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TESTED®
DEVICE

Yaskawa Europe GmbH
MOTOMAN robot MPP3
Report No. YA 1205-598

DUPLICATE

Statement of
Qualification

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Statement of Qualification

Customer:

Yaskawa Europe GmbH
Kammerfeldstraße 1
85391 Allershausen
Germany

Component tested:

Category: Automation Components

Subcategory: Robotics

Type: MOTOMAN robot MPP3

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

Test procedure: According to VDI 2083 Part 9.1

Measuring instruments being used: Optical Particle Counter:
Model LasAir II 110 manufactured by PMS with measuring channels of
≥ 0.1 µm, ≥ 0.2 µm, ≥ 0.3 µm, ≥ 0.5 µm, ≥ 1.0 µm and ≥ 5.0 µm

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 ± 0.5 °C (71.6 °F ± 0.9 °F)
- Relative humidity:..... 45 % ± 5 %

Test parameters of the test execution:

Full movement (synchronously):
- Tool load:..... 200 g
- Tool distance:..... 100 mm
- Pick and place height:..... 50 mm
- Horizontal movement distance:..... 500 mm
- T-axis (flange axis) movement angle:.....180 °
- Linear operation speed (50%):.....2000 mm/s
- Linear operation speed (100%):.....3350 mm/s

Axis 4 (T-axis):
- Movement angle:.....± 360 °
- Tool load:..... 200 g
- Tool distance:..... 100 mm
- Operation speed (50 %):..... 600 °/s
- Operation speed (100 %):..... 1200 °/s

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

At a operation speed of 50 %, the MOTOMAN robot MPP3 is suitable for use in cleanrooms fulfilling the Air Cleanliness Class 5.

At a operation speed of 100 %, the MOTOMAN robot MPP3 is suitable for use in cleanrooms fulfilling the Air Cleanliness Class 6.

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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Manufacturing Engineering and Automation IPA

Department Ultraclean Technology
and Micromanufacturing

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Stuttgart, June 19, 2012
Place, Date

i. A.
Project manager