IPA

Dry-Cleanroom

valid until: December 3, 2030

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TESTED®
DEVICE

igus GmbH
SLW-1040-10X25-E7-AL
Report No. IG 2511-1689

Statement of
Qualification

Single product
Particle Emission
in Dry-Cleanroom

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Statement of Qualification · Single product

Customer

igus GmbH
Spicher Strasse 1a
51147 Cologne
Germany

Tested product

Category: Automation Components

Subcategory: Linear Units

Product name: Linear modul with lead screw SLW-1040-10X25-E7-AL
(manufacturing date: 9/2025; color: silver/aluminium; article number: SLW-1040-10X25-E7-AL; length: 340 mm)

Random sampling of particle emissions (airborne) at representative sites in dry-cleanroom

Standards/guidelines: ISO 14644-1, -14
The norms stated generally refer to the version valid at the time of the tests.

Test equipment: Optical particle counter:
LasAir II 110 and LasAir III 110 with measuring ranges ≥ 0.1 µm, ≥ 0.2 µm, ≥ 0.3 µm, ≥ 0.5 µm, ≥ 1.0 µm and ≥ 5.0 µm

Test environment parameters:

- Dry-Cleanroom Air Cleanliness Class (according to ISO 14644-1): ..... ISO 3
- Airflow velocity: ..... 0.1 m/s ± 0.05 m/s
- Airflow pattern: ..... displacement flow
- Room temperature: ..... 22 °C ± 1 °C
- Dew point: ..... -40 °C ± 2 °C

Test procedure parameters:

- Installation position: ..... horizontal, slide at the top
- Travel length: ..... s = 188 mm
- Payload (weight force): ..... 25 N
- Acceleration: ..... 100 mm/s²
- Break time: ..... 1000 ms
- Parameter Set 1: ..... velocity v_1 = 20.83 mm/s
- Parameter Set 2: ..... velocity v_2 = 33.30 mm/s
- Parameter Set 3: ..... velocity v_3 = 41.70 mm/s

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Test result / Classification

The linear modul with lead screw SLW-1040-10X25-E7-AL is suitable for use under the specified test parameters (room temperature: 22 °C ± 1 °C; dew point: -40 °C ± 2 °C) in dry-cleanrooms of the following Air Cleanliness Classes according to ISO 14644-1:

Test parameter(s)	Air Cleanlines Class
v_1 = 20.83 mm/s; Break time: 1000 ms Payload (weight force): 25 N	4
v_2 = 33.30 mm/s; Break time: 1000 ms Payload (weight force): 25 N	4
v_3 = 41.70 mm/s; Break time: 1000 ms Payload (weight force): 25 N	4
Overall result	**4**

Please note: Transport damages, incorrect installation, oil leakage, aging behavior, corrosion etc. can influence the test result.

The measuring devices used for the qualification tests are calibrated at regular intervals; their results can be traced back to national and international standards. In cases where no national standards exist, the test procedure implemented complies with the technical regulations and norms applicable at the time of the test. The relevant documentation can be viewed on request at any time.

Detailed information and parameters of the test environment can be found in the Fraunhofer IPA test report.

Fraunhofer Institute for Manufacturing Engineering and Automation IPA

Business unit
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IG 2511-1689 — Report No. first document
Stuttgart, December 3, 2025 — Place, date of first document issued

-- — Report No. current document
-- — Place, current date

on behalf of
Dr.-Ing. Frank Bürger, head of business unit Testing and Certification

This document only applies to the named product in its original state and is valid for a period of 5 years from the date the first document was issued. The document can be verified under **www.tested-device.com**.