



Fraunhofer

**TESTED[®]
DEVICE**

Gimatic S.r.l.
Gripper MPLM2535
Report No. GI 1501-746

DUPLICATE

Statement of
Qualification

Particle Emission

Statement of Qualification

Customer: Gimatic S.r.l.
Via Enzo Ferrari, 2/4
25030 Roncadelle - Brescia
Italy

Test result / Classification:
(in acc. with ISO 14644-1)

Under the specified test conditions, the long stroke gripper MPLM2535 is suitable for use in cleanrooms fulfilling the specifications of Air Cleanliness Class 6.

Component tested

Category: Automation Components
Subcategory: Positioning Systems
Product name: Long stroke gripper MPLM2535
(Lot-No.: ODL-S02339; manufacturing date: 4/07/2014)

Random sampling of particle emissions (airborne) at representative sites

Standards/Guidelines: VDI 2083-9.1; ISO 14644-1
The norms stated refer to the relevant editions applicable at the time of the tests.

Test devices: Optical particle counter:
LasAir II 110 & LasAir III 110 with measuring ranges $\geq 0.1 \mu\text{m}$, $\geq 0.2 \mu\text{m}$, $\geq 0.3 \mu\text{m}$, $\geq 0.5 \mu\text{m}$, $\geq 1.0 \mu\text{m}$ and $\geq 5.0 \mu\text{m}$

Test environment parameters:

- Cleanroom Air Cleanliness Class (according to ISO 14644-1):..... ISO 1
- Airflow velocity:..... 0.45 m/s
- Airflow pattern:.....vertical laminar flow
- Temperature:..... $22^\circ\text{C} \pm 0.5^\circ\text{C}$
- Relative humidity:..... $45\% \pm 5\%$

Test procedure parameters:

- Control unit:..... supplied by customer
- Cycle time:..... 2 s
- Cycles per minute:.....30

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.

For further information about the test environment and parameters, please refer to the Fraunhofer IPA test report.

Fraunhofer Institute for
Manufacturing Engineering and Automation IPA

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and Micromanufacturing

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