Dexcom’s next generation applicator utilizes a Tyvek patch allowing for sterilization. The Tyvek seal onto this cap is a critical assembly step. The automation equipment that is used to seal the Tyvek to the cap needs to be set-up and confirmed for each production lot. The confirmation is conducted by a pressure decay test that must seal against the bottom of the cap and confirm the rate of pressure loss overtime through the Tyvek seal.

The Dex5 team has designed a fixture that allows production operators to easily conduct the pressure decay test required to confirm production equipment, while reducing overall test set up time and steps, and producing a reliable and repeatable result.

Project Overview

Prototype Iterations

Team Members

Gaby Ashor Research Lead
Victoria Carlson Technical Project Manager
Jonas Marave Manufacturing Lead
Clint Panlien Design and Procurement Lead
Andrew Silva Design Lead

Ametek Mocon Inc. Package Test System Lippke 5000

System Diagram

Test Methods and Results*

<table>
<thead>
<tr>
<th>Test Results</th>
<th>Tape</th>
<th>Dimple</th>
<th>Defect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test 1</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Test 2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Test 3</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

*Sponsorship by Dexcom.

*See binder for gage R&R test results.