

Performance & Economy for Thin Sheet Metal Joining in the Appliance Industry

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Developments in thinner sheet metal panels have led to problems with standard sheet metal screws holding joints tightly. In response to this, Leland Powell Fasteners, Inc., developed Grip-Lite™ screws specifically for thin sheet metal applications. These screws provide improved drive-to-strip ratios with precision controlled threads under the head, increased strip-out ratio with full formed thread within one pitch of the head and increased strip-out torque with special serrations under the head.

Further value from Grip-Lite screws is realized from a radius point that eliminates the screw point from cutting wire insulation in the assembly, that prevents the screw from drilling its own hole if the assembly is misaligned and that eliminates sharp points that can cause injuries during assembly.

Appliance Industry Assembly Applications

Appliance manufacturers are of course interested in value and cost reduction. One manufacturer who came to Leland Powell with a thin sheet metal assembly problem now uses over 50,000,000 Grip-Lite screws a year in multiple applications.

Also, inventory reduction programs and taking parts directly from the receiving dock to the assembly line have made quality improvements and part consolidations a key component of supplier added value. Fewer different part numbers mean less chance of the wrong screw arriving at the assembly line. Leland Powell works constantly with manufacturers to standardize fasteners. In a recent case, over 100 different thin sheet metal applications were re-specified to use a single size of Grip-Lite screw, in some cases eliminating nuts, clips or tapped holes.

Automated assembly in the appliance industry requires that screws are 100% presorted for consistent, uninterrupted operations. This added up-front expense is recovered from less assembly labor and better, more consistent joints. Leland Powell has developed several different, economical sorting methods depending on the application. Each application is studied for a customized sorting parameter. Less ex-



Grip-Lite™ screws are ideal for thin sheet metal fastening in the appliance industry.

pensive sorting methods often suffice for a given assembly application.

Key Considerations in Choosing Fasteners

All too often, the fastener is an afterthought in a new design. Leland Powell offers to work up front with the appliance manufacturer's Design Engineers in making the right fastener selection for the best performance in the application.

In this way, we can guide the Design Engineers in their consideration of parameters such as lowest drive torque, strip-out ratios, mating part elimination, sorting requirements and standardization.

For additional information on Grip-Lite screws, contact the author or **Circle 212**.



More on Grip-Lite™ Screws

Leland Powell's Grip-Lite™ screws provide cost effectiveness without sacrificing quality in today's



sheet metal panel assemblies that increasingly involve thinner and thinner gauges. Their use provides tight and reliable assemblies, increases assembly personnel safety and helps

to ensure the manufacturer's competitiveness.

High-performance Grip-Lite screws are available in standard head styles with diameters ranging from #6 through 5/16".

Company Profile...

Leland Powell Fasteners, Inc., is part of the **Elgin Fastener Group**. Comprised of four leading fastener manufacturers, the companies in the Elgin Fastener Group collectively offer a complete range of standard, semi-standard and custom fasteners in a wide variety of styles, sizes, materials and finishes.