VINSPEC HEALTHCARE
FOR INSULIN PENS

Tested safety for millions of people
To ensure safe and reliable function of insulin pens, one-hundred percent quality control over the entire course of production is imperative. This is the only way to comply with the strict requirements imposed on needle-based injection systems (ISO 11608-1). The VINSPEC HEALTHCARE inspection solution maps the complete assembly process of insulin pens and enables fully automatic quality control at all important stations. Moreover, the system can be seamlessly integrated in existing production lines. Thanks to extremely short cycle times, inline inspection is easily possible. Any defects that can occur during the assembly process are reliably detected early on.

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100 percent – at maximum quantities

Insulin pens facilitate the daily routine for many diabetics because they enable an easy and precisely dosed administration of insulin. To cover the worldwide demand for insulin and the corresponding injection aids, the production facilities of pharmaceutical manufacturers are designed for extremely high quantities. Several hundred pieces per minute is the capacity of a fully-automated assembly line for insulin pens.

With such short cycle times, a thorough quality inspection is possible only with an automated optical inspection system. Furthermore, 100% inspection of critical assembly steps is an important prerequisite for the safe and reliable function of the pen.

Quality control over the entire assembly process

As the insulin pens are assembled, the system performs an automated inspection at various stations, in each case directly after relevant assembly steps. In this inspection the system checks whether the individual components of the pens have been correctly assembled. Even potential defects that could arise during the assembly process are reliably detected by image-based VITRONIC systems. Depending on the system design up, to six parts are assembled simultaneously per cycle and then inspected.

For example, in the production cycle, inspections are performed on the following areas:

Sleek design

The VINSPEC HEALTHCARE inspection system for insulin pens is characterized by its sleek design and modular setup. Thanks to fast and precise image acquisition technologies only one camera is needed to meet the inspection requirements of the individual stations, even with multiple workpiece carriers. A central computing unit pools the data from the individual stations and serves as the interface to the machine control unit. Moreover, the system provides station-based and lane-based statistics, as well as a trend display, to quickly identify error bursts.

Standard performance data at a glance*

<table>
<thead>
<tr>
<th>Inspection concept</th>
<th>Inline directly after the assembly step</th>
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<tbody>
<tr>
<td>Scope of inspection</td>
<td>Modular combination based on customer</td>
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<tr>
<td>No. of webs</td>
<td>Up to six webs, or six parts per workpiece carrier</td>
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<tr>
<td>Inspection speed</td>
<td>300 objects per minute</td>
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</tbody>
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*We also offer customized solutions to meet any additional requirements.