



# Fraunhofer

## TESTED<sup>®</sup> DEVICE

Brooks CCS RS AG  
Handling Unit X/Y/R  
**Report No. BR 2504-1613**

Single product  
**Particle Emission  
in Cleanroom  
(atmospheric)**

## Qualification Certificate

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

**Brooks CCS RS AG**  
Tägerwil, Switzerland

has been awarded a Fraunhofer certificate TESTED DEVICE  
bearing the report number BR 2504-1613.

The EUV GUARDIAN LEAP HANDLING UNIT X/Y/R was assessed  
in compliance with ISO 14644-14. When operated under the  
specified test conditions (room temperature:  $22^{\circ}\text{C} \pm 0.5^{\circ}\text{C}$ ;  
relative humidity:  $45\% \pm 5\%$ ), 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 Cleanli- ness Class
X-Axis	5
Y-Axis	4
All-Axes $v_{x,1} = 1.0 \text{ m/s}$ , $a_{x,1} = 1.0 \text{ m/s}^2$ ; $v_{y,1} = 0.5 \text{ m/s}$ , $a_{y,1} = 1.0 \text{ m/s}^2$ ; $w_{r,1} = 180^{\circ}/\text{s}$ , $w'_{r,1} = 180^{\circ}/\text{s}^2$	5
All-Axes $v_{x,2} = 0.6 \text{ m/s}$ , $a_{x,2} = 0.6 \text{ m/s}^2$ ; $v_{y,3} = 0.3 \text{ m/s}$ , $a_{y,3} = 0.3 \text{ m/s}^2$ ; $w_{r,2} = 90^{\circ}/\text{s}$ ; $w'_{r,2} = 90^{\circ}/\text{s}^2$	5
<b>Overall result</b>	<b>5</b>

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

BR 2504-1613  
Report No. first document

Stuttgart, April 18, 2025  
Place, date of first document issued

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Report No. current document

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Place, current date

on behalf of   
Dr.-Ing. Frank Bürger, head of business unit Testing and Certification

This document only  
applies to the named  
product in its original state  
and is valid for a period of  
5 years from the date the  
first document was issued.  
The document can be  
verified under  
[www.tested-device.com](http://www.tested-device.com).

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



**Fraunhofer**  
IPA