IPA

Cleanroom (atmospheric)

valid until: January 23, 2031

Fraunhofer

TESTED®
DEVICE

Montech AG
TB30R-140x1500/MR 571854
Report No. MO 2511-1692

Statement of
Qualification

Single product
Particle Emission
in Cleanroom
(atmospheric)

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Statement of Qualification · Single product

Customer

Montech AG
Gewerbestrasse 12
4552 Derendingen
Switzerland

Tested product

Category: Automation Components

Subcategory: Transfer Systems and Bearing

Product name: Cleanroom Conveyor TB30R-140x1500-center right-single belt 571854 (manufacturing date: 8/2025; conveyor Type: E4/2U0/U2; article number: TB30/5/571673/01; serial number: 571854)

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:

- Belt length: ..... l_B = 3271 mm
- Belt width: ..... w_B = 110 mm
- Overall width: ..... w = 140 mm
- System length: ..... l = 1500 mm
- Drive unit: ..... center right
- Load: ..... none
- End section: ..... knife edge R=4 single belt on both sides
- Max. load: ..... F = 200 N
- Belt tension: ..... 0.3 %
- Velocity range: ..... v = 1 - 51.1 m/min
- Parameter Set 1: ..... v_1 = 15 m/min
- Parameter Set 2: ..... v_2 = 30 m/min

Test result / Classification

The Cleanroom Conveyor TB30R-140x1500-center right-single belt 571854 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 = 15 m/min	5
v_2 = 30 m/min	5
Overall result	**5**

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
Testing and Certification

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-- — 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**.