GIBBSCAM

CASE STUDY | G-CLEF BENDING MACHINE

Using GibbsCAM to Drive 5-Axis Laser Cutting and Drilling to Improve Efficiency

G-Celf Dual spindle laser cutting CNC machine

"When developing laser machines, we use other CAM software for programming. However, the post-processed programs fail to meet our requirements—they are not customizable, feature low programming efficiency, lead to extended machining time, and are cumbersome to revise. We need a CAM software with a high degree of openness to support our development work."

– General Manager of G-Celf

– Mr. Zheng ,G-Celf CEO

Automotive components requiring laser cutting and CNC milling and drilling.

New technology for profile processing

We know that hollow structure aluminum alloy profiles are widely used in fields such as aviation, aerospace, automotive, machinery manufacturing, shipbuilding, and rail transit. So many of the profile manufacturing processes are based on laser heads for forming and trimming, and CNC machine heads are also required for milling and drilling.

G-Celf Generation Workshop

About G-Celf

Guangdong Gaopu Bending Technology Co., Ltd. was established in 2012, headquartered in Foshan City, Guangdong Province. It is a national high-tech enterprise specializing in metal profile bending technology. The company currently has about 200 employees, including 60 research and development personnel, forming a strong technology innovation team. Has 103 patents and software copyrights.

Gaopu is essentially a software company. We have a strong interest in GibbsCAM software and have therefore established an R&D and sales department of 10 employees, all of whom are bachelor's or master's degree holders in software-related disciplines from top-tier universities in China.

We are confident in becoming the Asia-Pacific hub for GibbsCAM's technology, solutions, training, integration, services and sales.

The company itself operates over 20 CNC machines, and possesses the capability to conduct secondary development based on GibbsCAM—replacing the original CAM software and improving programming efficiency.

Our existing clients are mainly engaged in automotive component manufacturing and aluminum profile processing. They operate a combined total of no less than 20,000 CNC machines, representing a vast pool of potential users for GibbsCAM software.

The product is widely used in:

New energy vehicles (battery pack frame, body structural components)

Aerospace (wing frame, cabin structure)

Rail transit (train window frames, roof curved beams)

Special equipment (special vehicle components)

Shipbuilding (deck fencing, door and window frames)

"The post-processing program is well-developed and fully customizable. With open and integrable APIs, it enables secondary development and shortens programming time; its technical support is also highly responsive.
In particular, the post-processing program has resolved certain issues that were previously unsolvable with other CAM software, especially for dual-spindle laser CNC machines."

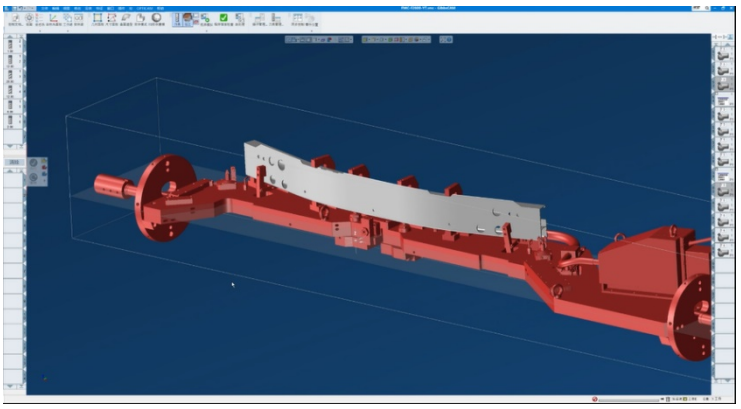
– Technical Manager from G-Celf

G-Celf engineers are discussing the programming application of new products in GibbsCAM software

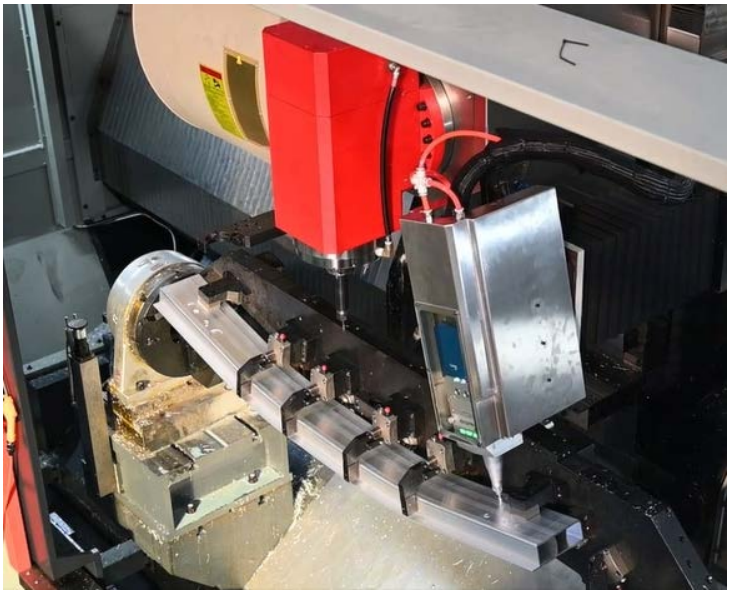
Improve the efficiency of dual spindle laser CNC equipment through professional technical support

When G-Celf started developing and producing dual spindle laser CNC machine, they used other CAM software. Although this software has been used by G-Celf for many years, its functions and corresponding technical support cannot meet the needs of on-site equipment development and production when facing dual spindle laser CNC equipment. In order to solve these problems that hinder research and development progress. The GibbsCAM channel manager introduced them to the application of GibbsCAM software and its powerful technical support and post-processing support team.

In order to get the dual spindle laser CNC machine running as soon as possible, according to the requirements of G-Celf, GibbsCAM China team arranged technicians to conduct a 3-day technical training on G-Celf. Their technicians are very passionate about learning and also work very hard. After the 3-day training, GibbsCAM post-processing team quickly customized post-processing files and machine simulation files according to G-Celf 's needs, and cooperated with G-Celf for the first test cutting process. The machining results met G-Celf 's requirements. In order to present the equipment's functions perfectly, GibbsCAM post-processing department optimized the post-processing in the shortest possible time. The technical support of GibbsCAM China team and the professional support of the post-processing department achieved this. The effective operation and delivery G-Celf dual spindle laser CNC machine .



Laser cutting program in GibbsCAM software



Verification of GibbsCAM program for dual spindle laser CNC machine

"Although we have grown accustomed to the programming methods of other CAM software, their limited API openness and the lack of scalable post-processing support have hindered any further upgrades or enhancements. However, since we adopted **GibbsCAM**, its open API architecture, professional technical support, and robust post-processing capabilities—coupled with AI-powered functionalities—have made programming more intuitive and significantly improved our efficiency."

–Technical Manager from G-Celf

GibbsCAM UKM Technology Universal Kinematic Machine (UKM):

Released in 2015.

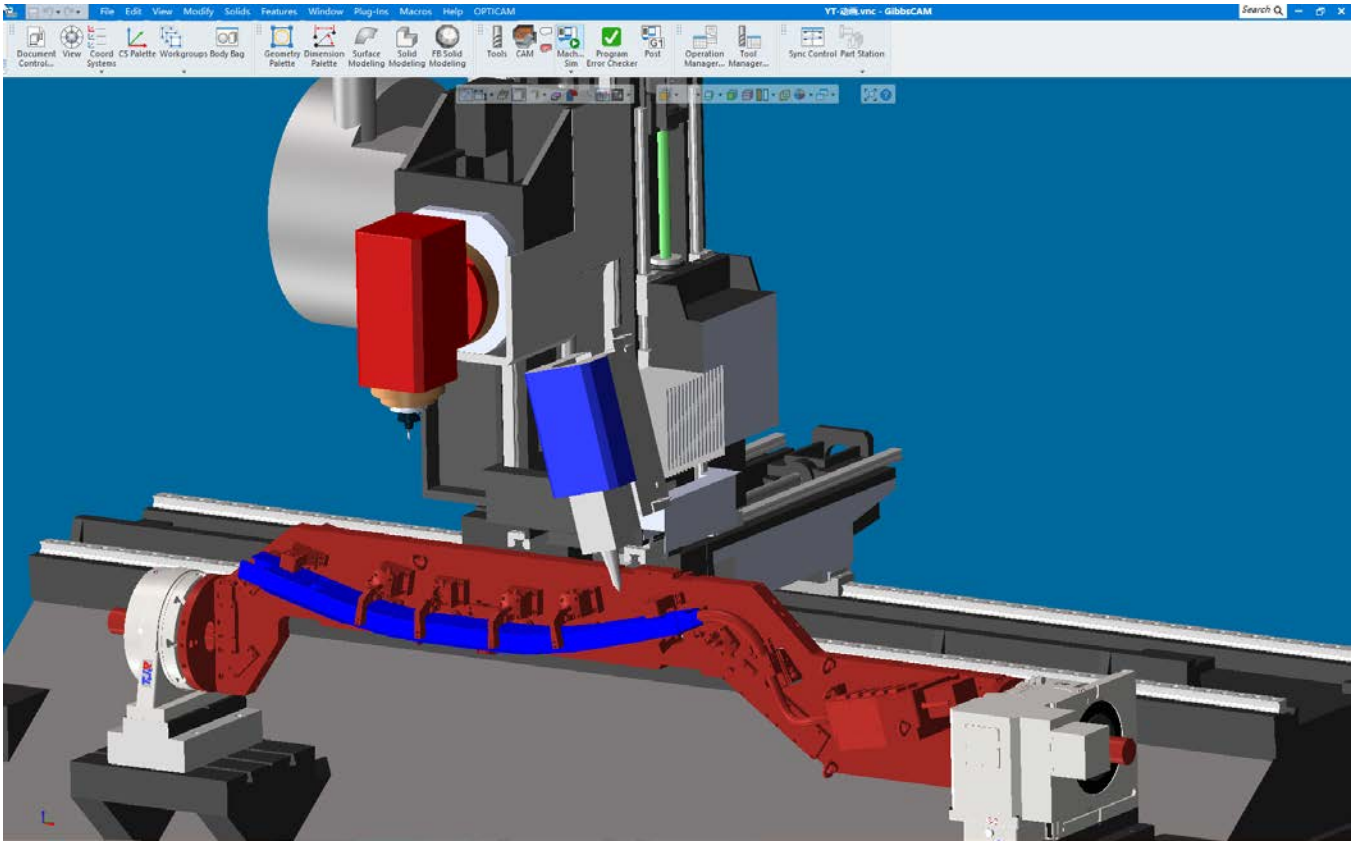
Able to define machine with any number of axes and flows.

Accurately simulate all the machine components and capabilities of any machine.

One Post Processor Engine for all machine types

Scalable technology that is ready to support future machine solutions.

WYSIWYG: What you see is what you get!



Dual spindle laser CNC machine defined by UKM technology based on Gibbs software

About GibbsCAM:
GibbsCAM is a single CAM solution that simplifies complex programming without sacrificing ease of use. GibbsCAM supports 2- to 5-axis milling, turning, multi-task machining, Swiss machining, probing, and wire-EDM.

About Sandvik Group:
GibbsCAM is part of the Sandvik Group offering digital solutions to automate the component manufacturing value chain – from design and planning to preparation, shaping and verification. (www.digitalmanufacturing.sandvik)