



# **CASE STUDY**

# LAMELLO ZETA P2: A CASE STUDY IN STRENGTH, BEAUTY AND EFFICIENCY.









Lamello's 2017 contest for real-world Zeta P2 uses spurred a robust response and many pleasant surprises. "There are many standard applications the product was designed for, but the system is so innovative when creative people get ahold of it they come up with applications that the manufacturer hadn't thought of," said Chris Hofmann, Lamello's eastern U.S. product manager.

Hofmann and a Lamello representative were wowed by the entries, with Klevr Furniture in Fort Worth, Texas, taking top prize in the end. Klevr crafts residential and commercial furniture with a focus on unique, functional solutions. Brock Brandenberg, Owner, shared their experience with us.

# **SITUATION**

"A Dallas-based dotcom news site came to us with a need for large workspaces for their writers and editors. Because they were a design-oriented group of people, they came to me with an existing look they liked, a wooden desk with waterfall ends that incorporated cable management. But they couldn't find it in commercially available products or in hand-built products through sites like Etsy. They asked us to design and fabricate a desk that could meet their needs with that design aesthetic."

## **DESIGN**

"We envisioned butcher block desks crafted in pairs facing each other with a cable storage enclosure between them. We engineered the desks completely in-house and fabricated ten desks which attach back to back in pairs with a central cable chase to make a single unit."

### **CONSTRUCTION CHALLENGES**

"The biggest challenge was to produce a 45 degree mitered joint that could be disassembled but would still be strong enough to withstand heavy use without any cracking or breakage. We needed a very clean visual design, so added reinforcements and fasteners on the inside of the miter joint were not an option. Secondly, because of their size, transportation of fully assembled desks would be an issue. We opted to change to a knock-down design to make moving and storage easier and cheaper."

### **SOLUTION**

"The Lamello Zeta P2 and Clamex P-14 fasteners provided several really significant benefits for us. First, the Clamex P cam locks have a very short engagement distance, so aligning and bringing two panels together requires very little movement of each panel which gave us a lot of flexibility in the knock-down construction and panel assembly order. Second, we didn't need to do any costly multi-axis CNC machining or need to fabricate any drill jigs. We did all of the machining with the Zeta P2. We just aligned the tool to measured marks with simple stop-blocks to reference the end or edge of a panel for accurate placement. The Clamex fasteners themselves can tolerate quite a bit of misalignment along their length, so even if we didn't get two mating fasteners in exactly matching positions, the panels would still lock together solidly.

Third, we didn't need to drill pilot holes and use screws to hold the Clamex Ps in place because the unique slot cut by the Zeta holds them securely in place. That saved a bit of time as well as risk of mistakes and stripped screws. Lastly, the only visual clue as to the presence of the fasteners is a tiny 6 mm hole on the underside and inside of some panels. With zero visible fasteners or brackets, the design is very clean with almost no way to tell how the desk is put together."

#### **RESULT**

"A space-saving, easy-to-transport desk that can be assembled on site with a single 4mm allen wrench. Because we could flat-pack the desks, it only took two people to load a small box truck with stacked flat panels for one trip, and they were easy to wrap so we weren't worried about chipping the miter edge. Additionally, the customer didn't have a loading dock so we had to off-load in the parking lot. The knock-down design made that easy with a short bucket brigade of people moving individual panels out of the truck and into the office. In addition, we now offer the design to other customers, and, thanks to the list of advantages, we have used the Clamex P fasteners on another job of six large standing workstations.

"Klevr's desks were a beautiful application that highlighted some of the best features of the P2 and Clamex system. Each Clamex fastener pulls together with 200 pounds of clamping force - there's really no other connector on the market that can do that, especially in miters" Hofmann added.

Lamello will be sharing some other contest stories in future newsletters so you can see the interesting applications your colleagues have come up with.