

Cleanroom classification according to ISO-Class 14644 – 1

Ergoswiss AG offers high-quality lifting columns and lifting elements designed for cleanroom applications. These products have undergone a comprehensive cleanroom suitability assessment conducted by the Fraunhofer Institute for Production Technology and Automation (IPA).

The results of the examination for our various lifting systems are as follows:

For the spindle lifting system SLA.3 4330:

Cleanroom Class 3 according to ISO Class 14644-1

Outstanding performance in demanding cleanroom environments. Perfectly suited for cleanroom applications in medical technology, aerospace, and electronics manufacturing.

For the spindle lifting column SL 1440:

Cleanroom Class 7 according to ISO Class 14644-1

Optimally suited for cleanrooms demanding the highest cleanliness standards. Ideal for applications in electronics manufacturing and food processing.

For the spindle lifting column SM 1440:

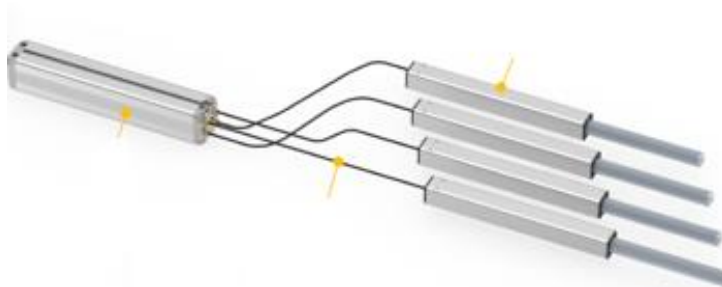
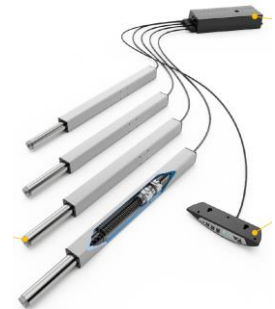
Cleanroom Class 7 according to ISO Class 14644-1

Exceptional cleanroom compatibility for precision-critical applications. Highly recommended for deployment in cleanroom environments across diverse industries.

For the hydraulic lifting system PFD 4830 – LA 1430 (4-LA-350-300-EU2):

Cleanroom Class 7 according to ISO Class 14644-1

Suitable for critical cleanroom applications. Ideal for use in the manufacturing of medical devices and other industries.



Recommended cleaning methods:

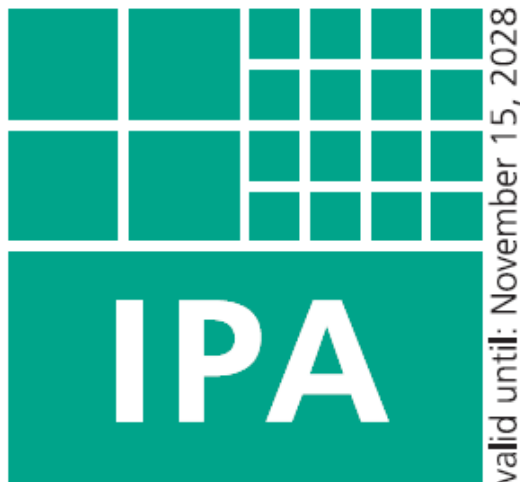
To ensure that the lifting systems meet the required cleanroom standards, we recommend the following cleaning methods:

1. Removal of Coarse Dirt: Start by removing coarse dirt and dust using compressed air.
2. Surface Cleaning: Use low particle-emission cleanroom wipes to clean the surfaces of the lifting systems. Avoid using abrasive cleaning agents or tools, as these may damage the surfaces.
3. Disinfection: For disinfection, we recommend using an isopropanol-water mixture suitable for cleanrooms.
4. Drying: Allow the cleaned lifting systems to thoroughly dry before reintroducing them to the cleanroom. Ensure that no lint or particles remain during this process.
5. Regular Maintenance: Conduct regular maintenance checks to ensure that the lifting systems continue to meet cleanroom requirements.

Please note that these recommendations serve as general guidelines. It is advisable to tailor the cleaning methods and agents according to the specific requirements of your cleanroom.

For further information or specific inquiries, we are at your disposal.

Appendix:
Certificates



Fraunhofer

TESTED[®] DEVICE

Ergoswiss AG
SLA.3 4330
Report No. ER 2305-1425

Single product Particle Emission

Qualification Certificate

This is to certify that the product mentioned above, provided by

Ergoswiss AG
Widnau, Switzerland

has been awarded a Fraunhofer certificate TESTED DEVICE
bearing the report number ER 2305-1425.

The spindle lift system SLA.3 4330 in combination with controller
SCT4 iSMPS 230V was assessed in compliance with ISO 14644-
14. When operated under the specified test conditions, it is
suitable for use in cleanrooms fulfilling the specifications of the
following Air Cleanliness Classes according to ISO 14644-1:

Test parameter(s)	Air Cleanliness Class
Stroke: s = 300 mm Velocity (up/down) v = 9 mm/s Payload: m = 600 kg Cycle time: 2 min on/ 18 min off	3
Controller	1
Overall result	3

Please note: Transport damages, incorrect installation, oil leakage,
aging behavior, corrosion etc. can influence the test result.

ER 2305-1425 Stuttgart, November 15, 2023
Report No. first document Place, date of first document issued

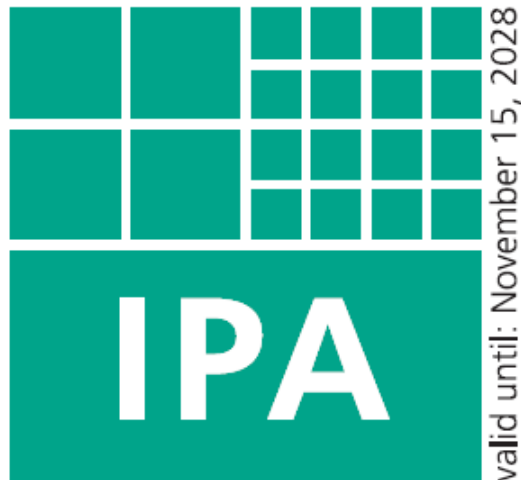
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Report No. current document Place, current date

on behalf of 
Dr.-Ing. Frank Bürger, Project Manager Fraunhofer IPA



This document only
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first document was issued.
The document can be
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www.tested-device.com.

Detailed information and
parameters of the test
environment can be found
in the Fraunhofer IPA test
report.



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TESTED[®] DEVICE

Ergoswiss AG
SL 1440
Report No. ER 2305-1425

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The spindle lift column SL 1440 in combination with controller
Compact-3-eco 230V was assessed in compliance with ISO
14644-14. When operated under the specified test conditions, it
is suitable for use in cleanrooms fulfilling the specifications of the
following Air Cleanliness Classes according to ISO 14644-1:

Test parameter(s)	Air Cleanliness Class
Stroke: s = 400 mm Velocity (up/down) v = 12 mm/s Payload: m = 200 kg Cycle time: 2 min on/ 18 min off	7
Controller	1
Overall result	7

Please note: Transport damages, incorrect installation, oil leakage,
aging behavior, corrosion etc. can influence the test result.

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TESTED[®] DEVICE

Ergoswiss AG
SM 1440
Report No. ER 2305-1425

Single product Particle Emission

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Widnau, Switzerland

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The spindle lift column SM 1440 in combination with controller
Compact-3-eco 230V was assessed in compliance with ISO
14644-14. When operated under the specified test conditions, it
is suitable for use in cleanrooms fulfilling the specifications of the
following Air Cleanliness Classes according to ISO 14644-1:

Test parameter(s)	Air Cleanliness Class
Stroke: $s = 400 \text{ mm}$ Velocity (up/down) $v = 12 \text{ mm/s}$ Payload: $m = 200 \text{ kg}$ Cycle time: 2 min on/ 18 min off	7
Controller	1
Overall result	7

Please note: Transport damages, incorrect installation, oil leakage,
aging behavior, corrosion etc. can influence the test result.

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Fraunhofer

TESTED[®] DEVICE

Ergoswiss AG
4-LA-350-300-EU2
Report No. ER 2305-1425

Single product Particle Emission

Qualification Certificate

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The hydraulic lift system PFD 4830 - LA 1430 in combination
with controller Compact-3-eco 230V was assessed in compliance
with ISO 14644-14. When operated under the specified test
conditions, it is suitable for use in cleanrooms fulfilling the
specifications of the following Air Cleanliness Classes according
to ISO 14644-1:

Test parameter(s)	Air Cleanliness Class
Stroke: s = 300 mm Velocity (up/down) v = 15 mm/s Payload: m = 350 kg Cycle time: 2 min on/ 18 min off	7
Pump with drive	7
Controller	1
Overall result	7

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