

# Kiwi Ingenuity

*Invercargill company, Kiwi Engineering, manufacture the Kiwi-Kraft brand of aluminium pontoon boats. Known for their quality construction and blue water handling capabilities, the Kiwi-Kraft range is extensive and includes commercial divers, water taxis and rescue boats.*

Established in 1988, Kiwi-Kraft Boats have seen significant growth in recent years, and in 2003 it was clear to company director, Rodney Harris, that a new approach to manufacturing was needed if they were to keep up with the ever growing demand for their product.

Not convinced that employing extra labour was the answer, Rodney Harris turned to technology for a solution. After researching all options a decision was made to purchase a CNC Routing Machine from Hamilton company iCAM Mechatronics.

In November 2003 Kiwi Engineering took delivery of their Advantage series CNC Routing machine. Able to process sheets as large as 6200x2050mm, the iCAM Advantage offers many benefits in processing aluminium, including; better material yield through efficient nesting, extreme accuracy and edge quality that requires no reworking.

"The introduction of the CNC Routing Machine to our factory has increased our production capability significantly and cut our labour costs" says Rodney Harris "the other benefits which are notable are increased accuracy and consistency in part fabrication and also the the cost savings in materials with the utilisation of Nested Based Manufacturing – there is very little waste"

Nested Based Manufacturing is based on the concept 'maximum output vs minimum labour & materials'. Material wastage is reduced by the CAM software arranging, or nesting, all the parts required to be cut on the specified sheet size for optimum use of the material, even interlocking parts where possible, the result is a significant saving in material usage. The reduction in labour can be shown by this example given by Rodney Harris "one particular part which would take twelve minutes of labour by cutting manually is cut on the routing machine in under two minutes".



The routing machine is equipped with a 5HP high frequency spindle fitted with a microdrop misting unit allowing it to efficiently cut aluminium. Kiwi-Kraft no longer have to mark out patterns from templates and cut aluminium manually – now they simply select which shapes are required to be cut from their CAD drawings then, using CAM software, apply toolpaths to the shapes and nest them on a sheet, the files are then sent to the machine which cuts the shapes out of the aluminium with an accuracy that would be unachievable using conventional methods.

Kiwi-Kraft have had their CNC Routing Machine in operation for eight months and Rodney Harris has never doubted his decision to invest in CNC Technology "already we are seeing increased production with the same labour content with production almost double what it was at the same time last year"

The iCAM range of CNC Routing machines are designed and built in New Zealand. This gave Kiwi Engineering the confidence to invest in technology, knowing that expert back-up was readily available. This is

something the imported machines struggle to provide.

iCAM Managing Director, Troy Cundy, believes the first step in deciding how CNC technology will benefit your business is understanding what system would best suit your application. Troy makes an effort to understand each clients core business, "by understanding your application we can build a system that will be more valuable to your business. Our systems are flexible and can feature many different optional functions"

iCAM CNC Routing Machines are built using the latest technology and are engineered for performance, flexibility and reliability. All iCAM Machines are ISO Standard G-Code compatible meaning they are connectable with many different CAM software packages. iCAM can make custom sized machines to suit your specific application. For more information phone iCAM on 0800 422 669.

**iCAM**  
Total CNC Solutions