



**Winner of the 2009
NADCA International
Die Casting Competition
for Mg Die Casting,
1 to 10 lbs.**

Chicago White Metal Casting
*High-Tech Al, Mg, & Zn Die Casting and
Miniature 4-Slide Zn & ZA-8 Die Cast Parts*
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Codonics engineers are changing the world of medical imaging and CWM is playing a part

High-Tech Die Cast Imager Housing Walls Provide Light Weight, Multiple Functions and Reduced Part Counts

With their Horizon® Multi-media Dry Medical Imager, Codonics engineers have created an all-in-one desktop unit that instantly delivers diagnostic film, stunning color prints, and grayscale paper images in a minimum footprint. Radiologists and MRI departments have called it a revolution in medical diagnostics—and two critical Mg die cast parts from CWM are playing an important product role.

With the Horizon® Multi-media Dry Medical Imager, Codonics has created a countertop-sized unit that delivers superior diagnostic film, stunning color prints and grayscale paper images in a compact all-in-one device.

Radiologists and MRI departments have called it a revolution in medical diagnostics based on its ability to produce outstanding digital images in a small footprint unit at attractive ownership costs. Health-care facility managers are referring to the new imager's output as "exceptional," far surpassing the image quality of its wet laser film predecessors which occupied the space of a passenger car.

Innovative Dry Imaging Technology

Utilizing a decade of innovation in dry, multi-media medical imaging technology, Codonics has combined their unique direct thermal and dye-sublimation media repro-



Imager's Mg die cast side walls are 12 x 17 in. CWM CNC precision machining brings positioning tolerances of ± 0.001 in. for select locations and flatness to 0.025 in. across a zone of 9 x 14 in.

duction processing with an imager housing that offers greater performance and versatility, translating into reduced costs, minimized waste and maximized workflow.

Breakthrough Housing Design

Among the design objectives for the imager housing were compactness and weight reduction to enable convenient relocation of the unit based on optimum workflow; durability to withstand high-volume medical usage; and part-count reduction to reduce assembly operations and ownership costs.

Validation that these objectives were reached is the fact that the final chassis design resulted in one of the lightest and most compact imagers available and a quality level that enabled Codonics to offer a limited time, free five-year product warranty.

To minimize the number of components in the unit's housing and, at the same time, provide the precision and durability under heavy use required for smoothly outputting

media from any of three cassettes, two complex, highly-toleranced one-piece metal side walls were decided upon. The chassis design went through initial production iterations using zinc-aluminum castings in graphite molds.

After design modifications, the hot-chamber magnesium die casting process and CNC precision machining was selected for volume production, with mag alloy offering lightest weight and process stability.

25 Tight-toleranced As-cast Features

Die cast by CWM in its 650-ton hot-chamber Mg machines, each of the two side walls has 25 tight-toleranced cast-in-place features. The portions of the internal face of each side wall that are exposed to the user are die cast to a cosmetic surface finish and receive a final paint coat.

CWM engineering guidance, skills and technologies can help assure your project's success. Call or email CWM.

