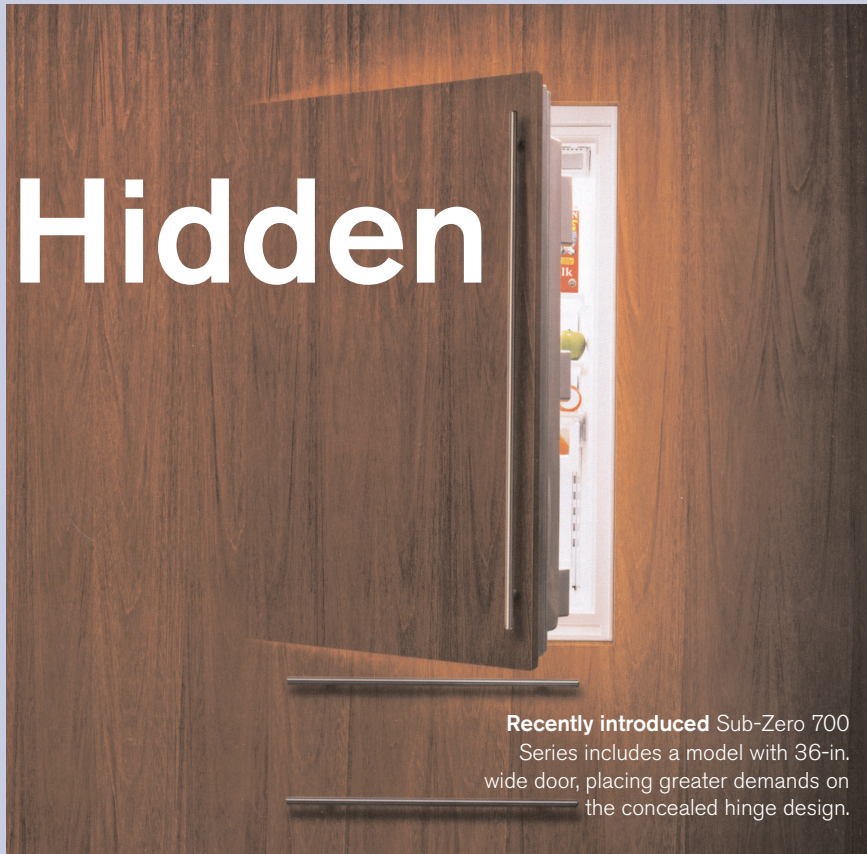


## NEW AND NOTABLE

# The Hidden Fridge



Recently introduced Sub-Zero 700 Series includes a model with 36-in. wide door, placing greater demands on the concealed hinge design.

*Concealed hinge design helps high-end units blend in.*

The kitchen has achieved unprecedented status in today's homes. As the modern-day hub for family interaction and entertaining, its new generation of high-end appliances has taken center stage, merging high style with performance. While one popular design trend calls attention to distinctive appliance design, another growing trend utilizes wood-paneled doors that blend into kitchen cabinetry to make appliances as inconspicuous as possible.

The stealthy appliance trend was boosted by high-end refrigerator maker Sub-Zero, Madison, Wis., and was made possible in part by a concealed hinge designed by Weber-Knapp, Jamestown, N.Y., a designer of custom hinges and other products. Weber-Knapp was approached in 1988 by Sub-Zero after the appliance maker was dissatisfied with the concealed hinge designed for them by a large Midwestern university.

The challenge was to produce a concealed hinge that was no more than 3/4-in. high, yet would support a 107-lb. door with its shelves and bins loaded. None of the hinge could protrude or even be visible when the door was closed. The Weber-Knapp hinge design proved successful and helped spawn a trend that continues to grow.

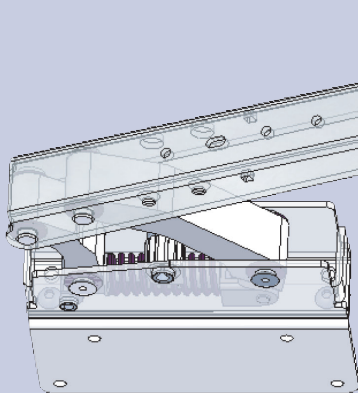
Recently, the design collaboration

between OEM and supplier continued when the refrigerator maker issued Weber-Knapp another challenge. For its new 700 Series, which was unveiled at the Kitchen & Bath Show earlier this year, Sub-Zero developed a 36-in. wide full-size refrigerator unit with two freezer drawers below it. This meant that the new hinge would have to support a 36-in. door weighing 143 lbs.

Weber-Knapp accomplished the mission, producing a concealed hinge that handled the extra duty, while resisting door sag, and still functions within parameters after 300,000 test cycles — double the number expected in a typical refrigerator door's life span.

Both hinge versions, the original and the new one, allow flexibility in kitchen layout. For example, the standard full-open position swings the door 105°. But that can be easily changed in the field to accommodate kitchen designs in which a 90° angle is the maximum the space allows, protecting adjacent walls or other cabinetry from door impacts. Adding to functionality is the self-closing feature, which creates a bias toward the closed position over a 30° angle.

The hinge design features a four-bar linkage system adapted to support the door's width, weight and the frequency of use. Design parameters can be adjusted to meet specific product configurations. ■



**Weber-Knapp concealed hinge** supports a 143-lb. refrigerator door while resisting door sag, even after 300,000 test cycles.

by **richard babyak**

For more information, enter **301**.