Inline, Automated and Safe
As an aseptic filling process, Blow-Fill-Seal (BFS) is particularly important in the pharmaceutical industry, for example, in the production of containers for infusion and rinse solutions. The demands placed on quality, safety, and reliability are particularly high for these products, because even the smallest impurities in liquids or defective containers can greatly impact the health of the patient. The VINSPEC HEALTHCARE optical inspection system inspects BFS containers immediately after they are filled and sealed to ensure flawless product quality.
www.vitronic.com
100% Inline Inspection
Common types of BFS containers are those used for infusion solutions (IV bottles), rinse solutions, or antiseptics, as well as BFS single-dose units for small volumes of liquid, such as eye drops. To ensure the flawless quality of the product, VINSPEC HEALTHCARE inspects the BFS container once it is filled and sealed. The optical inspection system can be integrated seamlessly in lines to monitor each process step. The inline inspection is 100% accurate and ensures that defective containers are rejected from the line directly and defective products are not processed further.

Fully Automated with Minimum Cycle Time
As an automated inspection system, VINSPEC HEALTHCARE is used for cycles of more than 14,000 BFS containers per hour. The system performs the complete range of inspection tasks for BFS containers and ensures that the products are of high quality and reliably defect-free.

Reliable Patient Care
VINSPEC HEALTHCARE also inspects BFS containers for particles that may enter the container while it is being shaped or when it is filled through the mouth area or tubes. Therefore, the system checks that there are no floating or suspended particles in the product solution, a key criterion for reliable patient care when BFS infusion bottles are used.

Identification and Serialization
In addition to inspecting the quality of the container, VINSPEC HEALTHCARE identifies codes and printed elements on packaging and labels. All data can be used for targeted evaluations and process optimization. VINSPEC HEALTHCARE inspection systems can be validated for compliance with FDA and GAMP guidelines. Furthermore, VITRONIC’s Track and Trace solution enables the reliable serialization of pharmaceutical products.

Standard Performance Data at a Glance*

<table>
<thead>
<tr>
<th>Inspection concept</th>
<th>Inline and fully automated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope of inspection</td>
<td>Modular assembly based on customer requirements</td>
</tr>
<tr>
<td>BFS container dimensions</td>
<td>Almost all BFS container dimensions</td>
</tr>
<tr>
<td>Inspection speed</td>
<td>14,000 BFS containers per hour; &lt; 0.26 seconds per object inspected</td>
</tr>
</tbody>
</table>

* We also offer customized solutions to meet additional requirements.
OPTICAL INSPECTION OF BLOW-FILL-SEAL CONTAINERS

QUALITY INSPECTION OF THE CAP
- Missing foil
- Bucked foil
- Damaged foil

MISSING CAP / RING INSPECTION
- Incomplete ring
- Colored / dark spots

PRESENCE OF SOLUTION CODING
- On the cap
- Side imprint

INSPECTION FOR SURPLUS MATERIAL
- Below the ring
- On the neck
- On the shoulder

DEFORMATION / QUALITY INSPECTION OF THE CONTAINER
- (Colored) inclusions within the body material
- Colored spots on the neck

READING + VERIFYING
- OCR
- OCV
- 1D-Codes
- 2D-Codes

INSPECTION OF THE BOTTOM
- Colored spots
- Dark incrustations

INSPECTION OF THE HANGER
- Incomplete hanger
- Hanger not punched
- Wrong position
- Colored spots

INSPECTION OF PARTICLES
- Floating particles
- Particles in the liquid

INSPECTION ON FILLING LEVEL
VITRONIC is a global leader in the field of industrial machine vision headquartered in Wiesbaden, Germany. Since its foundation in 1984, the privately owned company has been offering highly innovative solutions in industrial automation, logistics automation and traffic technology. Today, VITRONIC supports customers in over 60 countries via a global network of subsidiaries, service centers and partner companies.

All of the companies’ products are developed, designed and manufactured by VITRONIC in Germany. They range from standardized to fully customized solutions.

Feel free to contact us – we look forward to hearing about your projects.

Full contact details and further information are available at www.vitronic.com

America:
» Mexico – Mexico City sales.mx@vitronic.com
» USA sales.us@vitronic.com
- Atlanta, GA
- Philadelphia, PA
- Louisville, KY

Asia:
» China – Shanghai sales.cn@vitronic.com
» Malaysia – Penang sales.my@vitronic.com
» United Arab Emirates – Dubai sales.ae@vitronic.com

Australia:
» Australia – Melbourne sales.au@vitronic.com

Europe:
» Germany sales@vitronic.com
- Wiesbaden [headquarters]
- Berlin/Potsdam
- Wismar (VETRO GmbH) info@vetro-gmbh.de
» France – Lyon sales.fr@vitronic.com
» Poland – Kędzierzyn-Koźle sales.pl@vitronic.com
» United Kingdom – Birmingham sales.uk@vitronic.com