

CASE STUDY

Reference #10-4

Customer: Toyota Design Australia

Industry: Automotive

Type: Machine tool user

Project: CNC retrofit for Rambaudi H60L 5-axis gantry milling machine

**Retrofit the CNC control system to the latest
SINUMERIK ONE CNC from Siemens**



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The Customer

Since its founding in 1963, Toyota Australia thrived for excellence and cemented its position as the leading automotive company in Australia.

Toyota Design Australia, the research & development centre from Melbourne, played a crucial role in keeping the company always at the edge of technological advances in the competitive automotive field.



The Challenge

In the modelling process of a new car, complex machines are involved. One of these machines, located at Toyota Design Australia, is a Rambaudi H60L 5-axis gantry milling machine explicitly designed for this type of work.

After many years of doing great work, the control system of this machine became outdated and aligned with their constant goal to stay at the top of technology; Toyota Design Australia decided to upgrade this machine.



The Retrofit

- Optimizing the size and tuning the dynamic of the new servomotors.
- Making great use of the new functions for 5-axis high-speed milling available for SINUMERIK ONE, like TOP SURFACE and TOP SPEED PLUS.
- Optimizing the safe functions for the machine for a safer environment during part setup work using SINUMERIK Safety Integrated functions.
- Adapting the new SINUMERIK OPERATE Human Machine Interface and devices for this specific machine.

As a result, CNC Design was contracted to retrofit the CNC control system to the latest SINUMERIK ONE CNC from Siemens, the top CNC platform on the market for high-end machine tools.

The new SINUMERIK ONE CNC is complemented with SINAMICS S120 drive system and the very performant SIMOTICS 1FT7 servomotors.



The Result

The results were outstanding, as also confirmed by the words of Mr. Dennis Damsma, Toyota Design Australia Studio Engineering & Milling Manager:

“At Toyota Design Australia, speed and reliability is highly important when we use our milling machines. The retrofit activity completed by CNC Design has significantly improved the Rambaudi H60L 5-axis CNC machine performance in terms of speed and accuracy. Integrating the latest Siemens SINUMERIK ONE platform and drives will provide Toyota Design Australia with improved capability in order to create ever-better design prototypes, including full scale models.”