



GA 13031 – GA 13231 – GA 15231

Four rotor central delivery rake

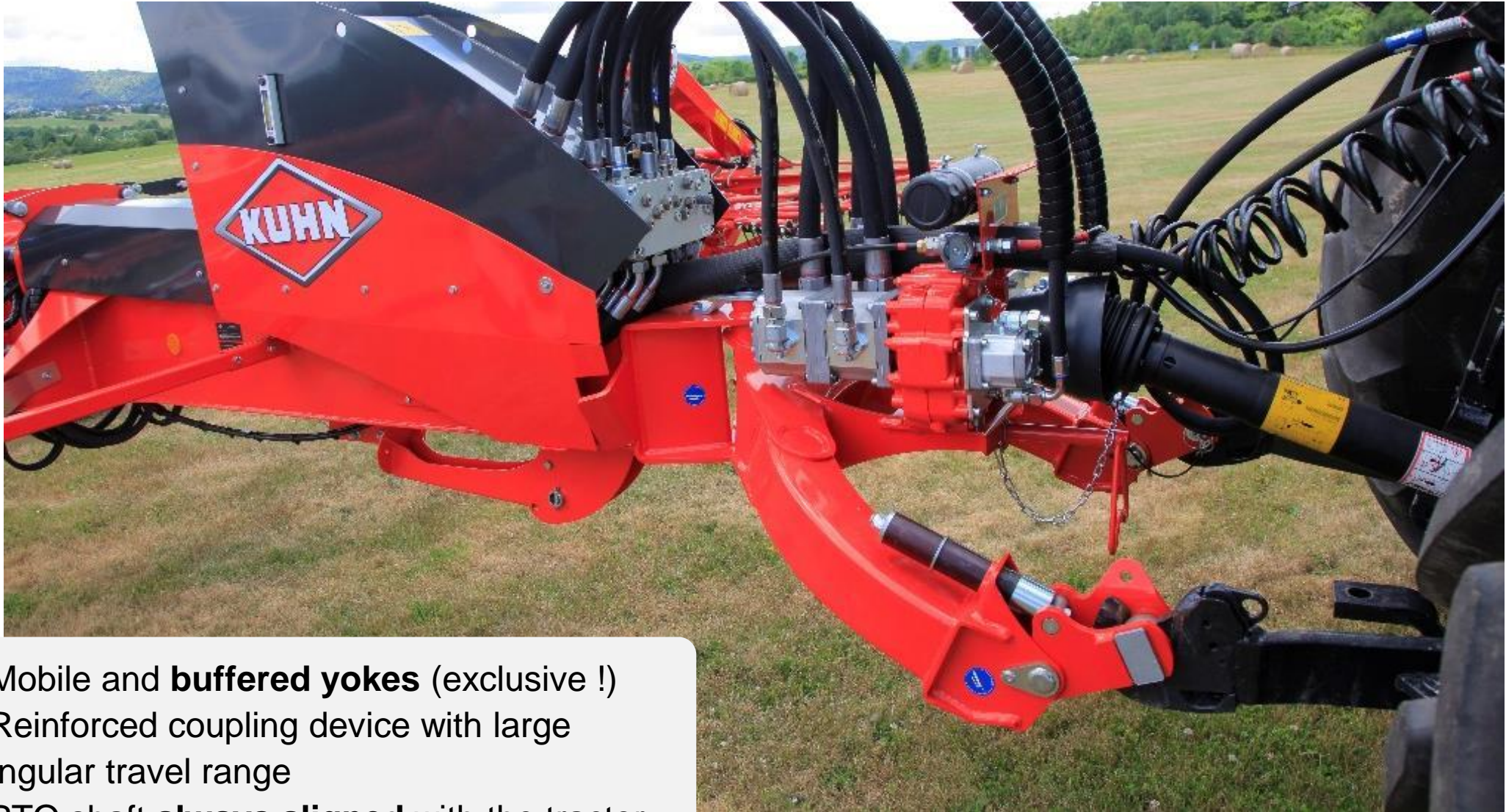
Versatile, efficient, robust



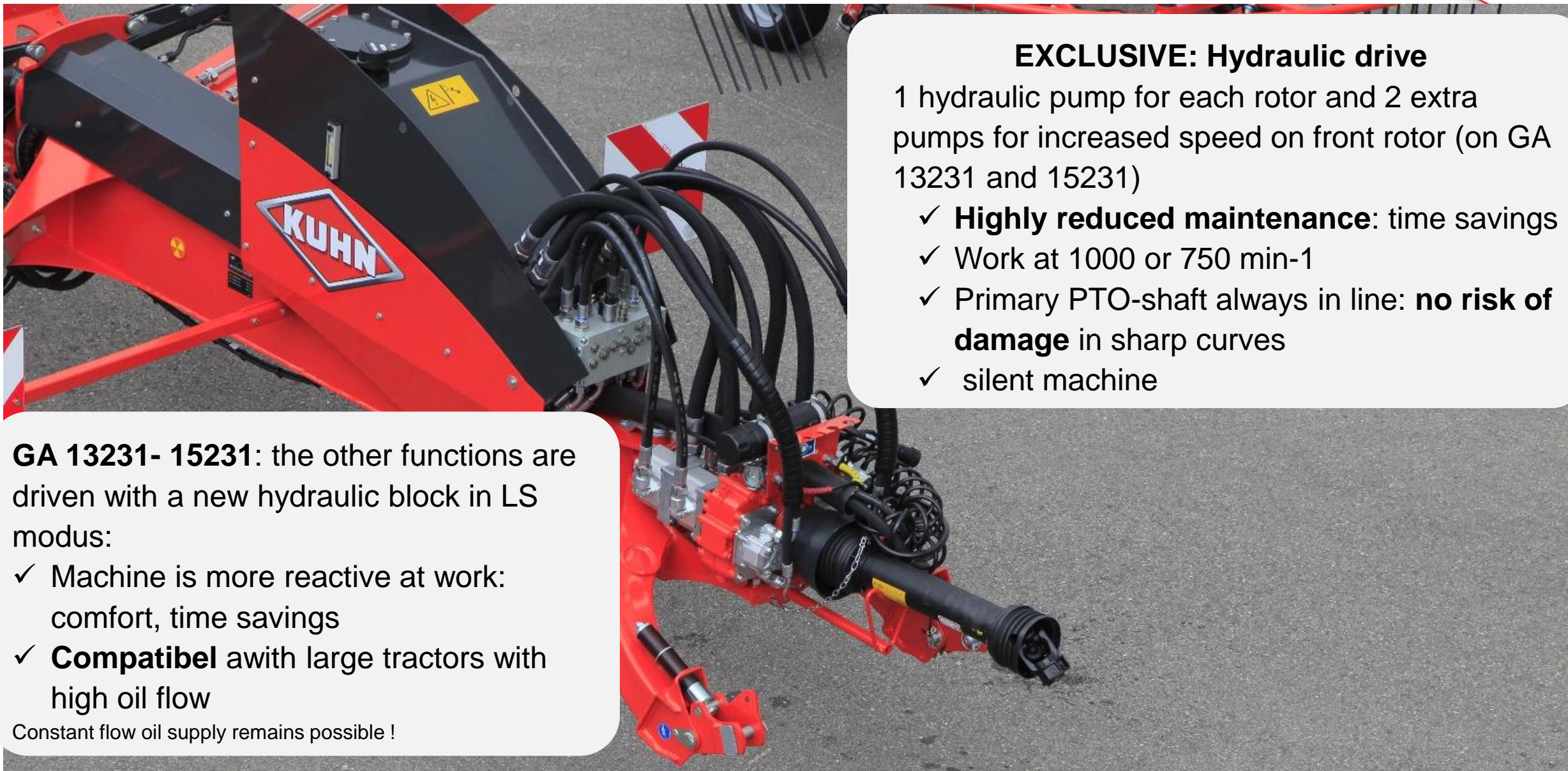


Working widths:

- GA 13231: 8.40 to 12.50 m
- GA 13231: 8.40 to 12.50 m
- GA 15231: 9.50 to 14.70 m



- ✓ Mobile and **buffered yokes** (exclusive !)
- ✓ Reinforced coupling device with large angular travel range
- ✓ PTO shaft **always aligned** with the tractor



EXCLUSIVE: Hydraulic drive

1 hydraulic pump for each rotor and 2 extra pumps for increased speed on front rotor (on GA 13231 and 15231)

- ✓ **Highly reduced maintenance:** time savings
- ✓ Work at 1000 or 750 min-1
- ✓ Primary PTO-shaft always in line: **no risk of damage** in sharp curves
- ✓ silent machine

GA 13231- 15231: the other functions are driven with a new hydraulic block in LS modus:

- ✓ Machine is more reactive at work: comfort, time savings
- ✓ **Compatibel** awith large tractors with high oil flow

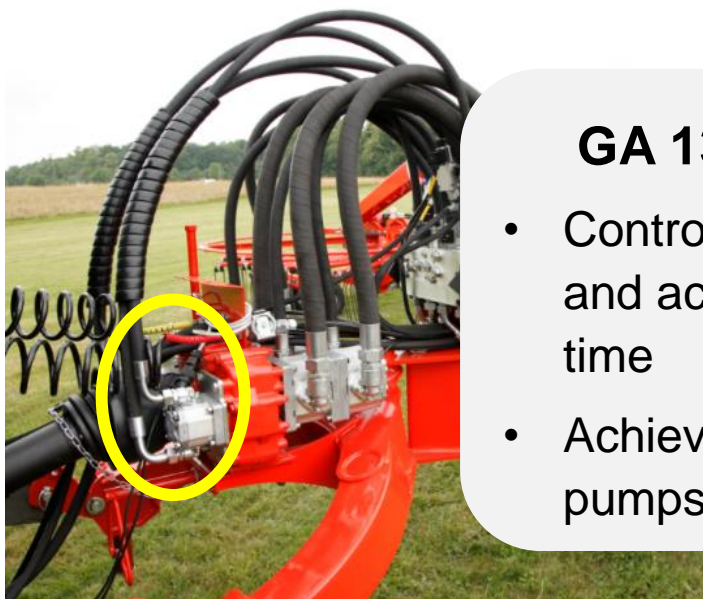
Constant flow oil supply remains possible !

Hydraulic rotor drive: “Boost Function”



EXCLUSIVE: front rotors can rotate 20% faster than the rear rotors:

- ✓ The forage is projected further to the centre of the machine
- ✓ Reduced risk of forage knotting for better drying quality and easier subsequent work.



GA 13231 and GA 15231

- Controlled from the control box, and activated or deactivated any time
- Achieved by using 2 additional pumps



GA 13031

- No boost fonction

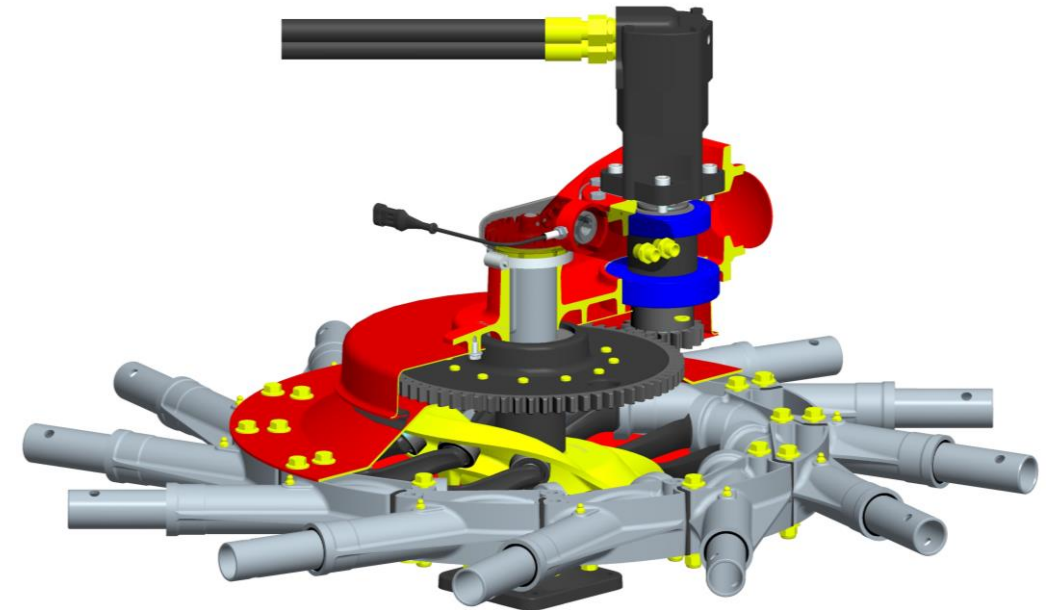


Hydraulic rotor drive:

- No drive shafts to grease
- No gearbox to maintain

➔ Less downtime, reduced labour cost/time for maintenance

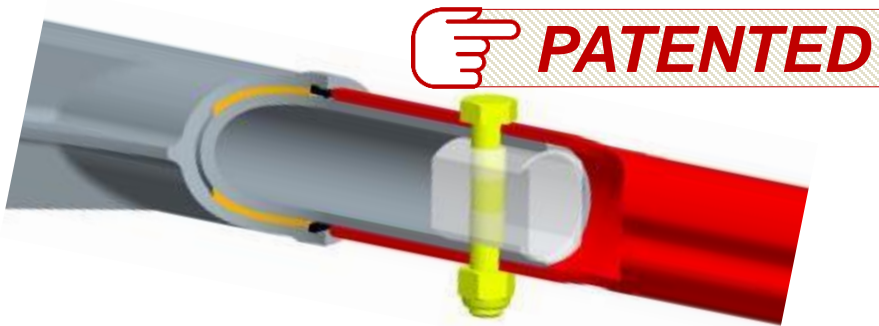
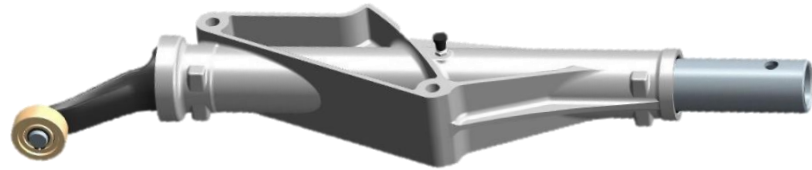
Quieter machine during work



Masterdrive technology :

- Hydraulic drive: only one bull gear reduction
- Bull gear is more robust than an usual bevel gear reduction

GIII rotor: light and reliable



- ✓ Softer cam profile, larger roller (Ø47 mm, 17,5 mm wide)
- ✓ Higher lever arm (A) → less pressure on the roller
- ✓ Forged and welded swivelling shaft: absolutely reliable attachment
- ✓ Aluminium alloy housing
- ✓ High diameter tube axle Ø45 (instead of smaller but heavier solid axle) → increased rigidity
- ✓ Attachment to the pivoting shaft by bolt with inner sleeve nut and outer nut



KUHN'S TECHNICAL STRENGTHS

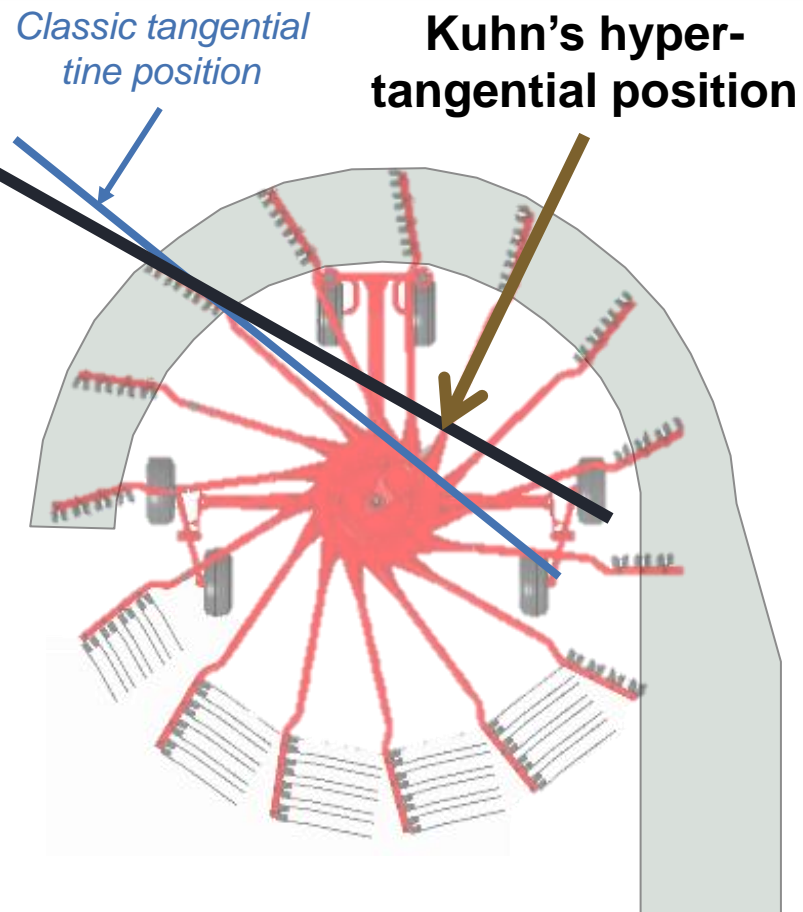
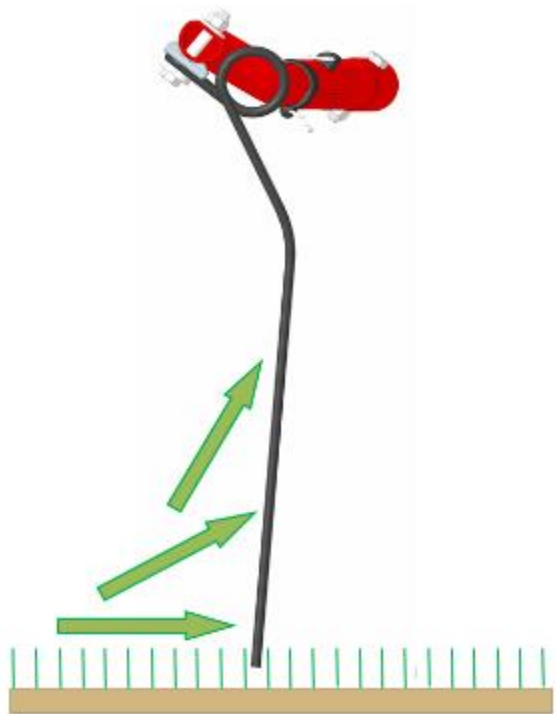
- ✓ **Stronger and easier to maintain**
- ✓ **Lighter**

Kuhn's tine attachment

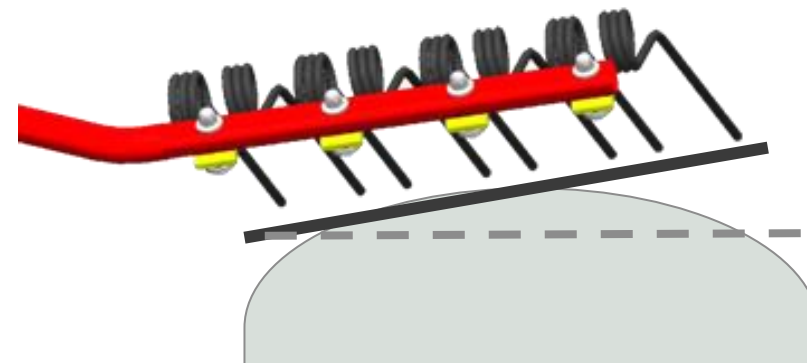


KUHN : Free coils = flexible, efficient, long-lasting

- Incurved tines allows forage transport far from the soil
- **Limits forage pollution**



- **Double bent arm gives a better clearance** while forming windrow
- The arm is bent backwards so it's **pushing forage outside**
- The forage is not caught again once the windrow is delivered



KUHN'S AGRONOMIC BENEFITS

- ✓ **Better raking**
- ✓ **Better windrow forming**

Excellent raking quality and windrow formation, even on hilly ground



✓ 3D rotor articulation with a large angular travel range



All rotor wheels pivot

- ✓ Avoids the risk of damaging the crop cover

Selectable according to model :

16 x 6,5-8

16 x 9,5-8 (soft land)

18 x 8,5-8 (to reserve in areas with « higher mowing height »)

Wheels positioned very close to the tines and distanced from each other:

- ✓ Excellent steering for ground following
- ✓ Highly stable for high quality and fast work output

GA 13231 and GA 15231

Adjusted from the cab (simultaneous or individual):
hydraulic motor with a locking device

→ **Reliable and easy setting**



GA 13031

Individual manual setting of the height by
crank handle on each rotor.

→ **Simplicity of use**



All models are equipped with an indicator
mounted on each rotor



Variable working width



All widths adjustable during work from the cab

- Windrow width = rear rotor width
- Working width = front rotor width



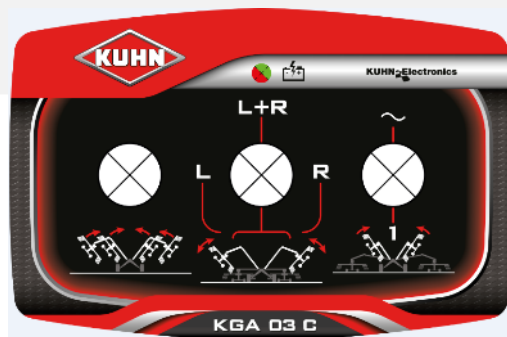
Width control

- GA 13231 and 15231: Isobus terminal
- GA 13031: 2 DA valves

GA 13031



- 1DA front rotor extension adjustment
- 1DA rear rotor extension adjustment
- 1SA + Free return for rotor lift
 - Front rotors lift first followed by the rear rotors
 - KGA 03C control box for independent lift of the front rotors only



GA 13231 – GA 15231



Via ISOBUS terminal:

- Working width adjustment
- Windrow width adjustment
- Simultaneous or individual rotor lift
- Time delay setting for the lift sequence of the front and rear rotors
- ...



High rotor clearance on headland:

- ✓ Rotor height can be **preselected automatically** in the control box
- ✓ Rotor lift **simultaneously or individually**
- ✓ Rotor height selection on headland independent from the selected working width
- ✓ Comfort of work with **headland sequence**, which is also **compatible with triangular plots**





“Jet Effect”: the rotor rear touches down before the front

- ✓ gentle touchdown, sward protected, no jolting on the tines



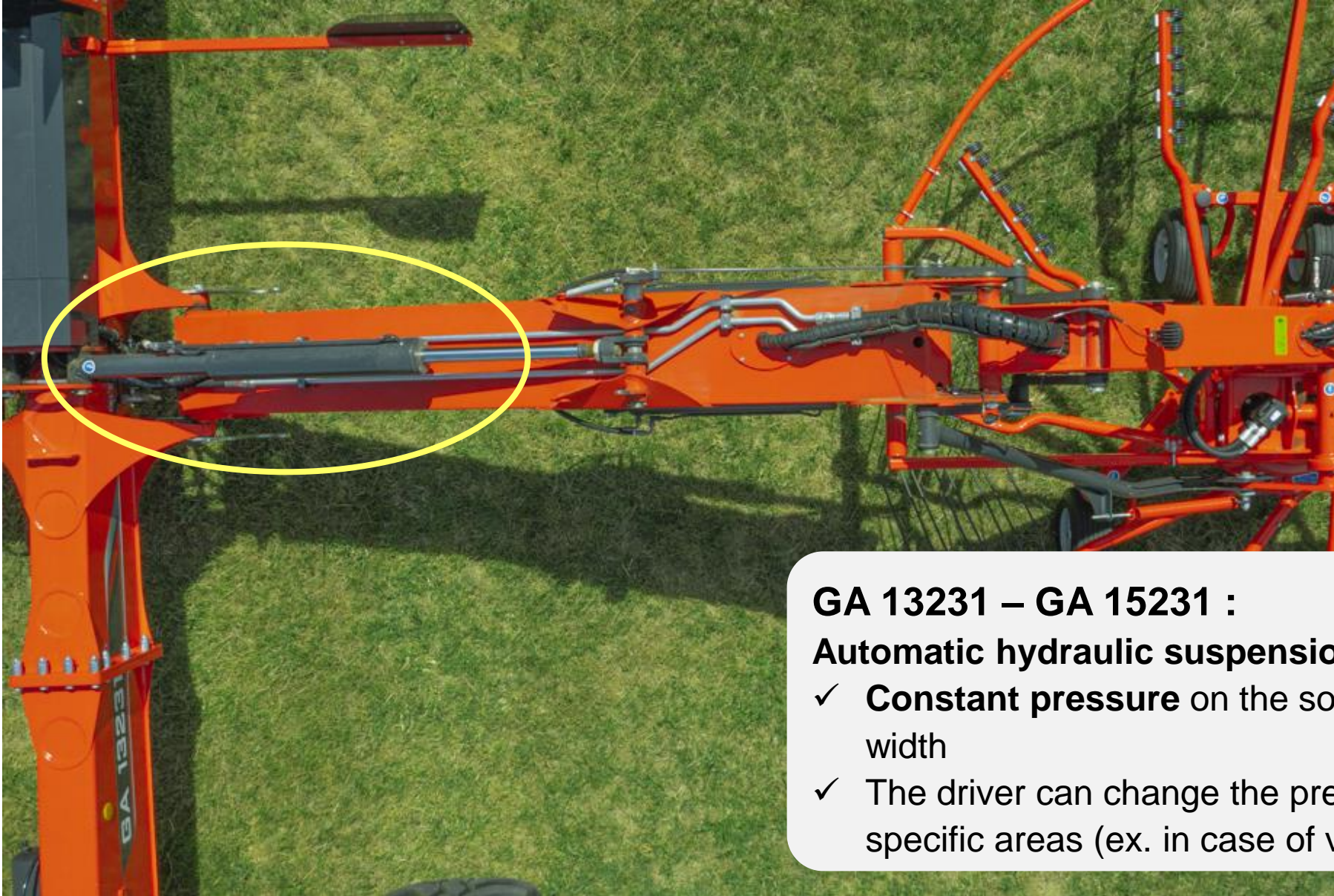
GA 13231 – 15231: Hydraulic cylinder which automatically locks the rotor pivot during lift

- ✓ Improved rotor stability in headland position and during road transport



Suspension with springs

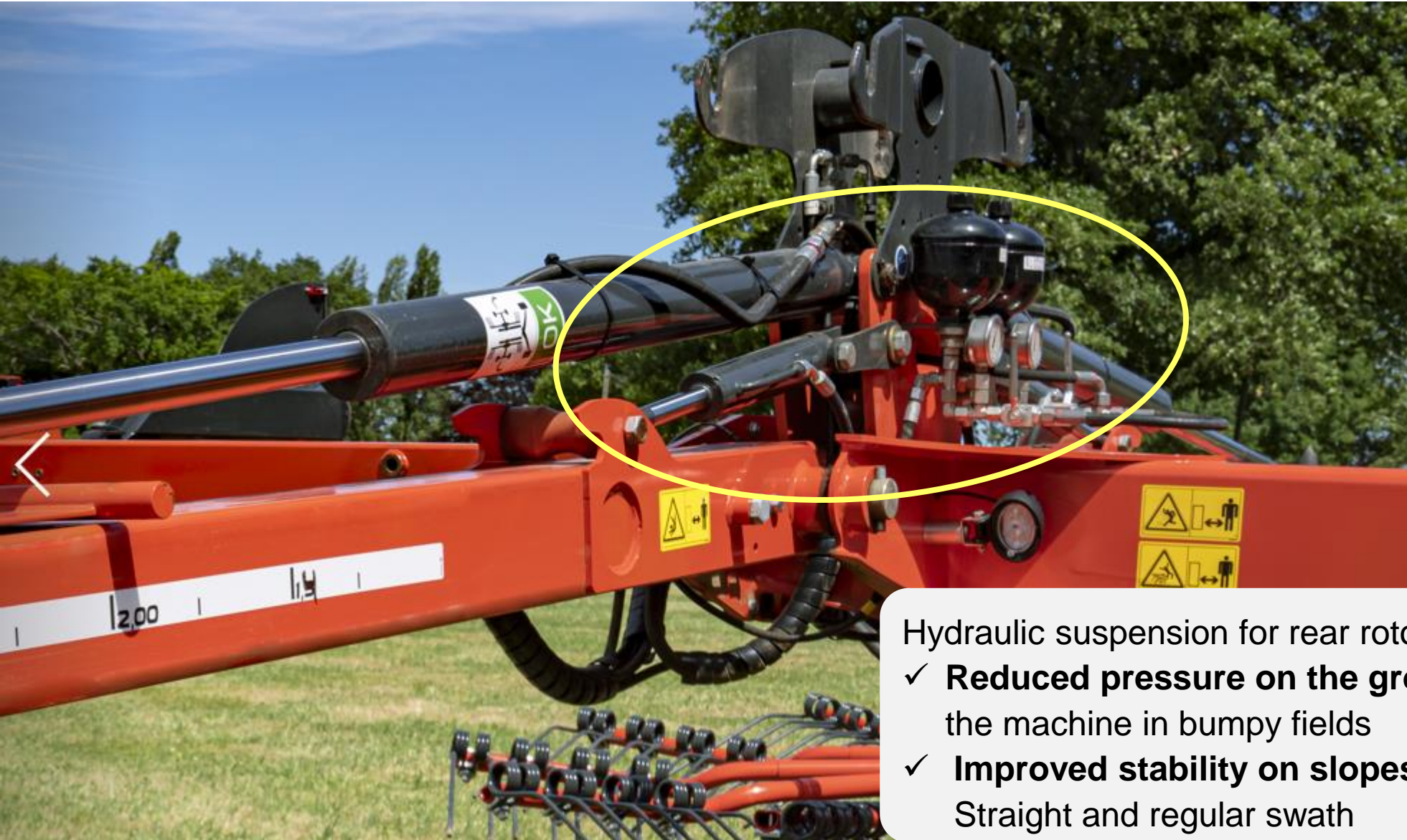
- Reduced weight of the rotors on the ground
- Increased stability when working on steep slopes

**GA 13231 – GA 15231 :**

Automatic hydraulic suspension with electronic control

- ✓ **Constant pressure** on the soil **independently of working width**
- ✓ The driver can change the pressure setting if needed on specific areas (ex. in case of very soft soils)

Hydraulic suspension for rear rotors (option)



Hydraulic suspension for rear rotors (option)

- ✓ **Reduced pressure on the ground** : less stress in the machine in bumpy fields
- ✓ **Improved stability on slopes** and wet soils :
Straight and regular swath

CCI control box and joystick



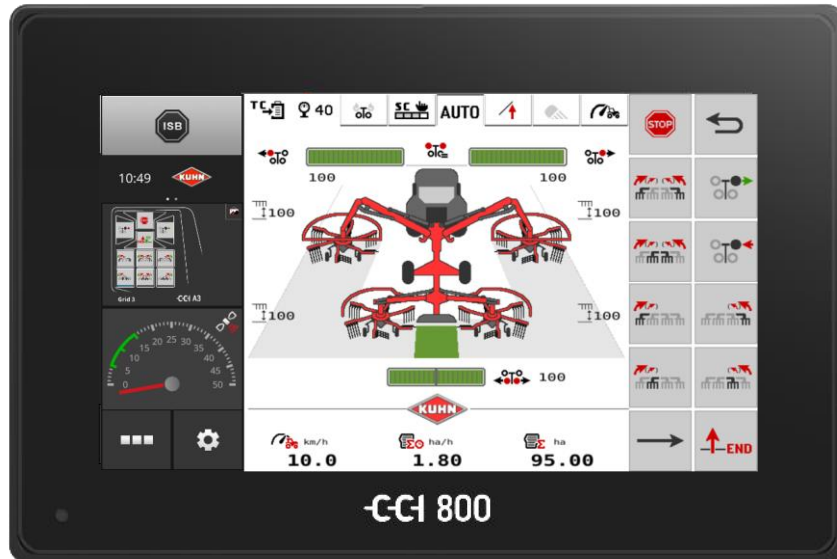
ISOBUS, CCI 800 and 1200 control boxes:

- ✓ Operations made easy, easy to understand interface
- ✓ Open gateway to the tractor's ISOBUS terminal
- ✓ Joystick and camera available as options

All settings from the cab:

- Working height and width, Windrow width
- Folding / unfolding
- Headland turn position
- Front rotor speed
- Area counter
- Diagnostic of sensors and components
-

➔ **Exceptional comfort, flexibility and adaptability**



ISOBUS COMPATIBILITIES

GA 13231- GA 15231

GA 13231 - GA 15231 : SOFTWARE V3.2				
BRAND	ISOBUS TERMINAL	SOFTWARE	BT	AUX-N
KUHN	CC 800 / 1200	2.0.8	✓	✓
KUHN	CC 50 / 100 / 200	5.72	✓	✓
FENDT	Gen 2 Profi 7"	Profi 7 -2021	✓	✓
FENDT	Gen 2 Profi 10,4"	ProfiPlus -2021	✓	✓
FENDT	Gen 3 One	Profi 2021	✓	✗
JOHN DEERE	Generation 3 CommandCenter/1800/2600 (not AEF certified)	-	✗	✗
JOHN DEERE	2630	3.36.1073	✓	✓
JOHN DEERE	Generation 4 CommandCenter_4100	Gen4_4100_10.9.79-185	✓	✓
JOHN DEERE	4240 / 4640 Universal / CommandCenter 4200 & 4600 V2	Universal_21_3_10.21.2144-121	✓	✓
CASE	AFS PRO 300 / AFS PRO 700 (provide NH 50 amp ISOBUS harness on tractor side)	31.12.00.00 / 32.06.00.00	✓	✓
CASE	XCN 1050 (not AEF certified)	1.6	✗	✗
CASE	XCN 2050 (not AEF certified)	4.51	✗	✗
MASSEY FERGLISON	C1000 / DATATRONIC 4	3.0.1 HW rev 2	✓	✓
MASSEY FERGLISON	DATATRONIC 5 (not AEF Certified)	-	✗	✗
NEW HOLLAND	IntelliView II / IntelliView IV (provide NH 50 amp ISOBUS harness on tractor side)	31.12.00.00 / 32.06.00.00	✓	✓
NEW HOLLAND	XCN 1050 (not AEF certified)	1.6	✗	✗
NEW HOLLAND	XCN 2050 (not AEF certified)	4.51	✗	✗
TRIMBLE	GFX 750 (not AEF certified)	1.6	✗	✗
TRIMBLE	TMX 2050 (not AEF certified)	4.51	✗	✗
TOPCON	X25 / X35	5.01.282	✓	✓
MÜLLER ELEKTRONIC	Track-Guide 3	V02.15.12	✓	✓
MÜLLER ELEKTRONIC	Touch 800 / Touch 1200	V02.30.07 / V02.15.12	✓	✓
RAVEN	VIPER 4 / CR7 / CR12 (not AEF certified)	-	✗	✗
HORSCH	Touch 800 / Touch 1200	02.15	✓	✗
AGLeader	InCommand 800 and 1200 (not AEF certified)	3.0	✗	✗
AMAZONE	Amapad	3.20.304	✓	✓
AMAZONE	Amatron 4 (not AEF certified)	NW216-G	✓	✓
CLAAS	S10	04.00.20	✓	✓
DEUTZ-FAHR / SAME	I Monitor 2	-	✓	✓
VALTRA	C1000	3.4.2 HW rev 2	✓	✓
VALTRA	SMART TOUCH (not AEF certified)	-	✗	✗
VICON / KVERNELAND	ISOMATCH TELLUS PRO	V1.06.1	✓	✓
VICON / KVERNELAND	ISOMATCH TELLUS GO+	V1.06.1.10	✓	✓
STEYR	S-Tech 700 (provide NH 50 amp ISOBUS harness on tractor side)	31.12.00.00	✓	✓

Information given in this table is for information purposes and is non-contractual. Any modification or evolution of the listed terminal or software version cannot engage our responsibility. Some functionalities can require specific activation

GA 13231 and GA 15231 AEF-certified

- ✓ List of UT-function compatibilities for different terminals on the market
- ✓ AUX- N functions for CCII A3 or WTK joystick (KUHN) and other joysticks on the market





RADIAL

STANDARD tyres:

GA 13031: 500/60 – 22.5

GA 13231: 500/60 – 22.5

GA 15231: 600/50 – 22.5 RADIAL

Optional: RADIAL profile

GA 13031: 600/50-22.5 RADIAL

GA 13231: 600/50-22.5 RADIAL

GA 13231 / 15231: 710/40-22.5 RADIAL

- ✓ Nothing to remove for road transport under 4 m



Main features

GA 13231 - 15231



ISOBUS: all adjustments from the cab

Hydraulic rotor drive

+20% rotor speed → more regular windrow

Suspended linkage for more stability at work and on the road

High amplitude 3D rotor articulation

Automatic constant ground independently of working width



MASTER DRIVE GIII rotors

Rotor locking in headland turn position and « jet effect » lowering

Programmable rotor lift, simultaneous or independent

Nothing to remove for road transport



GA 13031 – GA 13231 – GA 15231

Four rotor central delivery rake



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