

CASE STUDY: 360 DEGREE BOTTLE AND VIAL INSPECTION SYSTEM

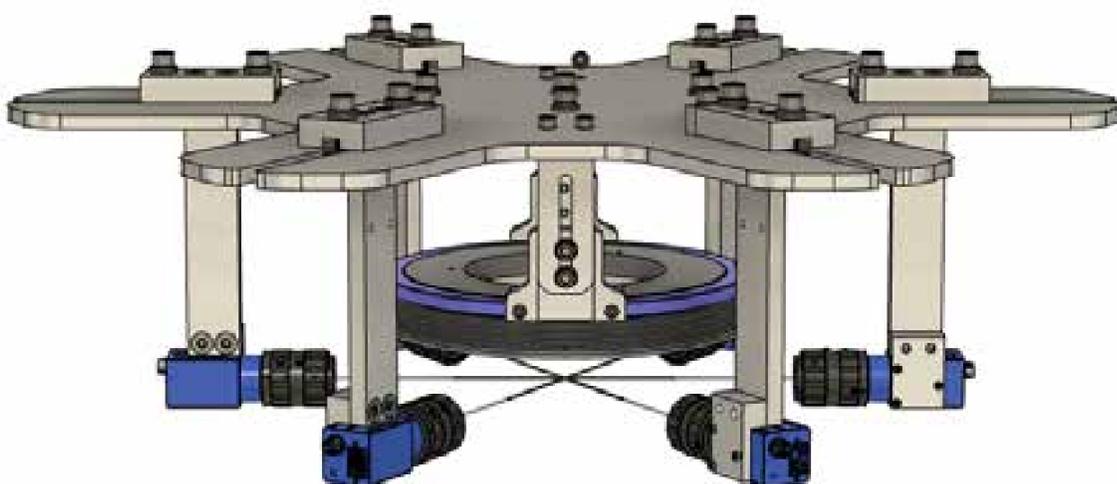


INTRODUCTION

In the United States and many other countries outside of Europe, the majority of medicines are packaged in bottles; however, because it is difficult to inspect bottles, 100% inspection of applied labels are rarely performed. Inspecting labels or defects on a round bottle is difficult because the bottle orientation is typically different on every bottle. To confirm that the data on the labels is correct, and that the correct label stock is being used, companies typically inspect bottle label information prior to applying them to the bottle, and then will collect a sample of the bottles for full inspection. Since the labels are not verified on the bottle, there is a possibility that a wrong label can be applied to a bottle, or the label can be damaged after application. Currently, the only other way to confirm that the information on the bottle is accurate is to do 100% label reconciliation, which has a huge cost (time and effort) when all labels are not accounted for; or deploy a large multi-camera solution which will typically have a high cost for implementation and challenges when a line changeover has to occur.

KEY CLIENT RESULTS

- ✓ 100% inspection of applied labels on all vials and bottles
- ✓ Eliminated manual inspection
- ✓ Multi-camera solution enables closure inspections



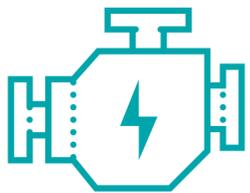


The Solution

The 360 degree inspection module comes in two different variants. The first is for small bottles and vials and the second is for larger bottles.

The small vial solution uses one top mounted camera and pericentric lens that can take images of the top and sides of a bottle at the same time. This solution enables detailed, high-speed inspection of the labels on the bottle, up to 400 parts per minute.

The second solution uses six cameras to create a single, un-wrapped image of the entire side of the bottle that can be used for detailed inspections of the label and the bottle closure. The system can process up to 70 parts a minute using an in-bedded computer without a graphic accelerator.



The Outcome

The customer is now able to inspect 100% of the labels on their vials and bottles instead of just inspecting a sample of the production run, without reducing the speed of the line. The customer also reduced the workload of their QC department, enabling them to spend the time normally spent inspecting bottles to inspect other complex products.

