



Chicago White Metal Casting

High-Tech Al, Mg, Zn & ZA Die Casting
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CWM Zn Die Casting: Key Structural Component for Silicon Graphics®

Octane™ Workstations from SGI Are Fueling the Next Generation of Visual Computing Solutions

When failure or inadequate computer performance is not an option for engineers who digitally create and analyze designs, the Silicon Graphics Octane Workstation can deliver.

Professionals in manufacturing, visual simulation, defense imaging, science and entertainment are requiring the control of larger, more complex and growing data sets on their desktops. The Octane Power Desktop Workstation was created for leading-edge applications in these fields.

Revolutionary System Architecture

With single or dual processors and dramatic new architecture, SGI's Octane can simultaneously tackle the most complex tasks. Criti-

cal data transfer is guaranteed. With more data and more tasks on their desktop, users can focus completely on any problem, work intuitively gain insights, and get the job done better and faster.

And the modular Octane architecture can be flexibly expanded as needs grow, with upgrades of memory, processor, geometry, and graphics.

Key Structural Zinc Die Cast Rear Cap

An important structural frame member within Octane's striking CPU enclosure (photo at left) is a zinc die casting produced by Chicago White Metal Casting. Called a rear cap, it provides strength and rigidity to the enclosure, and solid mounting support for the unit's fan.

In addition to strength specifications, SGI engineers required EMI/RFI shielding characteristics and an excellent exterior appearance for the part, since the system's modular design would often make it visible to the user.

Steel stampings, the traditional functional choice, were initially considered for production of the rear cap; in this case, two stampings combined with a plastic face for cosmetics. With a single near-net-shape die casting, however, SGI designers could work without



Octane's Zn die cast rear cap, shown above and in place, is SGI's first use of a die cast component combining structural function and cosmetic appearance.

the design limitations of stampings, a multiple assembly could be eliminated, EMI/RFI shielding assured as a built-in feature, and greater rigidity and strength achieved. High-purity zinc alloy was selected, over aluminum, for its conductivity and strength, as well as its castability and finishing superiorities.

Center-Gated Die Casting Die Design

In designing the die casting die, CWM engineers chose center-gated metal entry for the 10 in. (25.4 cm) wide by 15 in. (38.1 cm) high Zn frame. Inside gating made a smooth, unblemished surface possible on all areas of the exterior of the part, important for this design.

Nine holes are tapped after die casting. The part receives vibratory deburring to a lustrous surface finish.

For further information on CWM high-technology die casting in Al, Mg, Zn or ZA-8, contact your CWM Sales-Engineering Representative or the CWM Sales Dept. ■



Octane Power Workstations are UNIX-based, the proven computer operating system for innovative, mission-critical applications such as digital prototyping, collaboration and integrated engineering analysis.