



**CoreRFID** Ltd  
Manufacturing ID Systems

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## Warranty Management With RFID

### Quantum Saddles



#### *RFID helps keep track of essential repairs*

Techniques of saddle manufacturing haven't changed for over two hundred years but Quantum has taken a new approach using new techniques and new materials for their custom saddles. .

At the heart of the Quantum saddle is a high-tech design based on the use of carbon fibre to provide a light weight, stable and secure base for a saddle that is custom fitted to both horse and rider.

To identify saddles returned under warranty or for repair Quantum Saddles adopted a system using radio frequency identification (RFID). The partner they chose as their supplier was CoreRFID.

#### Hi-tech Solutions For A Traditional Craft

The Quantum saddle was the idea of Andrew Stockford. Andrew was an extreme sports fanatic involved in skiing, skydiving, canoeing, rock climbing and ice climbing. In all of these sports, Andrew was used to dealing with high-tech equipment where the use of modern materials is commonplace, due to their minimal weight and significant strength.

Working with veterinary, saddlery and equestrian specialists, Quantum developed a range of saddles using carbon fibre as the material to provide the necessary integral, structural, strength while reducing the weight of the saddle and making possible other innovative design features. The design that this made possible provides better distribution of the rider's weight. This results in an improvement in the horse's stride length and movement patterns. Performance improvements of up to 15% increase in jumping power have been identified. The performance of the Quantum saddle is not just a function of its technology, however. It is also the consequence of the way that the saddle is tailored to both the horse and the rider. A Quantum saddle is individually fitted and typically re-checked each six months so that any change in the configuration of the horse (or rider!) can be catered for.

Quantum saddles are design for heavy use in the demanding sports of show jumping, dressage riding and endurance. Even with the Quantum's rugged design repairs are occasionally necessary and Quantum provides a warranty and repair service for their customers. However the tailored nature of the saddle means that individual components for one customer's specific saddle need to be kept together. To help with that, Quantum chose RFID technology.



**The Quantum AMS-J: a high performance jump saddle customised to horse and rider.**

***"Quantum saddles are tailored to individuals, RFID means we can deliver and monitor an individual service."*** Matthew Stockford, Managing Director, Quantum Saddles

## Warranty & Service Management Using RFID

The challenge with servicing a highly customised product is the need to ensure that the specific item is identified in the service process and that the original item or one directly matching it, is returned to the customer after servicing. This depends on the ability to recognise a specific, unique individual product. Quantum places a strong emphasis on customer service. Its customers are often leaders in their chosen sport. Their quest for performance excellence means they demand excellence in their equipment suppliers. For Quantum this created the need for a service operation that was a tailored to the customer as the saddle is.

In the case of Quantum, the service areas involve the three main components of the saddle; the seat and the two saddle flaps each of which has its own, tailored, carbon fibre fin.

Using RFID tags each component piece can be identified and linked to an individual customer. This ensures that after service or repair the parts of the saddle can be correctly reunited, within the service operation before returning them to the customer. In addition, RFID tags provide security by monitoring saddle components for authenticity.



**Rigorous testing is at the heart of the Quantum Saddles approach to product innovation.**

attached to the outside as barcode labels would have needed to be. This means that there is no risk of the tag being rubbed off or defaced as a result of the saddle's use.

Quantum selected CoreRFID as their supplier of tags and readers to support their project. The solution uses clear plastic enclosed disk tags 30mm in diameter, chosen for their robustness, ease of integration with Quantum's manufacturing processes and read performance. CoreRFID provided a tag with high reliability and the ability to withstand the shock and thermal changes associated with the use that their saddles are put to.

## About CoreRFID Manufacturing ID Systems

CoreRFID Manufacturing ID Systems help save costs and improve delivered product quality in a wide range of manufacturing environments. To learn more about how we can help with your particular production issues, contact us today:

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### The Benefits

Quantum Saddle's RFID based warranty & service management approach provides:

- Automatic, accurate identification of items for service.
- Reliable linking of components for return after service.
- Security / authenticity checking of saddle components to prevent tampering
- Easy access to accurate customer information for saddle fitters.

By making each saddle uniquely and electronically identifiable, Quantum's saddle fitters can also call up details of the saddle's history and customer's fitting requirements for that individual saddle when in the customer's stable yard. Identifying each specific saddle is important because one customer may have several horses (with different saddles customised to the conformation of each). With planned additional products that will be specifically designed for endurance and for dressage, a rider could have more than one saddle for the same horse.

Using automatic identification means that the risk of error by miskeying code numbers is avoided. Quantum opted for RFID instead of barcoding because tags could be built into the saddle rather than simply