



360° of Wrapping Technology

John Deere Cotton Harvesters

The 7760, CP690, CS690 Cotton harvesters extends John Deere's lead in cotton harvesting technology.

This revolutionary cotton harvesters simplifie the system, improve productivity through non-stop harvest, and provide greater value to producers and ginners.

Value drivers include:

- Non-stop harvesting
- Labor & equipment saving
- More power
- Weather resilience
- Ginning advantages

On-board module builder - The 7760, CP690, CS690 round module builder forms cotton into a round module, and wraps it automatically with the Tama RMW[®], providing superior weather protection and transportation flexibility.

The Tama RMW® is a special wrapping material with a unique design which was developed specifically for the 7760, CP690, CS690. It provides durable protection which will last through tough weather conditions while maintaining the quality of cotton.

The Tama RMW[®] is much more than "just film". It is loaded with many features to guarantee non-stop harvesting.

Tama RMW® design

The Tama RMW[®] with Z-LOCK[®] wrap portions is designed:

- Specifically for the JD 7760, CP690, CS690 to assure reliable automatic packaging, for non-stop harvesting.
- To maintain the quality of cotton in round modules that are exposed to extreme conditions.
- To withstand severe tearing stress caused by field condition and the range of mechanical transportation equipment.
- To minimize waste.





Tama RMW[®] Features

1) The Tama RMW[®] Z-LOCK[®] wrap portion concept:

Tama RMW® is made of pre-cut wrap portions in order to eliminate the potential of plastic fragments.

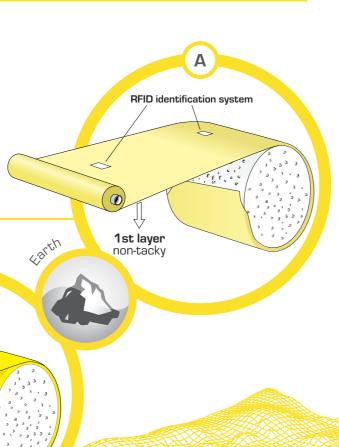
2 RMW® Structure:

Every RMW® portion is made of two segments:

- a. The inner layers are a non-tacky film with particular properties which prevent cotton from sticking to the wrap. (figure A)
- **b.** The outer layers are a special formulated film which is tacky on one side only. (figure B)

The combination of these two types of film ensures that the round module will hold its uniformity for transport and processing.

2nd & 3rd layers Tacky on the side facing in





3 The Z-LOCK® system connects and separates each individual portion on a roll, so the roll is made from 24 "ready to use" portions.

The Z-LOCK® system assures the next portion is ready to be fed correctly.

4 Tapered RMW® portion structure:
The tapered structure maximize the

durability of the tail in windy conditions.

5 Two types of specially designed adhesives secure the tail of a wrapped module in tough conditions and minimize the risk of

cotton contamination.



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6 Over the edge coverage:

Wrap goes over the edge to minimize cotton waste and exposure to rainfall, and holds tight the shoulders of the round module.



7 UV protection:

The RMW® is UV protected and designed to last a minimum of 6 months.

8 Radio Frequency IDentification (RFID):

Every RMW® includes RFID tags to provide the capability to track the individual module through harvesting and processing, all integrated with the electronic systems of the 7760.

9 Identification:

Each roll has its own ID number located inside the core, and on the leading edge of the 1st RMW[®].

Each RMW[®] has a unique serial number, located on the metallic label of the wrap.



(10) Plastic core:

Every core is marked on its left hand side, to assist correct installation:

- black dots or blue stripe on the core.
- a label inside the core.



The RMW[®] is recyclable.

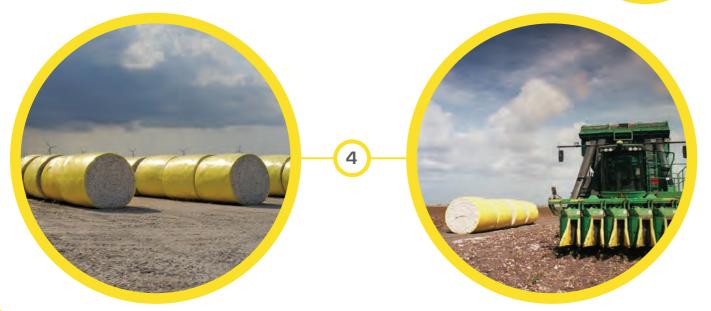




Operational Procedure

The steps of the process are:

- 1. a. Five rolls of 24 individual RMW® each, are manually loaded by two people onto the John Deere 7760, CP690, CS690 harvesters.
 - b. The RMW® is threaded into the John Deere 7760, CP690, CS690 harvesters.
 - c. The RMW[®] portion is fed around the module by the feeding mechanism.
 - d. The Z-LOCK[®] is activated to seperate the RMW[®] from the roll and to secure the tail of the RMW[®].
- 2. The round module is ejected from the John Deere 7760, CP690, CS690 harvesters to the handler while the harvesting continues.
- 3. The round module is placed at the end of the row.
- 4. The round modules are gathered in groups.
- **5.** The round modules are transported to the gin for processing.











Gin Solutions

(1) Storage:

The round modules are stored at the gin storage area in the same way as conventional modules.



2 Handling:

The round modules are loaded on the gin conveyer using appropriate equipment.



- The RMW[®] concept eliminates the constant maintenance and cost of the tarp. A savings in the production cost of the ginning process.
- Many solutions, from manual to fully automatic, are available to the gin, to enhance the adaptation of the RMW[®] concept.

(3) Stripping:

The RMW[®] is stripped from the round module by several different methods, depending on the size of the gin and its process.







4 Recycling:

The RMW® are compressed and can be sold to recyclers in the area, an extra income for the gin.



RMW[®] Removal Recommendation

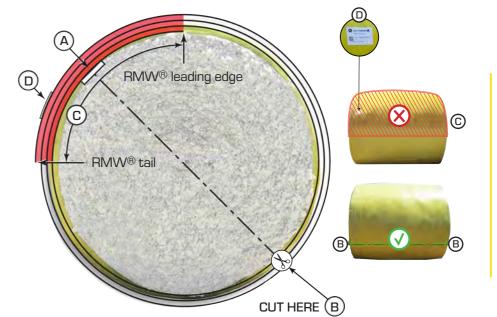
When cutting the wrap, make only one clean cut along the entire length of the module without leaving shreds of plastic at the cut.

Average size modules

- 1. An average size module would be between 90 and 96 inches
- 2. An RFID tag (A) is located near the inner wrap end (usually it is not visually seen)
- 3. The Safe Cutting Zone (B) is 180 degrees from the RFID tag location
- 4. Note: the red zone (C) is a "No Cut Zone", as cutting in this area may cause small pieces of wrap enter into the cotton.
- 5. If your RMW® removal machine does not have an RFID reader the Safe Cutting Zone (B) should be 180 degrees from the white metallic label with barcode and serial number (D) located 15.5 inches above the RMW® tail (visually seen)

Small Modules

In smaller modules, such as one that is ejected at the end of day or when finishing a field, the Safe Cutting Zone may move, so extra care should be taken when opening those modules, to make sure small pieces of wrap do not enter into the cotton.



- (A) RFID Tag
- B Safe Cutting Zone
- © RMW® tail and leading edge overlap (NO CUT ZONE)
- (D) White metallic label

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Handling Recommendations

- Handle One Pallet At A Time.
- Use suitable forklift to handle the pallets:
 - Recommended lift capacity 4,400 lbs (2 tons) forklift.
 - Use long forks when handling pallets from its narrow end to minimize damage.
- Use Pallet Puller when unloading from truck.
- Pallet pullers avaliable from material handling supply houses.



- RMW[®] can be damaged by improper handling.
- Make sure that all sharp edges and protrusions on hauling equipment are eliminated.

Storage Requirements

- Keep the RMW® rolls in their original packaging until use.
- Store under roof, in an enclosed structure and avoid exposure to direct sunlight and moisture when stored.
- Double stacking of pallets is permissible with proper handling equipment.
- To be used within two seasons only. It is advisable to use FIFO.











RMW® Palletizing

- End protectors on both ends of the pallet.
- Pallet cradles that stabilize the RMW® rolls on the pallet.
- Bubble wrap for extra protection.
- Different color to pallet label each season.

| Tac | hnical | Infor | rmation |
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| Toolilloal fillol filation | | | |
|----------------------------|-------------------------------|--|--|
| Wrap portion width: | 106 in. (2.70 meters) | | |
| Wrap portion length: | 69 ft. (21 meters) | | |
| # of RFID per wrap: | 2 | | |
| Wraps portions per roll: | 24 | | |
| Roll weight: | Appx. 220 lbs (100 kg) | | |
| Roll diameter: | 10 in. (25 cm) | | |
| Core Dimensions: | 9 ft. 2 in. (2.8 meters) | | |
| Rolls per pallet: | 9 rolls per pallet (216 RMW®) | | |
| Pallet length: | 9 ft. 3 in. (2.85 meters) | | |
| Pallet width: | 2 ft. 3 in. (72 cm) | | |
| Pallet height: | 2 ft. 8 in. (85 cm) | | |
| Pallet weight: | 2095 lbs (950 kg) | | |

About Tama

Tama Plastic Industry, established in 1950, is a partnership between Kibbutz Mishmar Ha'Emek and Kibbutz Galed. Kibbutz members are its owners; they occupy key management positions and work in every department. While remaining close to its origins at the heart of a working agricultural community, Tama has grown and developed into a modern, dynamic enterprise employing more than 1,000 people, in Israel and around the world.

Tama's main area of specialization is packaging and protective products for agriculture, which it refers to as "Crop Packaging Products" (CPP).

Tama's vision is to supply each farmer and contractor with the product that best suits his needs. This vision is supported by constant investment in innovation, setting the quality benchmark in the CPP market and focusing on the highest levels of service and support. Tama aims to supply our customers with the highest quality products for consistent baling results, through the most cost-effective solution.

Tama has long-term relationships with John Deere which includes cooperation in machines and packaging material development, product validation and verification, and crop packaging products distribution.

These close relationships have taught Tama how to adapt its products ideally to its customers' needs.







Handling & storage instructions provided on each pallet. Improper handling of the RMW^{\oplus} will cause damage to the round module.

The production process and quality manual are fully audited by John Deere. For further pricing and supply programs see your local JD dealer.

Manufactured by Tama Plastic Industry the Crop Packaging specialist, the exclusive producer of John Deere CoverEdge $^{\text{TM}}$ and Tamanet $^{\text{TM}}$.

* The RMW® with Z-LOCK® wrap portion is a patented product:
U.S. Patent No. 6,787,209; U.S. Patent No. 7,541,080; U.S. Patent No. 8,512,851
Australia Patent No. 2005300259; Australia Patent No. 2003292463; Australia Patent No. 2008355557
Brazilian Patent No. Pl0307327-0

China Patent No. ZL200380100224.X; China Patent No. ZL200580020614.5 South Africa Patent No. 2006/09928; South Africa Patent No. 2004/5937 Israel Patent No. 180527; Israel Patent No. 163215; Israel Patent No. 208906 Turkey Patent No. TR200504975; Turkey Patent No. TR200607638 B India Patent No. 254696; Argentina Patent No. AR043323B1 EPO Patent No. 017827

* RMW and Z-LOCK are trademarks of Tama Plastic Industry.



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