IPA

Cleanroom (atmospheric)

valid until: September 24, 2030

Fraunhofer

TESTED®
DEVICE

Kemei Automation
KMCT-COSW32-70
Report No. DO 2507-1646

DUPLICATE

Statement of
Qualification

Single product
Particle Emission
in Cleanroom
(atmospheric)

Fraunhofer
IPA

Fraunhofer
IPA

Statement of Qualification · Single product

Customer

Dongguan Kemei Automation Technology CO.,Ltd.
CIMC Digital Technology Industrial Park, Songshan Lake
Dongguan City, Guangdong Province
China

Tested product

Category: Energy Supply

Subcategory: Cable Systems

Product name: KMCT Cleanroom Dedicated Cable System & Convenient Zipper Opening Drag Chain KMCT-COSW32-70
(manufacturing date: 6/20/2025; color: white; serial number: KMCT-BWG-0010011005)

Random sampling of particle emissions (airborne) at representative sites in cleanroom under atmospheric conditions

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:

- Cleanroom Air Cleanliness Class (according to ISO 14644-1):..... ISO 1
- Airflow velocity:.....0.45 m/s
- Airflow pattern:..... vertical laminar flow
- Room temperature: .....22 °C ± 0.5 °C
- Relative humidity: ..... 45 % ± 5 %

Test procedure parameters:

- Bending radius: .....r = 85 mm
- Stroke length:..... s = 820 mm
- Parameter Set 1:.....v_1 = 0.5 m/s; a_1 = 1.0 m/s²
- Parameter Set 2:.....v_2 = 1.0 m/s; a_2 = 2.0 m/s²
- Parameter Set 3:.....v_3 = 2.0 m/s; a_3 = 4.0 m/s²

Test result / Classification

The KMCT Cleanroom Dedicated Cable System & Convenient Zipper Opening Drag Chain KMCT-COSW32-70 is suitable for use under the specified test parameters (room temperature: 22 °C ± 0.5 °C; relative humidity: 45 % ± 5 %) in cleanrooms of the following Air Cleanliness Classes according to ISO 14644-1:

Test parameter(s)	Air Cleanlines Class
v_1 = 0.5 m/s; a_1 = 1.0 m/s²	1
v_2 = 1.0 m/s; a_2 = 2.0 m/s²	1
v_3 = 2.0 m/s; a_3 = 4.0 m/s²	1
Overall result	**1**

Please note: Transport damages, incorrect installation, aging behavior, 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
Testing and Certification

Nobelstrasse 12
70569 Stuttgart
Germany

DO 2507-1646 — Report No. first document
Stuttgart, September 24, 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**.