



# Kookaburra & PENKO - *The Perfect Solution!*

A joint feature on process automation for the production of cricket balls.



## THE COMPANY

Kookaburra Sport Pty Ltd is an Australian manufacturer of sports products and the largest producer of cricket balls in the world. Named after the Australian Kingfisher, this family owned business was founded in 1890 and is entrenched as one of the leading Australian hand-made cricket ball manufacturers.

The Kookaburra Turf Cricket Ball has been used exclusively in Australia, New Zealand and South African Test Cricket since 1946 and the Dimple hockey ball has been used in Olympic Games since 1984. It is the only ball recommended by the Federation Internationale de Hockey.

In addition to its Australian operations housing over 60 employees, Kookaburra has offices in the United Kingdom, New Zealand, South Africa, and India.



## THE PROBLEM

Cricket is also known as the “Gentlemen’s game” where innings are interrupted for “Tea”. The ball is anything but gentle. Its core is made of a cork and rubber covered by many layers of cork and tightly wound wool, and finally covered with a highly polished leather casing.

Made entirely of natural materials, balls will vary in size, structure and – of course in weight. Leather is never of consistent thickness, even when taken from the same hide. The outer cover of a ball is made up of 2 pieces selected on bases of similar quality and are hand sewn together.

Traditionally making Cricket balls is a time consuming, painstaking procedure, while the weight accuracy of the leather cups is crucial to the final quality and grading. Any saving in manufacturing time means increased output and any higher weight accuracy ensuring better quality.

To find a solution to this challenge, Kookaburra approached Ward MHS Pty Ltd, the accredited Dealer in Australia for PENKO Engineering B.V. , The Netherlands.



## THE SOLUTION

A “tailor-made” solution requires a the right partner. Kookaburra found one in Ward MHS Pty Ltd, a company specialised in quality custom built weighing systems. Ward select the appropriate system and developed a “mock-up” to demonstrate potential output using a PENKO FLEX2100 controller.



Ward MHS Pty Ltd sourced and recommended quality components to achieve the desired end result.

- Precision machined drive & idler rollers for the conveyer system
- Oil damped load cell
- PENKO FLEX-2100 weight controller



PENKO FLEX-2100

The project solution consists of a precision machined drive and idler rollers conveyer system. What may seem like a contradiction, is actually the foundation for excellent results when using a oil damped load cell in combination with a high speed measuring instrument from PENKO.

Using an oil damped load cell avoids dynamic effects of the conveying system. The hide halves are measured at a speed of 0,6ms and the information is processed in the system.

## THE RESULT

The unique way of measuring, high speed and high resolution with PENKO instruments, suppresses unwanted dynamic effects. An output of 60 ball halves per minute, or 3600 per hour was achieved with the new installation compared to 4000 halves output in 4 hours, a weekly saving of 12,5 hours or 625 hours per year. A time / labor saving of 28%.

Grading is now achieved with a consistent accuracy of  $\pm 0,2$  grams. The system offers higher reliability by eliminating human error and its compact size significantly reduces the factory footprint, freeing up valuable space.

Expectations and requirements are effectively met and more efficiency is saving the company time and money. Ward MHS Pty Ltd supplied a relatively simple solution to a complex requirement with satisfying results.





# *The Perfect Solution!*

*“We are extremely happy with the end result. The system was designed, manufactured and tested in a timely fashion and performed as promised.”*

Peter Thompson, Director  
Kookaburra Sport Pty Ltd

