



AMAZONE

Cutting roller combination

TopCut 12000-2T



Challenges solved



The challenge:

The subject of soil tillage is becoming more and more significant when it comes to the purchasing decision-making on farms. The bigger the problems of lack of moisture, chemical resistance and the requirement for reducing the amount of plant protection agents used, the more important the right means of soil tillage becomes.

A particular emphasis is placed on the initial stubble cultivation. This is precisely where the biggest challenge lies. On the one hand, we need to produce the optimum seedbed for maximising the germination of volunteer cereals and weed seeds. This means that this undesirable regrowth can be allowed to accumulate directly after stubble chitting and then be combated mechanically in the second cultivation pass.

Ultra-shallow top working giving optimum germination conditions for volunteer cereals, weed seeds and grass weeds is of extreme importance, particularly with regard to old rape regrowth, and in the problem areas of black grass and loose silky bent.

In addition, decomposing organic matter is of enormous significance for field hygiene. Optimal breakdown of crop residues reduces the transfer of fungal disease and pests. It is therefore important to cut or crush the organic matter during the initial cultivation pass.

The solution:

the TopCut cutting roller combination for ultra-shallow soil tillage

AMAZONE developed the TopCut to meet the increasing requirements for ultra-shallow soil tillage. The cultivation objectives with the TopCut:

- ✔ Organic matter should be shredded to aid the decomposition process.
- ✔ Enough fine soil should be generated for optimum germination conditions.
- ✔ Working should be as shallow as possible – no burying of seeds and less soil moisture loss.
- ✔ Perfect contour following of the tools is ensured.
- ✔ Any straw should be redistributed if required.
- ✔ Good reconsolidation for optimum germination conditions should be provided, especially under dry conditions.

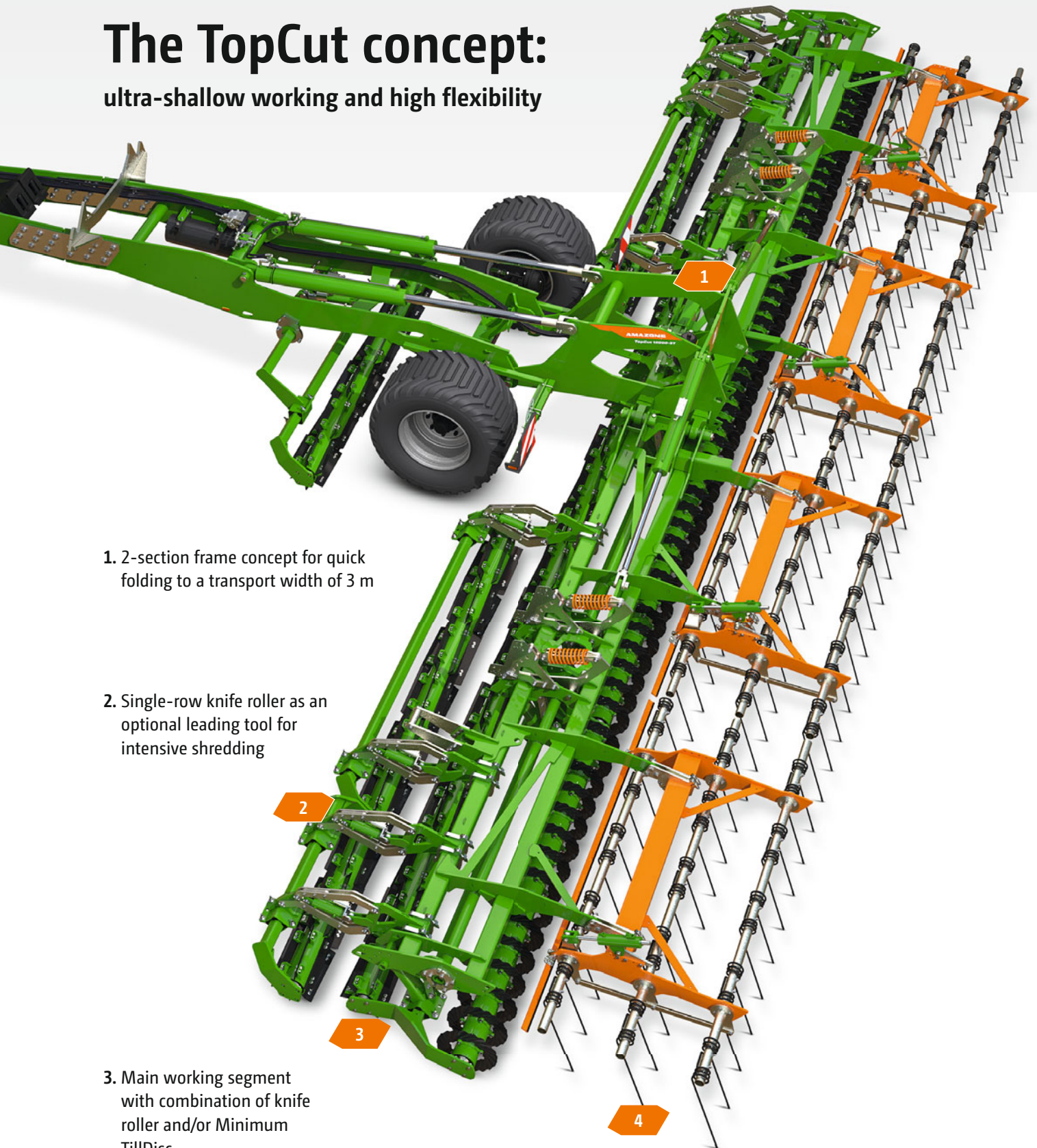
PRODUCT FILM

TopCut



The TopCut concept:

ultra-shallow working and high flexibility



1. 2-section frame concept for quick folding to a transport width of 3 m

2. Single-row knife roller as an optional leading tool for intensive shredding

3. Main working segment with combination of knife roller and/or Minimum TillDisc

4. Straw harrows for combing out weeds and packer rollers for ideal reconsolidation available

The perfect cut

Optimisable tool combinations

A variety of tool options for ultra-shallow working

The TopCut can be used universally throughout the year across a variety of cultivation passes from catch crop establishment and crop residue management to mechanical weed control and seedbed preparation ahead of, for instance, direct seeding with tines.

The TopCut consists of three consecutive tool segments which can be equipped with various tools to suit the farm's needs and requirements. For example, a single knife roller can be used as the leading tool. The double knife roller then operates in the main tool segment. As an alternative, however, straight double cutting discs can be used or a combination of a straight cutting disc with a knife roller. These combinations cultivate the soil only to a minimum extent, but they also produce enough fine soil for optimum germination conditions.

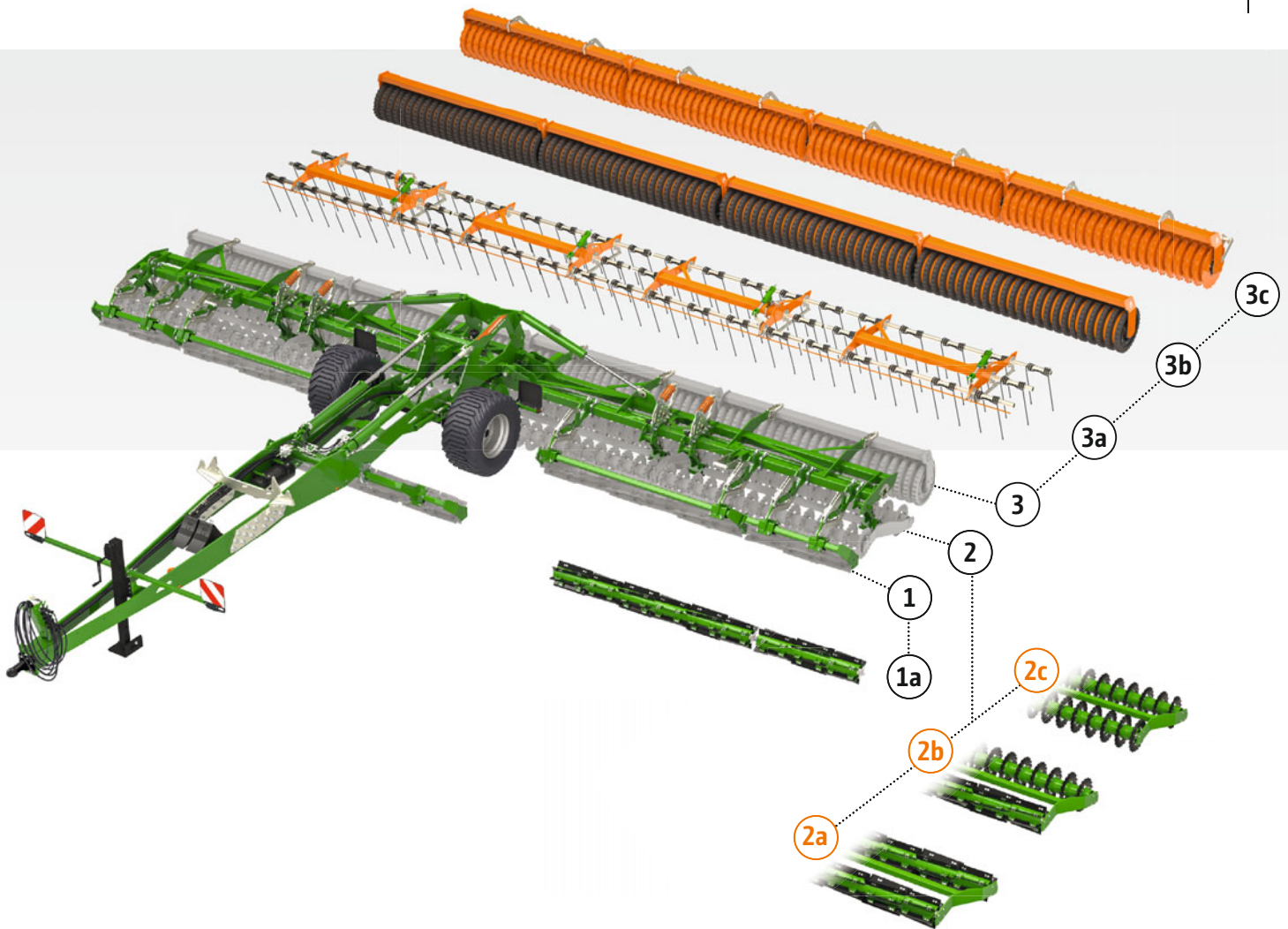
Reconsolidation or straw harrow

Under dry conditions, it is an advantage if the lightly worked soil is reconsolidated. Here we have the option of using the TopCut with a packer roller, such as the KWM 600 wedge ring roller with the Matrix tyre profile. As an alternative to the packer roller, a three-row straw harrow can also be mounted at the rear. This provides a redistribution of the straw and also shakes out any seeds from the straw, seed pods or ears.

Successful practical experience

The development of the TopCut 12000-2T with the various tool combinations has been accompanied by scientific research at the Anhalt University of Applied Sciences in Bernburg as well as extremely successful field trials on various farms across different regions since 2021.





Overview of the tool combinations for the TopCut:

1. Leading tool

- ①a Knife roller

2. Main working segment

- ②a Double knife roller
- ②b Combination of knife roller and Minimum TillDisc
- ②c Double Minimum TillDisc

3. Rear element

- ③a Straw harrow
- ③b KWM 600 wedge roller with Matrix tyre profile*
- ③c DW 600 disc roller*

* not in combination with the leading tool

②a



②b



②c



The results of the trials show the advantages of the TopCut cutting roller combination:

- ✔ Ultra-shallow soil tillage with high proportion of fine soil for perfect germination conditions, even on cereal stubbles
- ✔ Markedly reduced evaporation in comparison to other systems
- ✔ Optimum reconsolidation for reliable regermination
- ✔ Perfect shredding effect in rape stubbles, sunflower stubbles and maize stubbles as well as in catch crops
- ✔ High output with low fuel consumption

Set the working depth and drive off!

The depth of work adjustment is crucial

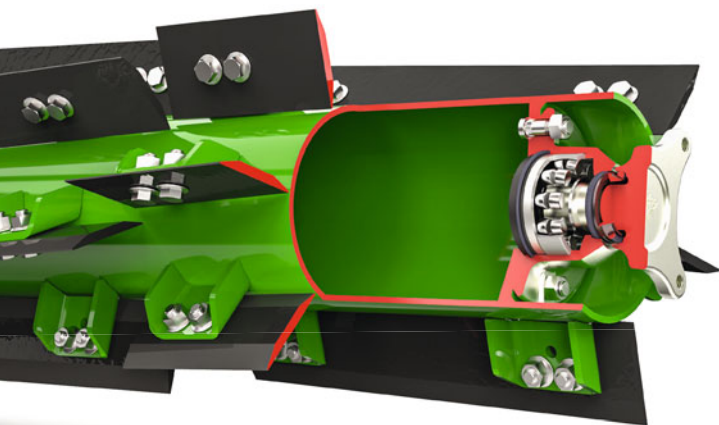


Precise adjustment of the working depth

The two side frames of the TopCut are hydraulically pressurised via the ContourFrame system for better contour following. This enables optimum contour following on undulating terrain.

Each side frame has two tool segments. Each of these has a width of 3 m and are individually height-adjustable. The working depth of each segment can be adjusted separately. The tools, which are pre-tensioned using compression springs, are adjusted via eccentric pins. The spring system adjusts the height to pressure ratio between the main working segment and the following unit.

This means that each tool segment adapts individually to the soil surface, thereby enabling ultra-shallow working.



AMAZONE knife roller

- ✔ Insensitive to stones and dirt contamination due to the enclosed roller core
- ✔ Maintenance-free, robust bearing housing with spherical roller bearings, gear oil filled and with metal face seal
- ✔ Durable knives made of tempered boron steel
- ✔ Wear costs cut by half thanks to reversible knives with twin cutting edges

Cutting profile of the knife roller

For difficult conditions: Cut n' Sow – direct seeding taken a step further

Effective, efficient, ultra-shallow



Ultra-shallow seedbed preparation when direct seeding with a large amount of organic matter present

- ✔ Cost-effective establishment method for optimising direct seeding under difficult conditions
- ✔ Mechanical weed control before sowing
- ✔ Cutting and shredding of organic matter
- ✔ Reducing the danger of blockages in tine seed drills
- ✔ Improved straw management with uniform straw distribution
- ✔ Promotion of straw decomposition as a result of mixing with fine soil on the surface
- ✔ Effective control of slugs and mice



Technical data:

TopCut 12000-2T cutting roller combination

Model	TopCut 12000-2T
Working width (m)	12.10
Transport width (m)	3.00
Transport height (m)	3.80
Transport length with lighting for road transport (m)	8.30
Operational speed (km/h)	14 – 20
Depth of work (cm)	0 – 3
Disc spacing (mm)	20
Minimum TillDisc disc spacing (cm)	10
Disc diameter (mm)	410
3-row harrow tine spacing (cm)	10
Harrow tine thickness (mm)	14
Transport wheel tyre dimensions	550/45-22.5
Number of double-acting spool valves (min/max)	2/4
Power requirement from (kW/hp)	180/240
Linkage	Drawbar eye or K80
Weight of the base machine without rear element (kg)	5,900



Illustrations, content and technical data are not binding and may differ depending on the level of equipment. Country-specific road traffic regulations apply and must be complied with, meaning that special approval may be required. The permissible axle loads and total weights of the tractor should be checked. Not all the listed combination options are possible with all tractor manufacturers.



AMAZONEN-WERKE H. DREYER SE & Co. KG

P. O. Box 51 · 49202 Hasbergen-Gaste/Germany
Phone +49 (0)5405 501-0 · Fax +49 (0)5405 501-193