

Smart force tester from Microtronics

Microtronics, an Italian manufacturer of electronic instruments, recently introduced a portable printer as their latest addition to the force tester 'BlueForce Smart', which they introduced last year. This printer, together with the said measuring instrument, offers the possibility of drafting a test report on site, showing if the gate meets the requirements of the standard.



Miriam Molegraaf

Tester

At the beginning of last year, Microtronics introduced the renewed BlueForce Smart. This is a device that measures the closing force of automated gates and doors. That measurement is one of the requirements of the EN 13241-1 standard. The device's design, packaging and technology were all revised, making it suitable for measurements according to the EN 12445 and EN 12453 standards. Optionally, using Bluetooth and NFC (Near Field Communication), the BlueForce Smart can communicate with the latest generation of smartphones, both iOS and Android.

Measurement

"A good way of determining the closing force of a gate, is using our measuring instrument," says Diego BIASON, one of the founders of Microtronics. *"After installing the automation, you place the instrument on the right spot on the gate. An app on your smartphone subsequently walks you through the test step by step. There is an icon on your phone for each type of gate, with all of the corresponding measuring points and distances. After the test is completed, the measuring results appear on the instrument's display. These data are automatically transferred to your smartphone, which shows the results of the test."*

Printer

Biason continues: *"To be able to make a detailed report of these results on site, we have introduced a fast thermal printer two months ago. This printer is small, portable and has a large battery that can be charged using a USB cable. Thanks to the Bluetooth interface, this connection is also wireless."*

Easy

"Our device, without a doubt, is the most advanced one in the market," says Biason. *"We have made it 'smart' because we wanted to make it easy for installers to perform the measurements. Without this help, an installer needs to have a lot of knowledge of the standard that describes in great detail how the force measurements need to be performed. Apart from this, the BlueForce also helps you do the test quicker. And at the moment we are very busy adding more functionalities to the software. Soon it will be possible to store the test results in the cloud, so customers can retrieve their test history at all times."*

Development

"We came up with the idea because of some customers' requests," says Biason. *"Eight people have worked for a year on its development. The biggest challenge was not only developing the instrument itself, but the process of making the app available for iOS. For this, the app has to be evaluated and approved by Apple. All in all we are happy with the results and we see a lot of demand for it with our customers."*

“Our device, without a doubt, is the most advanced in the market”

Diego Biason



Name

"We developed the first BlueForce measuring instrument ten years ago," says Biason. "Back then we were the first to integrate Bluetooth in such a measuring instrument. Our customers could connect the device to their laptop wirelessly. None of our competitors offered this functionality. Because of this unique element, we decided to call the device 'BlueForce,'" says Biason.

Machine building code

Since 2005 Product Standard EN 13241-1 is in place. To be allowed to grant the CE marking, which is mandatory since 2006, you have to meet a number of standards, among which are EN 12453 and EN 12445. These standards describe, respectively, the requirements of the gate construction and which tests need to be performed, among which is measuring the closing force of the gate. In this test the moving parts of an automated gate, for example a sliding gate, during the last 0.50 metres of the closing movement (where danger of entrapment yields), can close with a maximum force of four hundred Newton, as long as the peak duration is below 0.75 seconds. The EN 12445 standard describes the testing methods and the specifications of the instruments used for it in detail.

About Microtronics

Biason: "Our company was founded twelve years ago by a number of engineers with vast experience in the area of electronic instruments. We started out designing and developing instruments specifically for the fencing industry. The first product we started manufacturing was the BlueForce measuring device, which has remained our core activity to this day." ■

