

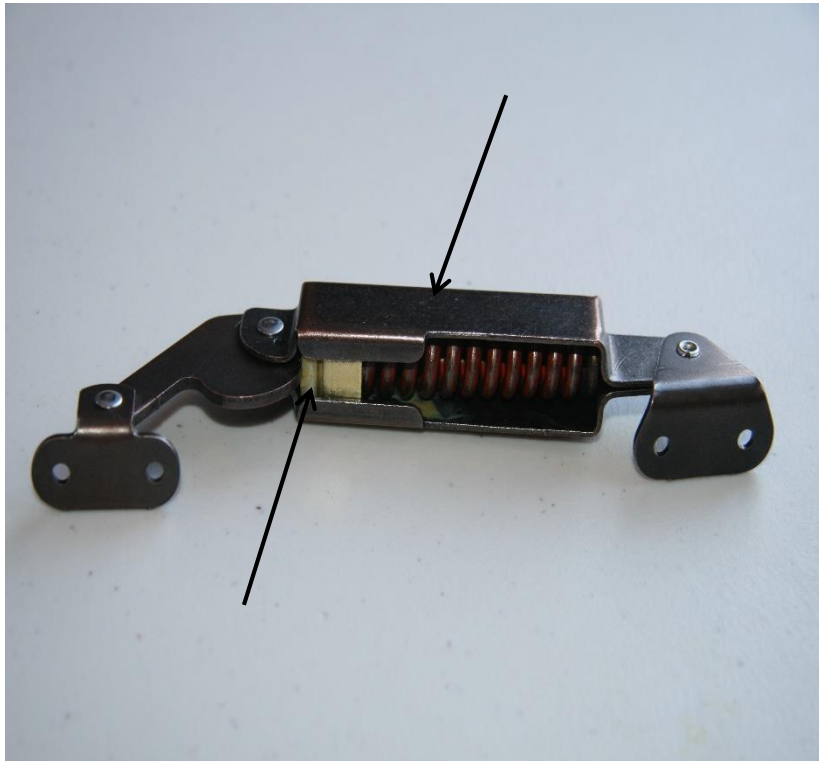


## Market: Hardware

### Critical products insure trouble free lid support performance

Carlson Capitol was founded in Rockford IL in 1945. The company's main product is Self-Balancing Lid Supports. A lid support is a piece of hardware that will keep a lid from slamming shut after it is released. Typical applications include furniture, school desks, toy boxes, test stands, sound enclosures and truck tool box lids.

Carlson Capitol is known for having the most dependable closure of its kind in the world. Depending on spring size commercial models have been tested to 120,000 cycles and home goods models to 60,000 cycles. Their cam action touch control enables the lid to be held in any position and performance can be tuned to the specific application.



Excelsior Inc. provides a shim made out of HDPE that acts as a bearing surface against which the spring travels. This is applied to both commercial and home goods models. For commercial units Excelsior provides a rectangular shim made of Delrin® that the cam runs on. It acts as both a shim and a heatsink.

The original application challenge was to determine the optimum material and thickness to provide the performance and durability required to of both the home goods and commercial lids. If either of these elements were not optimized there was potential for the lid support seizing up after extended cycles.

Excelsior continues to provide value to Carlson Capitol. Our AS9100 quality system insures consistent product and Excelsior has both of these custom products on the shelf at all times to insure that Carlson Capitol can respond to any spike in their demand.



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