

Inspection Machine **Seidenader V90-AVSB** for Visual Inspection of Ampules, Vials, Infusion Bottles, Cartridges and Pre-filled Syringes

The semi-automatic inspection machine Seidenader V90-AVSB provides great assistance in helping the inspector to do the best possible job with the least amount of fatigue. In comparison with manual handling, the visual inspection for particulate matter can be done 4 to 5 times faster, more accurately and more consistently with this machine.

Adjustable high-precision rollers allow high speed rotation of ampules, vials and bottles, ranging from 0.5 ml to 1000 ml in size, whirling up particulate matter in liquids. A glare-free system of concentrated light beams make any particulate matter more easily visible through the Tyndall effect. Light refracts off the particulate, making it glow like a small light bulb against a dark background.

Cracks and cosmetic defects can be detected in the bottom, entire sidewall and cap area. Strenuous manual inverting of containers is no longer necessary.

Advantages:

- One operator can inspect at 4 to 5 times the manual inspection rate.
- Wide variety of applications: Ampules, vials, infusion bottles, dental cartridges, prefilled syringes, diagnostic tubes.
All sizes between 0.5 and 1000 ml
- Great variety of products: Solutions, freeze dried products, suspensions, antibiotic powders, eye-drops, diagnostics etc.
- Simultaneous inspection for several criteria: Particulate matter, glass defects, bottom, shoulder and cap area, cracks, dirt
- Tyndall effect: Particles glow like dust particles in front of a film projector and can be detected very easily.
- The operator's ability to detect defects in the product is greatly enhanced by a range of light systems, magnifying lenses, and colored light filters.
- Variable high speed rotation of the objects to whirl up particulate matter.
- Variable slow rotation allows a 360° inspection of the container.
- Reproducible presentation and inspection process through scales on Tyndall light brackets, mirror holders and magnifying lens.
- PLC based electronic reject system operated by infrared sensors avoids manual contact with the product and makes handling of rejects easier.
- Various counting functions: Infeed, out-feed, rejects, rejects per category
- Batch data printer can be connected.
- Quick change-over, tool-less
- Unique modular design allows machine to be built to customer's specific needs.
- Interface with decontamination machine DAR allows "in-line" exterior cleaning, drying and inspection of all objects with only one operator.
- Experience of over 2000 machines successfully installed, validated and accepted in FDA and European regulated markets.



Inspection Machine Seidenader V90-AVSB

From the infeed system, the product is conveyed through the inspection cabin on a continuously or intermittently moving transport system, consisting of a dual chain system fitted with white or black rollers. Each roller has telescoping shafts which allow easy removal and repositioning on different pin positions to accommodate a wide range of vial and ampule diameters. Each roller rotates on two precision roller bearing assemblies. The rollers are supported between dual conveyor

chains and are inclined at an angle of 30°, 45°, 60° and 75° to the horizontal plane, depending on the application.

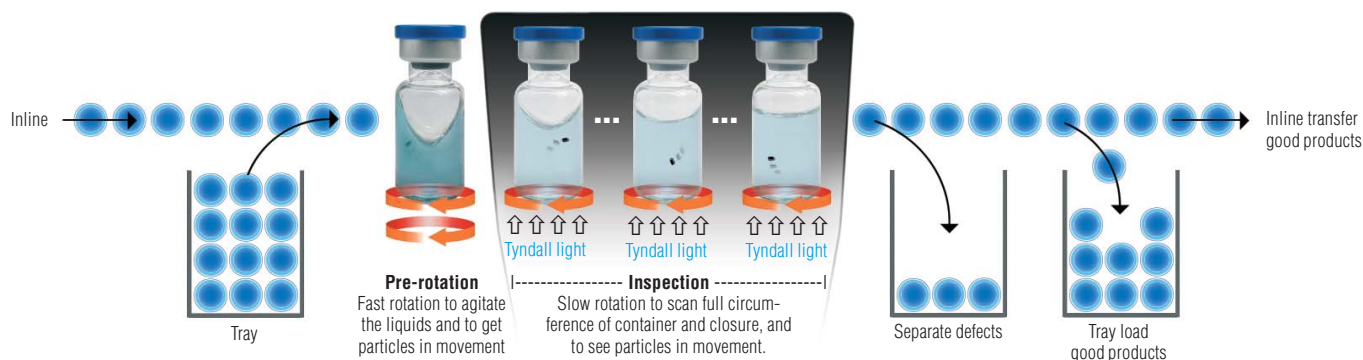
Several light systems are available: A white light source provides diffused illumination from behind the rollers to allow inspection against both a white background (light source) and a black background (the rollers) or vice versa to meet GMP recommendations.

Alternatively, highly concentrated halogen light can be shot through the bottom or shoulder of the containers, to reach the "Tyndall Effect". In addition to these lighting systems, mirrors, a magnifying lens and polarisation filters are available to optimize the inspection and to support the operator.

The product passes through the inspection cabin in front of the operator. This arrangement permits the inspection of the entire outer surface of the product, as well as the bottom, all glass surfaces, the top of the cap, the crimp of vials and the tips of the ampules.

The rejected product is easily removed either by hand or by an automatic reject system operated by infrared sensors which allows to separate defects without interrupting the inspection process and without operator/product contact.

The product moves out of the inspection cabin, back into upright position and transfers into various discharge systems.



Infeed



Infeed from trays.



Infeed combination syringe/vial.



Infeed from turntable.



Syringe turning screw at infeed.

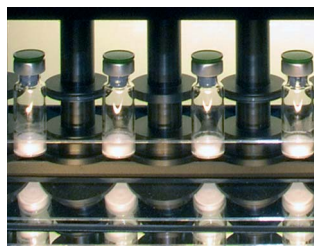
Inspection



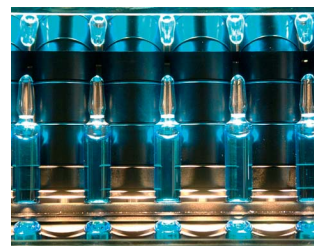
Particle inspection of liquid products against polarized background light, as well as cap, crimp and bottom control.



Two mirrors for bottom and cap inspection.



Disk rollers for presentation of lyo-filled vials at 75° inclination.



Color filters adapted to product or containers optimize defect recognition.

Light options



Tyndall light systems and inspection against dark background.



Special light adapted to suspensions.



Background light in combination with Tyndall illumination.



Special light to check albumin for microbial contamination.

Separation



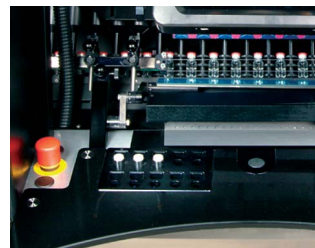
Separation of defects for ampoules and vials.



Separation of defects for bottles.



Separation of defects for small containers like syringes or cartridges.



Push buttons for separate counting of rejects per defect group.

Ergonomics



Tray unloader with segmented infeed starwheels.



Bottom dust pan to collect dust, product debris and liquids in an easily accessible area.



Ergonomic inclination of the machine baseplate.



Ergonomic cockpit design reducing stray light and glare, touch screen HMI for all operating functions.

Outfeed



Single tray loader.



Double tray loader.



Y-Mag modules to separate two reject categories.



Exact counting into trays.

Syringe handling



Syringe feeding system SyWalker.



Syringe presented needle-up.



Syringe presented needle-down.



Syringe reject rail.



Inline options



Bulk syringe feeding and orientation system in line with V90-AVSB.



Four inspection machines with tray loading function.



Integration with outside vial washer and buffer tables.



Inspection lines for lyophilized product in vials.
Infeed: Bi-flow tables.
Outfeed: High-speed tray loader MGZ-2.

Technical Data Seidenader V90-AVSB:

Application:	ampules, vials, infusion bottles, cartridges, diagnostic tubes, pre-filled syringes
Range of sizes:	0.5 ml - 1000 ml
Contents:	clear solutions, suspensions, eye-drops, diagnostics, freeze dried products, sterile powder
Inspection criteria:	particulate matter, glass and cosmetic defects, closure quality
Inspection area:	overall glass surface, neck-, bottom-, shoulder area and crimping of vials or ampule tips can be inspected 100 %
Operators:	one per cabin - dual or triple cabins available
Techn. output:	max. 150 objects/min/lane (actual output depends on operator's performance)
Machine base:	stainless steel frame and panels
Mode of operation:	continuous or intermittent (switch)
Voltage:	230 V, 0.8-1.4 kW, 50 Hz standard; other voltages available

Inclination of objects:	30°, 45°, 60°, 75°, depending on application
Tyndall lights:	from 5 different directions with adjustable intensity, depending on products
Background:	black, white, illuminated, polarized
Electronic reject system:	"infrared curtain" system. Defect collection in box or on trays.
HMI:	21 CFR part 11 compliant, touch screen, digital display for - counter infeed, outfeed, rejects - production rate objects/min/h - trouble shooting info
PLC:	Siemens or Rockwell Allen-Bradley
Working height:	900 mm ± 50 mm
Dimensions:	ca. 2300 x 1000 x 1700 mm
Weight:	ca. 550 kg net

Since we are constantly working on the improvement of our high-quality machines, the texts, illustrations and figures on these pages are illustrative only and not binding.

Seidenader

Seidenader Maschinenbau GmbH
Lilienthalstr. 8, D-85570 Markt Schwaben / Germany
Phone +49 8121 802-0, Fax +49 8121 802-100

Seidenader Equipment Inc.
25 Hanover Road, Florham Park, NJ 07932 / USA
Phone +1 973 301-9800, Fax +1 973 301-9090

info@seidenader.de, www.seidenader.de