



**Fraunhofer**

**TESTED<sup>®</sup>  
DEVICE**

Salli Systems  
Salli Swing ESD  
**Report No. SA 1011-538**

DUPLICATE

Statement of  
Qualification

# Statement of Qualification

**Customer:**  
Salli Systems  
Sahalantie 41  
77700 Rautalampi  
Finland

**Test results:**  
(according to ISO 14644-1)

The chair Salli Swing ESD is suitable for use in cleanrooms fulfilling the Air Cleanliness Class 5.

## Component tested:

Category: Working Place and Operator

Subcategory: Chair

Type: Salli Swing ESD

## Random check measurements of particle emission (airborne) at representative points

Test procedure: According to VDI 2083 Part 9.1

Measuring instruments being used:

- Model LasAir II 110 manufactured by PMS with measuring channels of  $\geq 0.1 \mu\text{m}$ ,  $\geq 0.2 \mu\text{m}$ ,  $\geq 0.3 \mu\text{m}$ ,  $\geq 0.5 \mu\text{m}$ ,  $\geq 1.0 \mu\text{m}$  and  $\geq 5.0 \mu\text{m}$
- Model Airnet 310 manufactured by PMS with measuring channels of  $\geq 0.3 \mu\text{m}$ ,  $\geq 0.5 \mu\text{m}$ ,  $\geq 1.0 \mu\text{m}$  and  $\geq 5.0 \mu\text{m}$

Test parameters of the test environment:

- Cleanroom of Air Cleanliness Class ISO Class 1 (according to ISO 14644-1)
- Air flow velocity: 0.45 m/s
- Air flow guidance: vertical unidirectional air flow from ceiling to floor
- Temperature:  $22 \text{ }^\circ\text{C} \pm 0.5 \text{ }^\circ\text{C}$  ( $71.6 \text{ }^\circ\text{F} \pm 0.9 \text{ }^\circ\text{F}$ )
- Relative humidity:  $45 \% \pm 5 \%$

Test parameters of the test execution:

- Fatigue stress with a force of 1200 N and 12 strokes per minute
- The chair consisted of:
  - Salli Swing chair, A1 (SWTCHA1)
  - Swing seat, A1 (SWTA1)
  - Black 02 ESD (L02ESD)
  - Cylinder, medium, chrome (CYMCHST)
  - Base, 5.star, polished, aluminium (BASE5POCH)
  - Castors, 65 antistatic soft 11 mm (CA65ANT11)

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The measuring equipment used for the qualification is regularly calibrated and is based on national and international standards. In the case where no national standards exist, the measuring procedure used corresponds with technical regulations and norms valid at the time of the measurement. The documents drawn up for this procedure are available for viewing.

The validity of this certificate applies only to the mentioned product in this particular condition for a duration of 5 years.  
Further information: [www.tested-device.com](http://www.tested-device.com).


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Stuttgart, March 28, 2011

Place, Date

  
i. A.   
Project manager