valid until: April 4, 2030

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TESTED®
DEVICE

ETS GEORGES RENAULT
ERXS50
Report No. DE 2503-1602

DUPLICATE

Statement of
Qualification

Single product
Particle Emission
in Cleanroom
(atmospheric)

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Statement of Qualification · Single product

Customer

Etablissements Georges Renault
38 rue Bobby Sands
44800 Saint Herblain
France

Tested product

Category: Working Place and Operator

Subcategory: Work Equipment

Product name: Screwdriver ERXS50
(manufacturing date: 1/2025; material number: 6151658750; serial number: 25D76149)
in combination with:
- Controller for ERXS screwdriver
(manufacturing date: 4/2023; part number: 6159327200; serial number: 08 09 23 00064)
- Power Supply for CVIXS controller
(manufacturing date: 2022; part number: 6159326630; serial number: 42012200584)

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:
- Installation position: horizontal
- Tightenings/min: 15
- Run down angle: 3600°
- Final angle: 720°
- Run down velocity: 500 rpm (50 % tool max. velocity)
- Final velocity: 100 rpm (10 % tool max. velocity)

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Test result / Classification

The screwdriver ERXS50 in combination with Controller for ERXS screwdriver and Power Supply for CVIXS controller 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
Screwdriver: • Installation position = horizontal • max. velocity = 500 rpm • Tightenings/min = 15	5
Controller	1
Power supply	2
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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DE 1802-1007 — Report No. first document
Stuttgart, March 28, 2018 — Place, date of first document issued

DE 2503-1602 — Report No. current document
Stuttgart, April 4, 2025 — 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 current date the document was issued. The document can be verified under **www.tested-device.com**.