



Fraunhofer

TESTED[®] DEVICE

igus energy chains/
linear bearings

Report No. IG 0308-295

DUPLIKAT

IPA Qualification Certificate

This is to certify that the product mentioned below manufactured by the company

igus GmbH

Spicher Str. 1a
D-51147 Köln

has been awarded an IPA Qualification Seal bearing the report number IG 0308-295.

The following models of linear bearings operated at the velocities listed below are suitable for use in cleanrooms fulfilling the corresponding air cleanliness specifications in accordance with ISO 14644-1. Tests in accordance with SEMI E78-0998 resulted in the ESD classifications which are also listed in the table.

Model Description	Air Cleanliness Class at v = 1 m/sec	Air Cleanliness Class at v = 2 m/sec	ESD Classification
DryLin NK-02-40-02	ISO Class 6	ISO Class 6	Level 1
DryLin TK-01-25-02	ISO Class 5	ISO Class 6	Level 1
DryLin WK-10-40-15-01	ISO Class 6	ISO Class 7	Level 1

Model Description	Air Cleanliness Class at v = 0.1 m/sec	Air Cleanliness Class at v = 0.3 m/sec	ESD Classification
DryLin TK-01-30-01	ISO Class 3	ISO Class 4	(no measurement)

Detailed information and parameters of the test environment can be found in the IPA Test Report compiled by the Fraunhofer Society.

Certified on 7th November 2003.

The duration of the validity of this certificate is unlimited. For further information visit our website at <http://www.ipa-qualification.com>

Stuttgart, Germany, 7th November 2003


Signature



Fraunhofer Institut
Produktionstechnik und
Automatisierung