

How Materials Testing Generated Market Expansion

► *“We are facing very demanding customers. Some of them are using active sitting for kids and for their teachers. Thus we needed to convince export markets that OneLeg could handle the rough handling that schools typically expose their stools to. With the test results we got from using the LR30KPlus, and the knowledge of how the stools react when exposed to more than the max weight load, we were able to convince important agents in some of our focus countries to take OneLeg into their assortment towards schools and kindergartens. This new opportunity was secured through professional counselling from AMETEK TCI along with the test results and video capture showing the breaking point for our stools”* says Susanne Schmidt.



When the OneLeg first started designing their key product, a one legged stool for gardening, their main focus was on functionality and ergonomics. They wanted to design a stool that saved your back and legs when gardening and so the idea of designing a stool with a curved foot was born. The curved foot enabled you to lean and rotate freely, providing a large working radius without straining your back and knees. OneLeg wanted the stool to be lightweight so it was easy to carry around in the garden. To reduce the weight they designed the stool with a cavity core and seat.

Discovering the many additional markets for the ergonomic stool, a new model was designed. This model was higher than the previous model enabling industries such as car mechanics, the educational market and physiotherapists to use the stools. A silicone seat cover was developed to provide its user with extra comfort and the possibility to lean even more without sliding on the seat. An anti-slip foot cover was developed to prevent the stool from sliding when using the stool on slippery surfaces or indoors.

Challenge

Before introducing the stool to new markets, such as children's daycares, car mechanics and physiotherapists, OneLeg wanted

to test the strength of the stools to determine if the stools were strong enough to withstand an intense use on a daily basis. Furthermore, they wanted to determine if the quality of the newly developed silicone seat was flexible and rugged enough for the daily use by playful children and professional car mechanics. And last but not least, they wanted to determine the maximum weight that the stools could support without breaking.

Solution

To determine the maximum weight that the stools could support, compression tests were carried out using a LR30KPlus materials tester from Lloyd Instruments. The compression tests showed that the new stools could support a weight of 270 kilo.

However, what OneLeg discovered through the compression tests was that even at a compression of 1.000 kilo the stools did not break. They simply redistributed the plastic into the cavity of the stools causing the stools to compress rather than break.



By simply changing the grips on the materials tester, OneLeg used the same test machine to perform tensile tests on the silicone material used for the anti-slip covers. The test results showed that the silicone covers were highly flexible yet rugged enough to withstand use on an everyday basis without breaking when being added and removed from the stool on a continuous basis.

“Being able to use the same test machine for the different test types that we performed on our stools and accessories was a big advantage. All we did was change the grips when we changed the test type. The built in analysis software contained a video capture feature and a library of standard test set ups, so all we needed to do was turn on the machine and push a few buttons. Not only did this solution provide us with high precision test results, it also kept costs down” says Susanne Schmidt, owner of OneLeg.

Benefits

The test results, and the knowledge of how the stools responded when exposed to more than the recommended max weight, helped OneLeg increase their business. Not only did it open up new industries, it also added new markets, such as United Kingdom, Germany and Switzerland, to their business.