to the machine
- Smart planning for maximum machine utilization and efficiency
- This is the heart of the modular NEXT Farming digital farm management system for digital farm management customized to individual needs

NEXT Machine Management intelligently links up mixed fleets for greater efficiency. You can use these data for documentation and evaluation purposes. Smart planning boosts your efficiency and optimizes machine and fleet productivity.



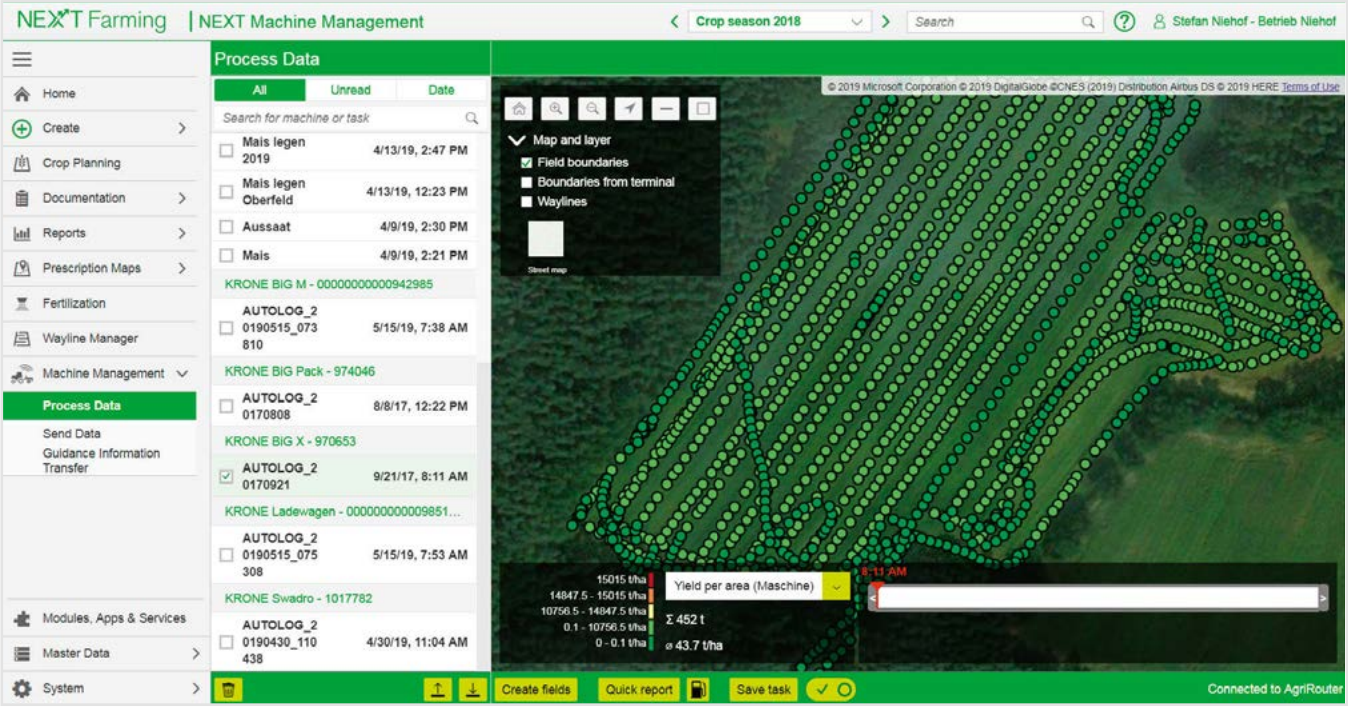


The modular structure

NEXT Machine Management forms the heart of the modular NEXT Farming digital farm management system for digital farm management customized to individual needs. At the heart of the application are the NEXT Cropping Plan and Documentation modules where all passes and treatments are entered and shown in clear overviews.

Documentation made easy

All cropping and machine data are collected in the field plot file and are then used for all statutory documentation and viability evaluations.



Entering the machine data

NEXT Machine Management imports the machine data automatically into the field plot file for comprehensive documentation of a given job, including the machine used and inputs applied. You also enter the agronomical data, creating a basis for future decisions.

The open system

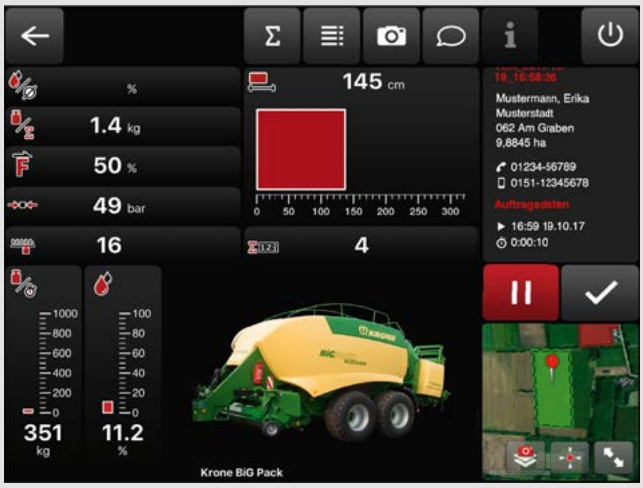
A joint development by FarmFacts and leading agricultural machinery manufacturers, the NEXT Machine Management software application covers all areas of farming.

The **CCI.Control Mobile** data management app

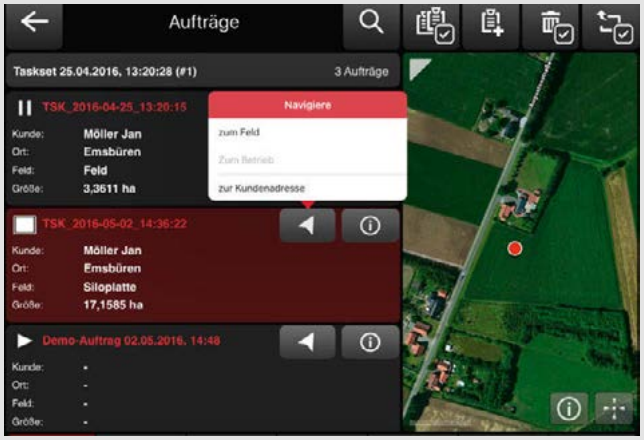
- Convenient data management from an iPad
- Job management and machine data collection
- Complete customer and field log
- Navigation up to the field gate

The CCI.Control Mobile App allows you to manage your machine data conveniently from the iPad. Receiving jobs, navigating to the field, monitoring productivity levels and transmitting the finished jobs can be done all from this app, making processes smooth and efficient.

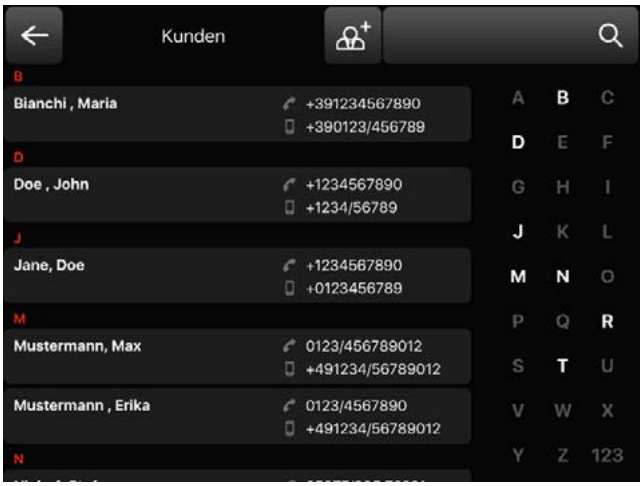
The clear menu
Its clear, flat menu architecture makes the app very user friendly, simple and easy to work with. The black background ensures glare-free work at night.



Convenient data management
The live view provides all necessary machine data at a glance. Besides, photos and comments are easily included in the job so you can easily recap specific aspects of a job even after harvest has long been completed. No data are lost due missing references.

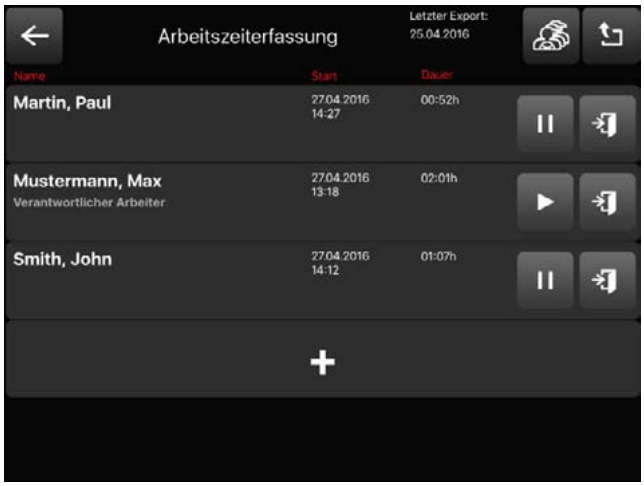


Navigating right up to the gate
The navigation software ensures no time is lost in travel. Drivers won't have to drive to the farm first to get road instructions but go to the field directly. Even if they are unfamiliar with the area, they won't make detours and are more productive. Managers save time as briefings are no longer necessary.



Comprehensive customer log

Operators can retrieve all customer information from the app. These include contacts, fields and field entrances, which helps avoid farming the wrong field. No time is lost checking back.



Exact job time log

The app also logs the time spent on a job including start and end of work and the breaks This makes billing straightforward and easy. No issues with transposed numbers, poor handwriting or lost time sheets.

Wireless data communication

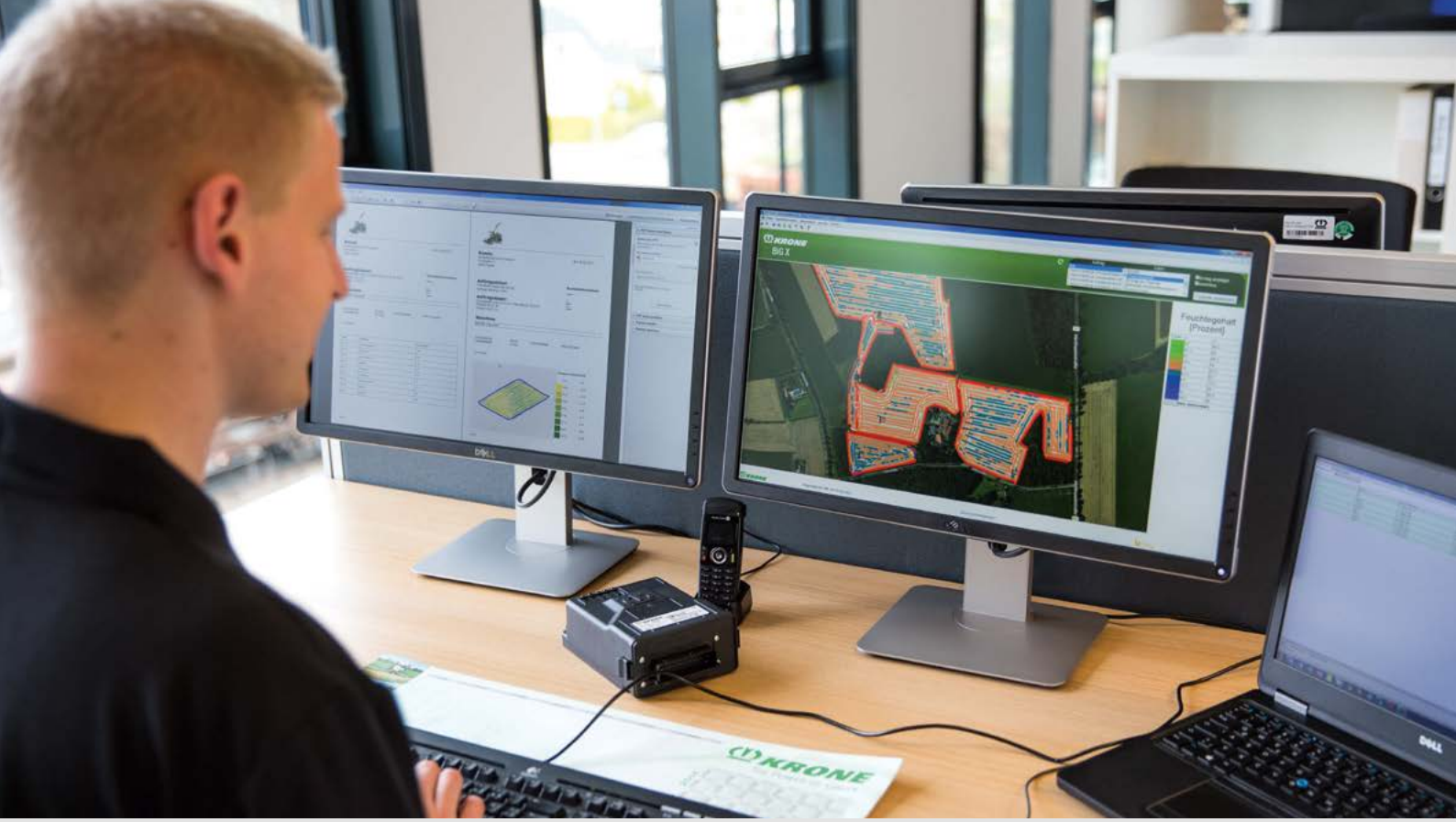
The machine data are wirelessly uploaded from the machine to the iPad using the Wi-Fi signal provided by the KRONE SmartConnect telemetrics box. This is the hardware required to implement data management for KRONE machines.

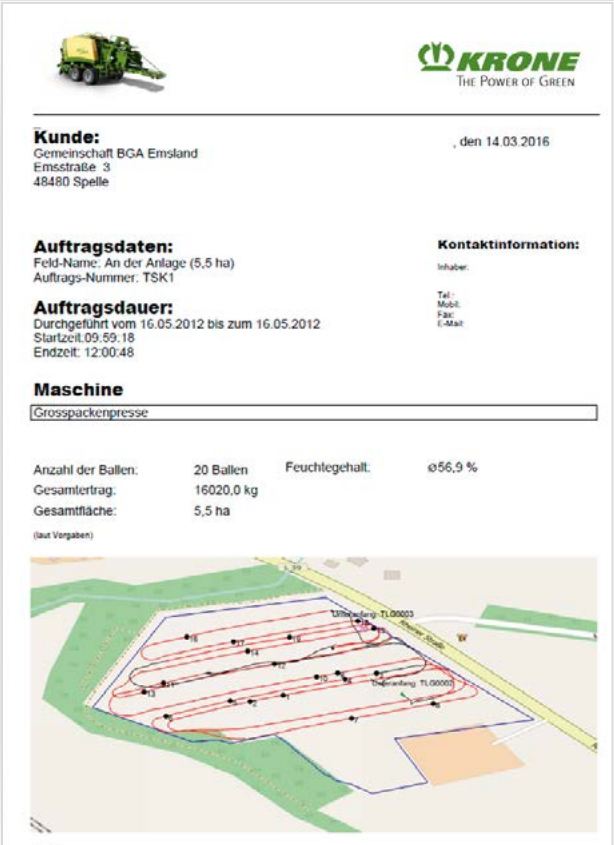
BiG Data Tools – the evaluation software

- Free evaluation software for KRONE machines
- Visualizes the collected machine data
- Prepares PDF reports in your corporate design
- Exports Excel files for further analysis

The BiG Data Tools is a software application that evaluates collected machine and job data that are collected in your system. These data can be presented to the farmer in PDF or Excel format as proof of the work done. BiG Data Tools is now available for free download from the KRONE Media website.

Visualizing machine data
The KRONE BiG Data Tools software visualizes the collected machine data which helps contractors provide evidence of their work to their customers.





KRONE
THE POWER OF GREEN

Kunde:
Gemeinschaft BGA Emsland
Emsstraße 3
48480 Spelle

, den 14.03.2016

Auftragsdaten:
Feld-Name: An der Anlage (5,5 ha)
Auftrags-Nummer: TSK1

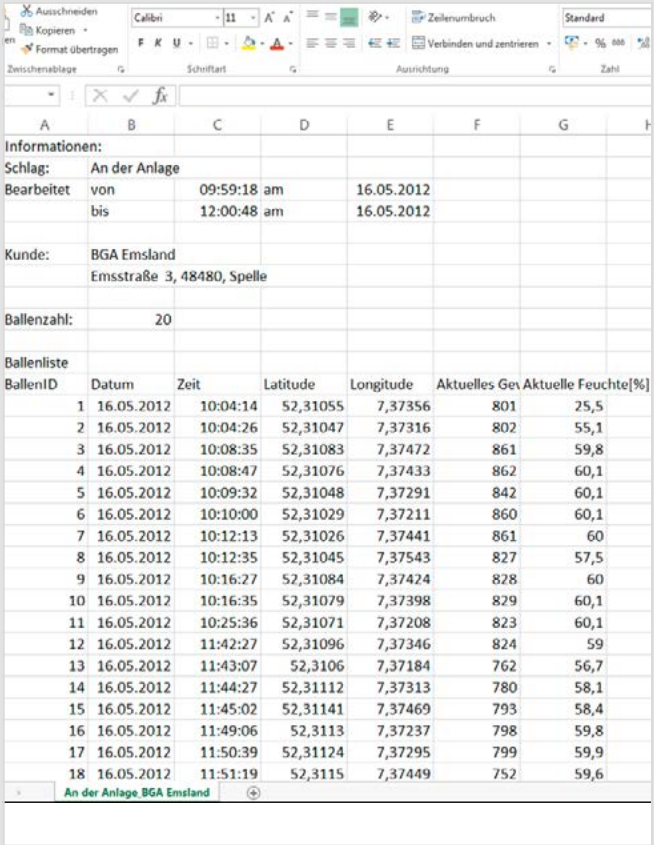
Kontaktinformation:
Inhaber:
Tel.:
Mobil:
Fax:
E-Mail:

Auftragsdauer:
Durchgeführt vom 16.05.2012 bis zum 16.05.2012
Startzeit:09:59:18
Endzeit: 12:00:48

Maschine
Grosspackenpresse

Anzahl der Ballen:	20 Ballen	Feuchtegehalt:	ø56,9 %
Gesamtertrag:	16020,0 kg		
Gesamtfläche:	5,5 ha		

(laut Vorgaben)



Informationen:

Schlag:	An der Anlage			
Bearbeitet	von	09:59:18	am	16.05.2012
	bis	12:00:48	am	16.05.2012
Kunde:	BGA Emsland			
	Emsstraße 3, 48480, Spelle			
Ballenzahl:	20			

Ballenliste

BallenID	Datum	Zeit	Latitude	Longitude	Aktuelles Gew	Aktuelle Feuchte[%]
1	16.05.2012	10:04:14	52,31055	7,37356	801	25,5
2	16.05.2012	10:04:26	52,31047	7,37316	802	55,1
3	16.05.2012	10:08:35	52,31083	7,37472	861	59,8
4	16.05.2012	10:08:47	52,31076	7,37433	862	60,1
5	16.05.2012	10:09:32	52,31048	7,37291	842	60,1
6	16.05.2012	10:10:00	52,31029	7,37211	860	60,1
7	16.05.2012	10:12:13	52,31026	7,37441	861	60
8	16.05.2012	10:12:35	52,31045	7,37543	827	57,5
9	16.05.2012	10:16:27	52,31084	7,37424	828	60
10	16.05.2012	10:16:35	52,31079	7,37398	829	60,1
11	16.05.2012	10:25:36	52,31071	7,37208	823	60,1
12	16.05.2012	11:42:27	52,31096	7,37346	824	59
13	16.05.2012	11:43:07	52,3106	7,37184	762	56,7
14	16.05.2012	11:44:27	52,31112	7,37313	780	58,1
15	16.05.2012	11:45:02	52,31141	7,37469	793	58,4
16	16.05.2012	11:49:06	52,3113	7,37237	798	59,8
17	16.05.2012	11:50:39	52,31124	7,37295	799	59,9
18	16.05.2012	11:51:19	52,3115	7,37449	752	59,6

An der Anlage_BGA Emsland

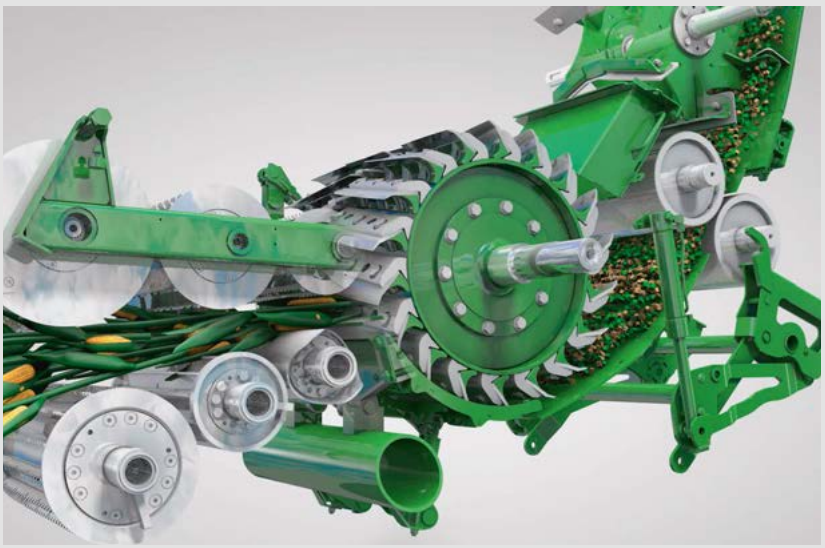
Corporate Design reports
The application also generates reports in PDF using the individual corporate design of the particular farmer or contractor.

Exporting into Excel format
In addition, you can export the data into Excel sheets to evaluate them for specific, individual needs.

KRONE **AutoCalibrate**

- AutoCalibrate automatically calibrates the yield metering system on your BiG X
- Exact yield metering even in varying conditions
- Eliminates the extra trip to the weighing bridge

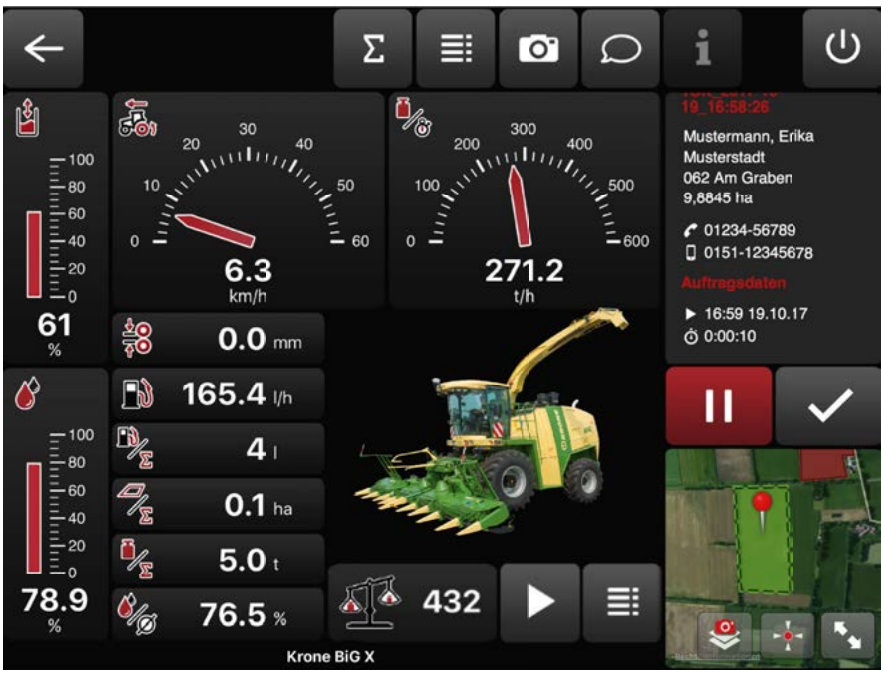
AutoCalibrate calibrates the BiG X yield metering system automatically by using the load weight data of the KRONE forage wagon. Regular calibration ensures the yields are accurately measured also in varying conditions. When several harvest chains are operating in the same field only one KRONE forage wagon needs to have the weighing system and only one KRONE SmartConnect controller is required. All other trailers in the fleet can be any type of trailers of any brand.



Exact yield metering
The CropControl yield metering feature on the KRONE BiG X computes the yield by measuring the crop flow. The crop flow is measured by using the speed and the distance between the two leading pre-compression rollers. Regular calibration ensures that the yield metering system delivers accurate readings even in varying conditions.

One for all
Only one KRONE forage wagon with a weighing system and one KRONE SmartConnect controller are required when several harvest chains are working in the same field. All other trailers in the fleet can be any trailer from any make. This gives you maximum flexibility when setting up your harvest chain.

AutoCalibrate (calibrated yield metering)

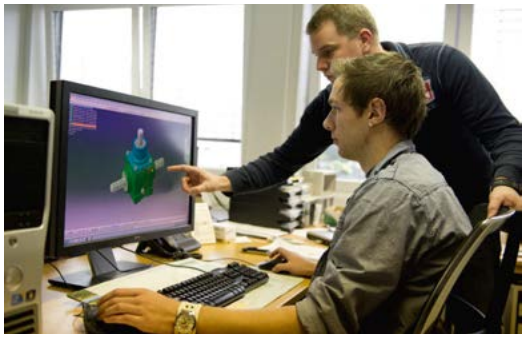


Easy operation
The system is used from the CCI.Control Mobile App. The BiG X operator simply confirms data reception only once. The weighing results are not keyed in manually, which eliminates the risk of transposed figures and typing errors. The operator verifies the data to ensure that the correct data are used for calibration. This may be crucial when the calibrating machine is being filled by two foragers at the same time.

Reliable data communication
The forage wagon and the BiG X share data via their SmartConnect controllers. This has integral GPS which ensures the individual load data from the forage wagon data are assigned to the right BiG X. Harvest chains can be reshuffled during the day without having to reprogram the AutoCalibrate system.

Maschinenfabrik Bernard KRONE

Perfect in every detail



Innovative, proficient and close to our customers – these are the keywords that mark the philosophy of our family-owned company. As a forage specialist, KRONE manufactures disc mowers, tedders, rakes, forage wagons and silage trailers, round and square balers as well as the high-capacity and self-propelled BiG M mower conditioners and our BiG X forage harvesters.
Quality made in Spelle – since 1906.

Your KRONE dealer

KRONE
THE POWER OF GREEN

Maschinenfabrik Bernard KRONE GmbH & Co. KG

Heinrich-Krone-Straße 10
D-48480 Spelle

Phone: +49 (0) 5977 935-0
Fax: +49 (0) 5977 935-339

info.ldm@krone.de | www.krone.de

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