



Fraunhofer

TESTED<sup>®</sup>  
DEVICE

Asyrl SA  
Asycube Clean 230  
**Report No. AS 2503-1610**

DUPLICATE

Statement of  
Qualification

Single product  
Particle Emission  
in Cleanroom  
(atmospheric)

Customer	Asyrl SA Z.I. du Vivier 22 1690 Villaz-St-Pierre Switzerland
Tested product	
Category:	Automation components
Subcategory:	Transfer Systems and Bearing
Product name:	Asycube Clean 230 (manufacturing date: 11/7/2024; weight: 11 kg; serial number: A24450139)

Random sampling of particle emissions (airborne) at representative sites in cleanroom under atmospheric conditions

Standards/guidelines:	ISO 14644-1, -14 The norms stated generally refer to the version valid at the time of the tests.
Test equipment:	Optical particle counter: LasAir II 110 and LasAir III 110 with measuring ranges $\geq 0.1\text{ }\mu\text{m}$ , $\geq 0.2\text{ }\mu\text{m}$ , $\geq 0.3\text{ }\mu\text{m}$ , $\geq 0.5\text{ }\mu\text{m}$ , $\geq 1.0\text{ }\mu\text{m}$ and $\geq 5.0\text{ }\mu\text{m}$
Test environment parameters:	<ul style="list-style-type: none"><li>Cleanroom Air Cleanliness Class (according to ISO 14644-1):..... ISO 1</li><li>Airflow velocity:.....0.45 m/s</li><li>Airflow pattern:..... vertical laminar flow</li><li>Room temperature: .....22 °C ± 0.5 °C</li><li>Relative humidity: ..... 45 % ± 5 %</li></ul>
Test procedure parameters:	<ul style="list-style-type: none"><li>Long-axis centering: ..... Amplitude = 75 %; Duration = 500ms</li><li>Waiting:.....Duration = 100ms</li><li>Cross-axis centering: ..... Amplitude = 75 %; Duration = 500ms</li><li>Waiting:.....Duration = 100ms</li><li>Flip:..... Amplitude = 75 %; Duration = 500ms</li><li>Waiting:.....Duration = 1000ms</li></ul>

Test result / Classification	The feeding system Asycube Clean 230 is suitable for use under the specified test parameters (room temperature: 22 °C ± 0.5 °C; relative humidity: 45 % ± 5 %) in cleanrooms of the following Air Cleanliness Class according to ISO 14644-1:						
	<table><tr><th>Test parameter(s)</th><th>Air Cleanlines Class</th></tr><tr><td>Amplitude: Long-axis centering: 75 % Cross-axis centering: 75 % Flip: 75 %</td><td>5</td></tr><tr><td>Overall result</td><td></td></tr></table>	Test parameter(s)	Air Cleanlines Class	Amplitude: Long-axis centering: 75 % Cross-axis centering: 75 % Flip: 75 %	5	Overall result	
Test parameter(s)	Air Cleanlines Class						
Amplitude: Long-axis centering: 75 % Cross-axis centering: 75 % Flip: 75 %	5						
Overall result							
	Please note: Transport damages, incorrect installation, oil leakage; aging behavior, corrosion etc. can influence the test result.						

The measuring devices used for the qualification tests are calibrated at regular intervals; their results can be traced back to national and international standards. In cases where no national standards exist, the test procedure implemented complies with the technical regulations and norms applicable at the time of the test. The relevant documentation can be viewed on request at any time.

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

Fraunhofer Institute for Manufacturing Engineering and Automation IPA	AS 2503-1610 Report No. first document	Stuttgart, April 10, 2025 Place, date of first document issued
Business unit Testing and Certification	-- Report No. current document	-- Place, current date
Nobelstrasse 12 70569 Stuttgart Germany	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).