

Seidenader

Pharma Technology Solutions



V90-AVSB

Seidenader V90-AVSB

Visual Inspection of Ampoules, Vials, Infusion Bottles,
Cartridges and Pre-filled Syringes

Advantages

- One operator can inspect at 4 to 5 times the manual inspection rate.
- Wide variety of applications: Ampules, vials, infusion bottles, cartridges, prefilled syringes, diagnostic tubes.
All sizes between 0.5 and 1,000 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.
- Various counting functions: Infeed, outfeed, rejects, rejects per category.
- PLC based electronic reject system operated by infrared sensors avoids manual contact with the product and makes handling of rejects easier.
- Batch data printer can be connected.
- Quick change-over, without tools.
- Modular design allows machine to be built to customer's specific needs.
- Interface with decontamination machine DAR for in-line exterior cleaning, drying and inspection of all objects with only one operator.
- More than 2,000 machines successfully installed, validated and accepted in FDA and European regulated markets.

Seidenader V90-AVSB

semi-automatic inspection machine for detection of particles and cosmetic defects

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 1,000 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 of the container as well as the entire sidewall and cap area. Strenuous manual inverting of containers is no longer necessary.



V90-AVSB - outfeed to turntable



Technical Data Seidenader V90-AVSB

Application:	ampules, vials, infusion bottles, cartridges, diagnostic tubes, pre-filled syringes
Range of sizes:	0.5 ml - 1,000 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
Technical output:	max. 9,000 objects/h/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
Reject system:	manual optional: infrared curtain system, contactless with electronic reject unit
Working height:	900 mm ± 50 mm
Dimensions:	ca. 2,300 x 1,000 x 1,700 mm
Weight:	ca. 550 kg net

Seidenader's V90 systems ensure full compliance with the new regulations discussed for a revision of the US Pharmacopoeia for particle inspection. With background light, the required minimum intensity of 2,000 lux for illumination at the inspection point is always achieved, and with Tyndall light the intensity is 10 to more than 20 times the required value.

Most of the inspection features are also available as a table top version Seidenader V90-T.

Seidenader V90-AVSB

Semi-automatic inspection machine

Products continuously presented to the operator

Applied in smaller production environment where automatic inspection would not be economical

Inclination of containers 30°, 45°, 60° or 75°

From the infeed system, the product is conveyed through the inspection cabin on a continuously or intermittently moving transport system. The product passes through the inspection cabin in front of the operator.

Seidenader V90-T

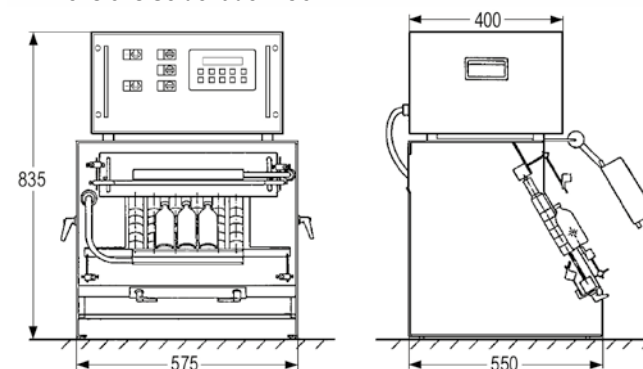
Table top inspection unit

A handful of products at a time

Applied for small production runs, for quality control sample checks and for use in hospital pharmacies and laboratories

Adjustable inclination of the containers in the inspection area from 15° - 75°

Cabin similar to the inspection machine V90-AVSB but without the infeed system and the automatic transport of products.

**Dimensions Seidenader V90-T**

Seidenader V90-AVSB

automatic handling of containers for easy visual inspection of entire product

Function

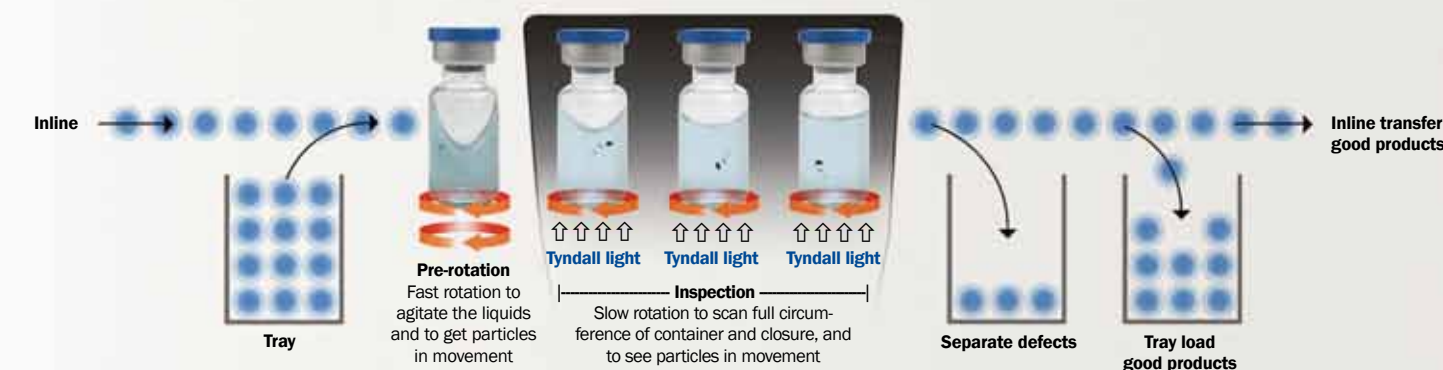
From the infeed system, the product is conveyed through the inspection cabin on a continuously or intermittently moving transport system, consisting of a dual chain system fitted with white or black rollers. Each roller has telescoping shafts which allow easy removal and repositioning on different pin 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 achieve 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, that is operated by infrared sensors, allowing 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

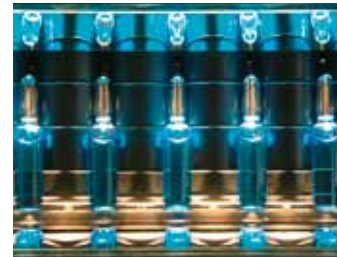
Particle inspection of liquid products against polarized background light, as well as cap, crimp and bottom control



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



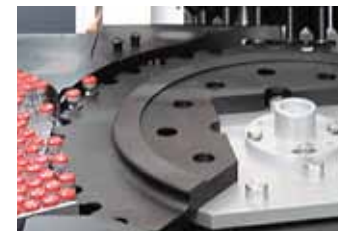
Separation of defects for small containers like syringes or cartridges



Push buttons for separate counting of rejects per defect group

Ergonomics

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



Tray unloader with segmented infeed starwheels



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

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Inline Options V90-AVSB:



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



Integration with exterior washing machine DAR
and buffer tables

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

The product range of Seidenader Maschinenbau GmbH includes:

- automatic inspection machines
- semi-automatic inspection equipment
- complementary inspection technologies
- track and trace solutions / serialization, e-pedigree
- equipment for inspecting and sorting of tablets
- exterior washing machines
- automation & IT solutions for pharmaceutical packaging lines

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.



Four V90-AVSB inspection machines with
tray loading function

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