Seidenader
Inspection Machines

Exterior Cleaning and Drying Machine
Seidenader DAR
for Ampules, Vials, Syringes and Cartridges

After filling antibiotics, anti-cancer drugs and other toxic products, vitamin B 12, sugar containing solutions and oily liquids, it is very important that no product remains on the outer surface of the ampules/vials to secure operator safety and optimal processing. The exterior cleaning and drying machine Seidenader DAR provides for clean and dry containers from 0.5 ml - 250 ml.

On the Seidenader DAR the filled and sealed containers pass first through a washing cycle which allows thorough cleaning, using warm water, optionally with detergent, and second through a rinsing cycle with clear water. The water nozzles are designed and pre-adjusted to keep the caps, seals and crimps dry.

Drying of the cleaned ampules/vials is accomplished by a series of pre-compressed air nozzles. An optional warm air blow-off system is also available. Starwheels transport the containers individually through the DAR.

The modular system allows a compact interface of the DAR with inspection lines and leak detectors, labelling and ampule/vial printing machines. In-line and stand alone (tray in/tray out) operation, both are possible.

The special noise protection cover with wide opening doors allow low noise level in the operating environment.

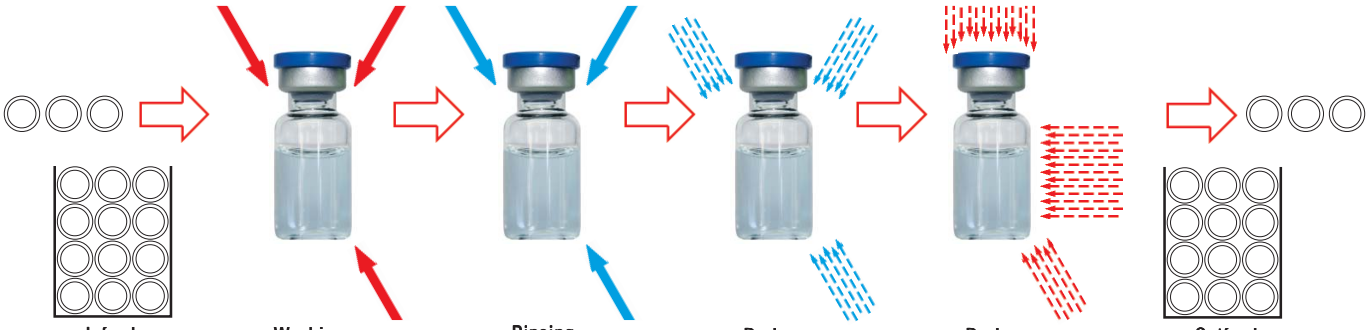
Mode of operation:

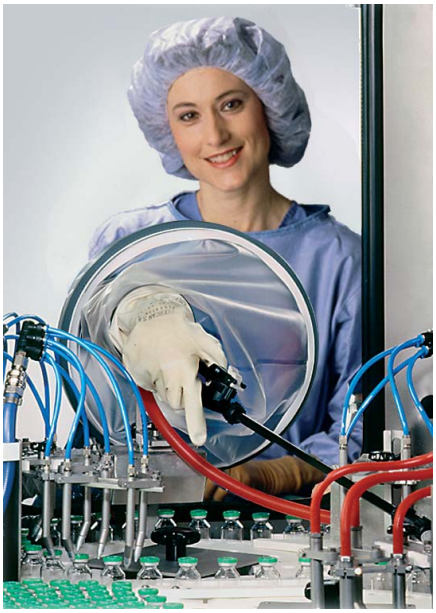
The ampules/vials are fed in-line or from a tray by an infeed belt into synchronized star-wheels. In the cleaning stage the containers pass through a pre-wash zone with warm water, a cleaning zone with warm water and detergent and a rinsing zone with clear water. A series of adjustable nozzles aim a gentle flow of water onto the shoulders of the vials with caps, crimps and seals of the vials staying dry. Ampules are washed on their entire surface.

After the cleaning process the ampules/vials are passed through the first drying zone with a series of compressed air nozzles and the second drying zone with a warm air blower system. The clean and dry containers are then transferred to a downstream machine or into a tray loading system.

Dry caps, seals and crimps through exact adjustment of the water nozzles

Functional Diagram:



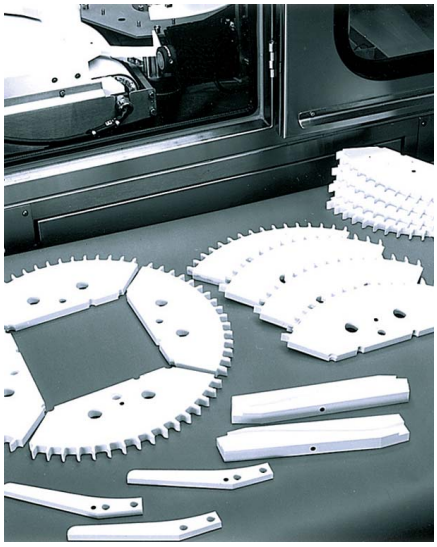


DAR with optional isolation system and glove parts for toxic products

Options

- Infeed system with stainless steel mesh belt conveyor and shower for pre-wash of heavily contamined ampules
- Stainless steel tank for recirculation to reduce consumption of water
- Detergent dosage system with dosing pump
- Access restriction barriers and special air handling for toxic materials
- PLC controlled warm air drying system
- Monitoring of utilities like water, compressed air, warm air and detergent for throughput, pressure, temperature and fill level
- Batch report including all critical data

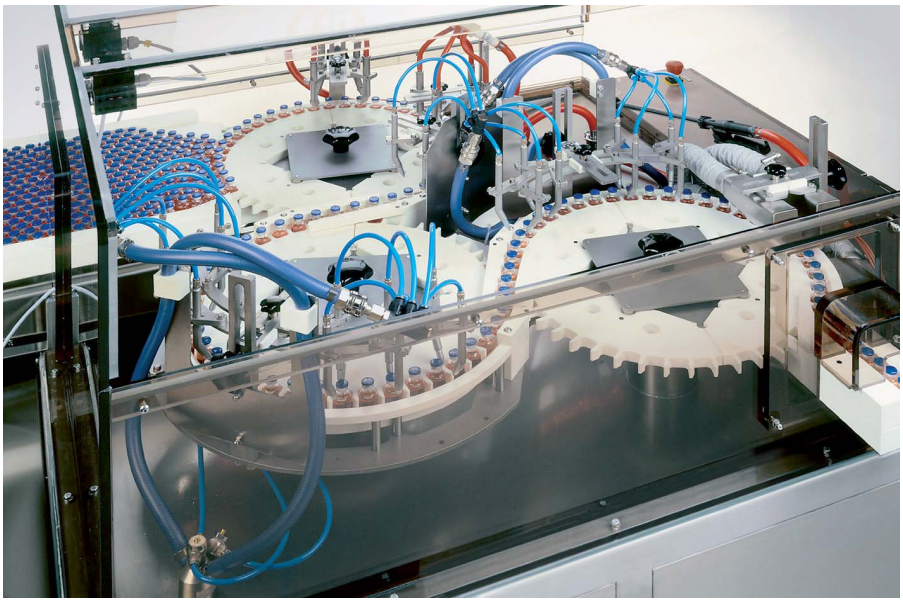
Cleaning nozzles with graduations for precise adjustment, reproducible for each format.
Ampules are washed on their entire surface.



Plug in change parts for quick change over without tools and space-saving storage.

Advantages:

- Product spillage and contamination on the outer surface of the containers are washed off thoroughly
- Plug-in change parts for easy and quick change over
- Adjustable cleaning and drying nozzles with graduations for precise adjustment for reproducible change over
- Dry caps, seals and crimps through customized adjustment of the water nozzles and special design
- Improves performance of downstream inspection machines. Only clean and dry products are transferred to the next step
- Labels stick perfectly
- High throughput:
  70 - 350 containers/min., depending on container size
- Low water consumption, rinse water is collected in the stainless steel tank and re-circulated to pre-wash nozzles
- Low noise level through noise protection cover
- Sanitary standard piping. Valves and sensors are mounted with tri-clamp fittings



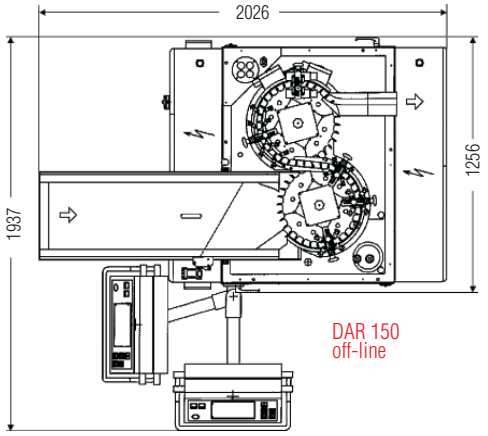
Top view: pre-set cleaning and drying nozzles with precise scaling allow a reproducible change over.

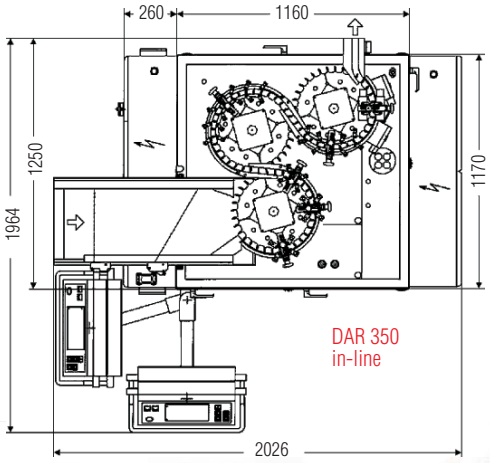
Exterior cleaning and drying machine DAR 350
for vials, in line with 2 inspection machines V 90-AVSB/75
and byflow table on outfeed

Exterior cleaning and drying machine
Seidenader DAR 350 in-line with a automatic
inspection machine Seidenader VI

Technical data Seidenader DAR:

Application:	Exterior cleaning and drying of ampules, vials, syringes and cartridges
Range of sizes:	0.5 ml - 250 ml
Throughput:	DAR 100: 100 containers/min DAR 150: 150 containers/min DAR 350: 350 containers/min depending on container size and drying requirement, variable speed drive
Design:	Complies with current GMP recommendations, OSHA regulations and CE requirements. The electrical standard is EN 60204. All parts in direct contact with water are made of FDA acceptable polymers or 316 stainless steel . Internal piping to the washing and rinsing nozzles with Tri-Clamp joints and silicone hoses (sanitary design).
Mode of operation:	Continuous motion
Working height:	930 mm ± 30 mm
Voltage:	400 V, 3 Ph + N + PE, 50 Hz; all other voltages possible through transformer
Power consumption:	1-18 kW depending on heating system for warm air and water
Compressed air:	min. 6 bar
Consumtion:	DAR 100 / DAR 150: ca. 140 Nm^3/h DAR 350: ca. 190 Nm^3/h
Water:	min. 2 bar - max. 4 bar
Consumption:	ca. 300 l/h, ca. 180 l/h with optional recirculation system
Net weight:	DAR 100 : ca. 350 kg DAR 150: ca. 420 kg DAR 350: ca. 600 kg





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.

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