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

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 360º 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 customers 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.
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)
- **Weights:** ca. 550 kg net
- **Dimensions:** ca. 2,300 x 1,000 x 1,700 mm
- **Working height:** 900 mm ± 50 mm
- **Content sizes:** 0.5 ml - 1,000 ml
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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 environments 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°
- Similar to the inspection machine V90-AVSB but without the infeed system and the automatic transport of products.

**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 polarization 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.

Seidenader V90-AVSB
automatic handling of containers for easy visual inspection of entire product

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**Dimensions Seidenader V90-T**

- 420 mm x 575 mm x 715 mm

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Seidenader V90-AVSB
automatic handling of containers for easy visual inspection of entire product
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.

Inspection

Insfeed combination syringe/vial

Insfeed from turntable

Syringe turning screw at Infeed

Infeed

Infeed from trays

Light options

Tyndall light systems and inspection against dark background.

Special light adapted to suspensions and inspection against dark background.

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.

Push buttons for separate counting of defects.

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.

Syringes presented needle-up.

Syringes presented needle-down.

Syringe reject rail.

Seidenader V90-AVSB

for a wide range of containers, products and inspection criteria.

Ergonomics

Ergonomic steering wheel.

Ergonomic inclination of the machine baseplate.

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

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

Infeed from turntable with segmented infeed starwheels.

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Four V90-AVSB inspection machines with tray loading function

Integration with exterior washing machine DAR and buffer tables

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

Inline Options V90-AVSB:

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.