PROJECT PROFILE

HYDRODRIVE MOTOR DESIGN REFINEMENT

CLIENT CHALLENGE

Our client is developing a unique hydraulic motor design that runs on low pressure water. The disruptive nature of this technology will introduce significant cost savings and ease of use to many industries such as the food processing field. Key design features of the motor are: improved operator safety, reduced operating costs, design for wash-down environments, and no gear reducer required.

The goal of the client is to achieve a design that is manufacturable in typical expected production volumes. The client required New Product Development expertise in key stages of the New Product Development Cycle:

- Prototype 3D CAD modeling and drawings
- Geometric Dimensioning and Tolerancing (GD&T)
- Automated BOM creation linked to CAD

SOLUTION

Palladium was retained for our expertise in the New Product Development field. The following tasks were performed during the project:

- Model and drawing review to incorporate the latest as-built prototype design information
- GD&T applied to the motor design recognizing the client's suppliers manufacturing capabilities
- Tolerance stack-up analysis based for selected assemblies based on the correctly toleranced drawings produced during the project

PROJECT HIGHLIGHTS

Palladium staff accomplished the following project deliverables:

- Complete set of correctly toleranced models and drawings for parts and assemblies reflecting the two major versions of the Hydrodrive.
- Tolerance stack-up analysis based for selected assemblies based on the correctly toleranced drawings produced during the project

Palladium's work enabled the client to:

- Proceed with pilot manufacturing with confidence on part interchangeability and function.
- Provide a well documented Rev0 staging point for more detailed production refinements.