



INVAKOR
TECHNOLOGIES INC

Reference Target Case Study

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Classic Granite Works is a family-owned business that has been operating in Central Alberta since 2005. They offer stone products made with quality workmanship. They are dedicated to serving the local community with excellence and ensure that the work is not done until their client's satisfaction is met. As leaders in their industry, they do their work using technology that allows them to reach beyond their industry standard. The technology they use allows them to obtain precision and accuracy so that the product they make fits perfectly within their client's structures and needs.

When Classic Granite Works' professionals go in their client's home or business to gather measurements and templates, they often use telemetric scanning technology to obtain precise dimensions of a kitchen. Simply put, this technology functions with a spinning laser at the centre of a room. The operator places targets at specific locations so that the laser can establish measurements while intersecting the targets. These measurements are taken as digital data which can then be treated with design software such as AutoCAD. Typically, the telemetric device is used to precisely measure the distance between the wall and the front edge of the cabinet at several locations. This, in turn, generates an accurate layout of the kitchen and provides the necessary information to produce countertops that fit perfectly in place.

The professionals at Classic Granite Works were experiencing difficulties with some targets in various scenarios. They hired Invakor Technologies' services to design and manufacture a target for their telemetric device that would address those scenarios. For example, during a renovation, the reading of the telemetric device could be affected by a tall backsplash behind the existing countertop. The reference targets supplied with the telemetric device were either too short or if it is long enough, were too flimsy and would fall at the vibration of a footstep. The reference targets that are supplied with the telemetric device are simply not meant for renovations where existing countertops are being replaced.

To solve the difficulties that Classic Granite Works' professionals were facing, Invakor Technologies designed an adjustable reference target. The new target is fitted to the front of the existing countertop. The new design allows it to attach quickly on countertops as thick as 2.5 inches. The new design includes a probe which slides horizontally to position the target precisely even with the face of the cabinet under the countertop. The target itself can be extended to reach a height of 8.5 inches. The target is made of durable thermoplastic called Onyx. Onyx is a carbon-filled nylon filament material used in additive manufacturing.

Invakor Technologies was able to design and produce a functioning prototype in only 36 hours with the active collaboration of Classic Granite Works' professionals. The new target was then tested in various usage scenarios, including destructive testing. From there, another 10 hours was allocated to perfect the design and produce the final functional new target. In only 46 hours, the design evolved from an idea to a fully operational product.

Invakor Technologies Inc. was able to provide Classic Granite Works with a solution that supports their mission at an affordable price. The end result is a new reference target that provides more accurate measurements for their professionals. Having an accurate measurement from the beginning reduces the margin for potential error and reduces the overall cost throughout the entire fabrication process. The new target allows them to maintain their professional and precise workmanship and save time while providing outstanding service to their clients.

Invakor Technologies Inc is thrilled to provide Classic Granite Works with product design and additive manufacturing services using their industrial-grade 3D printers.

