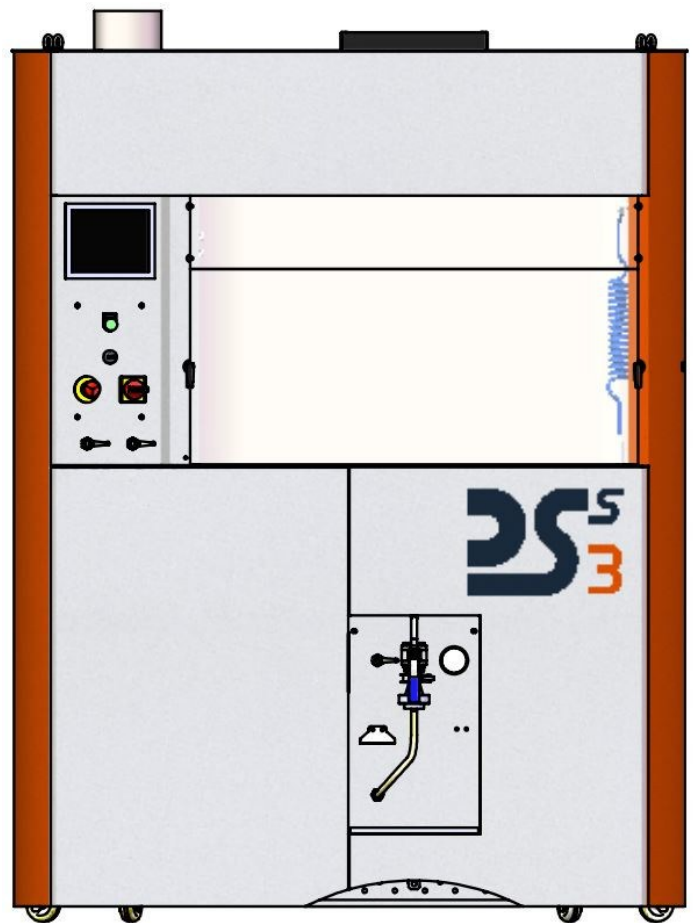


The DSS3 is our particle tracker extraction station for small and medium-sized components. It allows the extraction of contamination on very small components to evaluate their level of cleanliness according to the current standards such as ISO 16232 and VDA19, among others.

The DSS3 extraction enclosure, the most elaborate of the market, is super mirror polished stainless steel, has been designed with a minimum of welding and retention area and without any sharp angles.

Benefits

- Quick installation, passing through a standard access door.
- Automatic wall flushing integrated into walls without the risk of particle retention.
- Fast and repeatable blank acquisition, value less than 150 μm , 100 μm repeatable as a minimum.
- Ultrasonic integrated in the bottom of the sink, adjustable 400W power (optional).
- Full access to the extraction area (optional sliding window).
- Double air supply flow and exhaust air extraction, integrated into the station.
- Colour touchscreen HMI with intuitive functional controls.
- Proven and reliable equipment.
- Quality materials and finishes to avoid particle generation and retention.
- Accessories precisely designed in order to avoid any additional contamination.
- Uniquely designed accessories on demand.
- Laminar air flow with 0,3 μm HEPA filter meets Class 5 of ISO 14644-1.
- Complies with the European Machinery Directive 2006 and Electromagnetic Compatibility.



The DSS3 extraction station collects the contamination on a measurement membrane which makes it possible to:

- Perform a particle counting.
- Define the gravimetric value.
- Determine the type or define the nature of the contamination.

The cabinet is divided into 4 modules:

- Module 1 – Laminar air flow hood
- Module 2 – Dust-controlled work enclosure
- Module 3 – Lower part with equipment
- Module 4 – Electrical cabinet



Module 1 - Laminar air flow hood

The vertical non-recycled air flow hood consists:

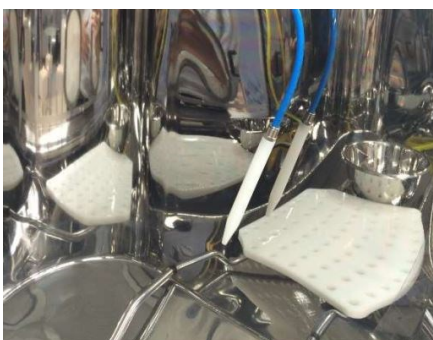
A motor, which supplies air to the dust-controlled enclosure. In standby mode, this motor ensures an overpressure in the enclosure to limit the access of environmental particles.

A suction motor to extract stagnant air. It exhausts the air to outside, on the top of the station and ensures operator protection during use of volatile washing fluids.

A removable pre-filter is located behind the hood, with 95% removal efficiency for particles greater than 5 µm.

A removable absolute HEPA filter (99,999% efficiency for particles of 0,3 µm or greater). It ensures air cleanliness control of the air in the work enclosure.

A plenum ensures a constant and homogeneous laminar air flow on output from the absolute filter.



Module 2 - Dust-controlled work enclosure

The dust-controlled enclosure meets Class 5 of ISO 14644-1. In this area, component contamination extraction is protected from environmental contamination.

The material of the extraction enclosure is stainless steel, super mirror surface ($R_a < 0,02$) with a conical bottom and wide curves to eliminate the risk of contamination retention. A central orifice is set therein to evacuate the wash fluid toward the filtration membrane.

Lighting is provided by 2 IP65 low voltage LED spotlights fixed inside the work area.



The unit is equipped with a sidewall automatic rinsing program. A cylindrical ramp allows automatic rinsing of the whole surfaces of the enclosure without the help of the operator. Drilled with numerous holes, this ramp generates practically no solvent vapor. A solvent pen ordered by a switch pedal supplies the solvent under pressure. An air curtain spanning the width at the front of the work area provides operator protection. When the station is not in use, the enclosure is closed by a polycarbonate removable window. Sliding door to fully close the enclosure is available on demand.

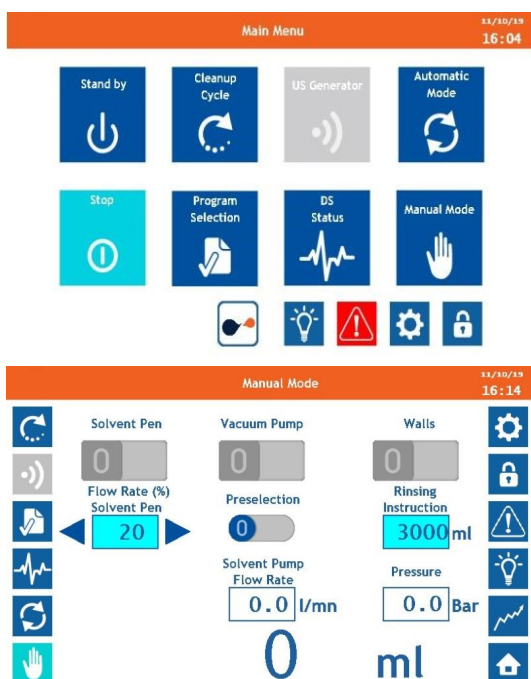
Module 3 – Lower part with equipment

The equipment is located in a powder coated steel box with an access door in the front of the unit.

A door gives access to the various parts to facilitate the replacement of the filter elements or a mechanical component

All equipment is placed in a sealed retention container with greater capacity than the solvent tank. A drain connector is attached to the container.

Under the membrane holder there is a stainless steel drip tray.



Controls and Automation

Operating parameters are entered via the 7,5" Colour Touch Screen HMI using Pro-face in the standard version or Siemens on request.

Main functions:

- Manual mode
- Automatic mode
- Cabinet status display
- Flow rate adjustment
- Monitoring of distributed solvent.
- Specific function to distribute the solvent.
- Defaults and Alarms.

Documentation

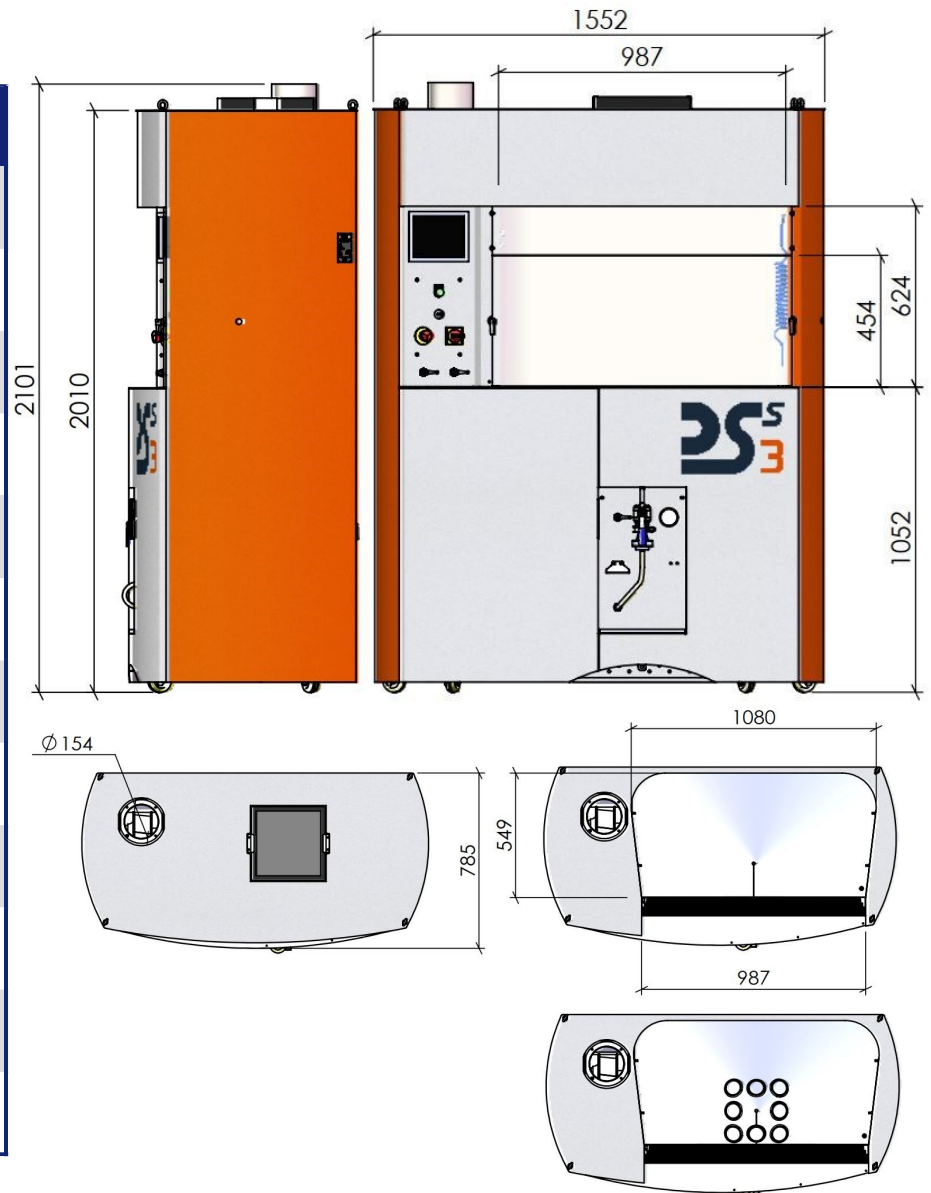
The station is delivered with the user's manual and a technical documentation including :

- The general drawings and slinging drawing.
- The wiring and bill of material for electric parts.
- The schematic and bill of material for hydraulic parts.
- The recommended spare parts list.
- The CE certificate.
- The pre-commissioning report (Fabrication Acceptance Tests).
- The hood calibration certificate.

All the technical documentation in English is supplied during the commissioning or during the training.

IMEX DSS3

Technical data	
PLC	Pro-face / Siemens
Pen flow rate	max. 5 l/min
Wall flushing	max. 12 l/min
Rinsing pressure	max. 4,5 bar
Useful tank volume	50 l
Membrane holder	Ø 47 mm
Fluid filtration rate	0,2 µm
Accepted fluid types	solvent/detergent (water based)
Structure material	Painted steel
Working area material	polished 304L stainless steel
Extraction connection	154 mm outside
Power consumption	max. 1700 W



Dimensions	Width [mm]	Depth [mm]	Height [mm]
Working area	987 / 1080	549	630 + 205
Overall	1552	785	2101

Configuration	HMI	Finishes	Window	Option: Ultrasound	Power supply
	Pro-Face 7"	Painted frame	Removable	Without Ultrasound	110V - 60 Hz
	Siemens 7"	Full stainless-steel	Sliding door	400W Ultrasound	220V - 60 Hz