



Fraunhofer

TESTED[®] DEVICE

Atlas Copco Tools
Power MACS 4000 MSB
Report No. AT 1211-623

DUPLICATE

Statement of
Qualification

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Customer: Atlas Copco Tools Central Europe GmbH
Langemarckstraße 35
45141 Essen
Germany

Test results / Classification:
(according to ISO 14644-1)

The power MACS 4000 power supply Main Switch Box is suitable for use in cleanrooms fulfilling Air Cleanliness Class 1.

Component tested:

Category: Working Place and Operator
Subcategory: Work Equipment
Type: Power MACS 4000 power supply Main Switch Box

Random check measurements of particle emission (airborne) at representative points

Test procedure: According to VDI 2083 Part 9.1

Measuring instruments: Optical Particle Counter:
Model LasAir II 110 manufactured by PMS with measuring channels of
 $\geq 0.1 \mu\text{m}$, $\geq 0.2 \mu\text{m}$, $\geq 0.3 \mu\text{m}$, $\geq 0.5 \mu\text{m}$, $\geq 1.0 \mu\text{m}$ and $\geq 5.0 \mu\text{m}$

Test parameters of the test environment:

- Cleanroom Air Cleanliness Class (according to ISO 14644-1):..... ISO 1
- Air flow velocity:.....0.45 m/s
- Air flow guidance:vertical unidirectional air flow
- Temperature:22 °C \pm 0.5 °C (71.6 °F \pm 0.9 °F)
- Relative humidity: 45 % \pm 5 %

Test parameters of the test execution: Power supply for the representative operation of the electric fixtured nutrunner QST42-50CT (system program parameters):

- Angle:360° forward
- Cycle: 14 cycles/min
- Nutrunner: Electric fixtured nutrunner QST42-50CT
- Controller:Power MACS 4000 controller TC4000-P-ES

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The measuring equipment used for the qualification is regularly calibrated and is based on national and international standards. In the case where no national standards exist, the measuring procedure used corresponds with technical regulations and norms valid at the time of the measurement. The documents drawn up for this procedure are available for viewing.

The validity of this certificate applies only to the mentioned product in this particular condition for a duration of 5 years.
Further information: www.tested-device.com.


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Stuttgart, December 17, 2012

Place, Date


i. A.
Project manager