IPA

Fraunhofer

TESTED®
DEVICE

GEBHARDT Group
System 300
Report No. GE 1104-550

DUPLICATE

Statement of
Qualification

Fraunhofer
IPA

Fraunhofer
IPA

Statement of Qualification

Customer:

GEBHARDT Fördertechnik GmbH
Neulandstrasse 28
74889 Sinsheim
Germany

Component tested:

Category: Automation Components

Subcategory: Transfer Systems and Bearing

Type: System 300

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 Class 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:

- Drive roller conveyor (Type 325.10) (Partitions D; E; F and Partition A)
- Lifting transfer; Lift pneu.; Parallel lift; 1 lane (Type 355.10)
- Lifting unit; Lift pneu.; Parallel lift; 1 lane (Type 355.10)
- Turn Table (Type 350.10) (Partition I)
- Drive roller conveyor (Type 325.10) (Partitions G; H and Partitions B; C)

Please see report for further information.

Fraunhofer IPA

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

In its present state, System 300 is not suitable for use in cleanrooms fulfilling ISO Class specifications in accordance with ISO 14644-1.
Under the condition that all problematic components mentioned in the report are appropriately altered as far as the selection and pairings of materials are concerned, that the system is supplied clean on delivery and that no excessive amounts of grease are utilized, it can be assumed that the system will be suitable for use in cleanrooms fulfilling ISO Class 7 specifications in accordance with ISO 14644-1.

DUPLICATE

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**.

Fraunhofer Institute for
Manufacturing Engineering and Automation IPA

Department Ultraclean Technology
and Micromanufacturing

Nobelstrasse 12
70569 Stuttgart
Germany

Stuttgart, September 15, 2011
Place, Date

i. A.
Project manager