



Tanaka Reduces Costs and Achieves Fast and Precise Machining with ZWCAD and ZW3D

TANAKA

INDUSTRY
Mold & Die

PRODUCTS
Oil filter housings and related sheet metal parts

WEBSITE
www.tanaka-press.co.jp

❓ CHALLENGES

- High annual operation costs for 2D and 3D CAD
- Need for smooth migration and data exchange when switching to new CAD systems
- Low efficiency due to manual creation of G-code and lack of CAD data for hand-refined molds

💡 SOLUTION

ZWCAD, ZW3D

✅ RESULTS

- ZWSOFT's perpetual licensing significantly reduces annual operation costs
- ZWCAD and ZW3D robust compatibility ensures seamless migration and data exchange
- ZW3D's CAD/CAM integration and reverse engineering capability improve efficiency

Founded in 1941 and headquartered in Sagami-hara, Kanagawa prefecture, Japan, Tanaka is an integrated metal processing manufacturer whose business covers the entire process from mold design to product manufacturing. It is renowned for its expertise in deep drawing, particularly in the color steel plate deep-drawn products. Tanaka constantly engages in maintenance and improvement initiatives to provide customers with high-quality products and services.

Reducing Annual Operation Costs with Perpetual Licensing

Tanaka uses 2D and 3D CAD together in various ways. For stamping dies, machines and fixtures, it primarily uses 2D CAD. Then it employs 3D CAD/CAM to create 3D models and conduct pre-processing simulation. After that, it will proceed with machining.

In the past, Tanaka used AutoCAD® and Inventor®. To minimize operation costs, the company implemented ZWCAD and ZW3D across its operations in 2011.

Mr. Ono, Head of Production Department, said: “The cost-performance ratio was a key factor when we considered switching to ZWSOFT’s solutions. With its one-time, perpetual licensing, it helps cut down

operation costs. For instance, the price of ZWCAD is 30% lower than AutoCAD.”

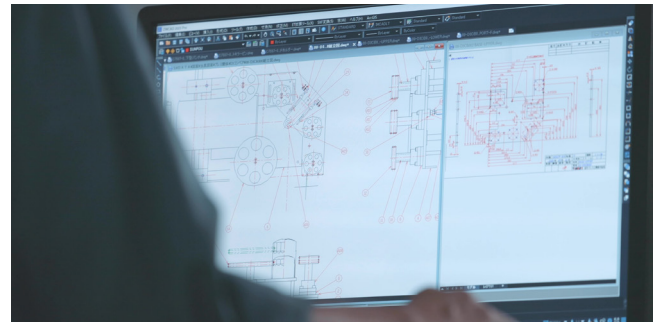


Figure 1. An engineer used ZWCAD to create mold drawings

Simplifying Design Work with Fast and AutoCAD-Compatible 2D CAD

Tanaka had been using AutoCAD before the introduction of ZWCAD, so compatibility and operability were important for it during the migration.

ZWCAD boasts many highlights, such as the Classic interface, common CAD shortcuts, and format compatibility. Mr. Ikata, Head of Production Technique Department and Manager of Quality Assurance Department, said: “ZWCAD is almost the same as AutoCAD, so we switched to it seamlessly. I didn't

hear from other employees that they encountered any big problems.”

In addition, portability is one of the highlights of ZWCAD. Its exceptional speed enables users to switch between drawing and zooming smoothly, improving the comfort of design without a high-performance workstation.

Smoothly Realizing 3D Data Exchange with Customers

Tanaka needs to exchange 3D data created by different 3D CAD systems (including CATIA®) with customers, so it aims to prevent situations where the data cannot be smoothly transmitted to the other party due to differences in CAD programs or versions. Additionally, 3D CAD files may be damaged when converted to intermediate formats such as IGES or STEP.

ZW3D is compatible with many intermediate and native formats, so Tanaka doesn't need to worry about data conversion or loss. Mr. Ikata said: “Data conversion is a standout feature in ZW3D. It enables us to communicate smoothly with customers.”

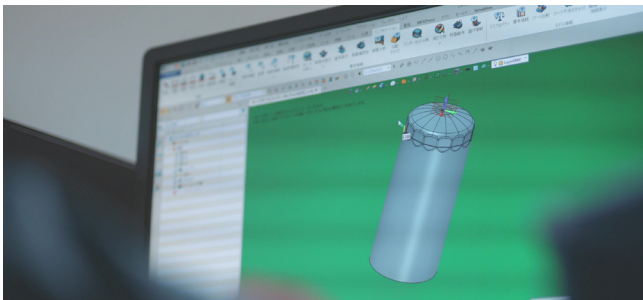


Figure 2. An engineer used ZW3D to design the punch for oil filter housings

Improving Efficiency with ZW3D's CAD /CAM Integration and Reverse Engineering Capability

Previously, Tanaka operated machine tools by

manually creating machining programs (G-code). When dealing with complex engineering, it takes a lot of calculation time and may cause errors. By using CAD/CAM software, Tanaka can create 3D models and generate G-code automatically. This approach reduces the risk of input errors and saves time.

“ Creating programs becomes much easier after we introduced ZW3D. We saved a huge amount of time by turning from manual operation to using software to convert 3D data to programs. ”

— Mr. Ono, Head of Production Department

Tanaka also utilizes ZW3D for reverse engineering to save 3D data of molds. When making molds for high-precision stamped products, chamfers and fillets need to be finished manually and it is a time-consuming process. To address it, 3D scanners are employed to measure the hand-refined molds, and CAD data is created based on the collected point clouds. By reflecting these molds in CAD data, the time needed to produce spare molds is reduced.

Mr. Ono said, “It's much easier to produce a second one by making 3D CAD data match real molds. ZW3D's point cloud function enables us to create surfaces and solids based on points. It is fantastic and we saved a few hours.”

He concluded. “ZWCAD and ZW3D are indispensable in our operations. Our future strategy is to leverage data and new technologies to improve efficiency and promote digital transformation.”

ZWSOFT

ZWSOFT has been delivering reliable all-in-one CAx solutions since 1998. With over 20 years of experience, our products have been chosen and trusted by over 1.4 million customers in more than 90 countries worldwide.

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