



valid until: March 1, 2029

# Fraunhofer

## TESTED<sup>®</sup> DEVICE

hawo GmbH  
HM 5000 PRINTPAK MED  
**Report No. HA 2401-1488**

### Single product Particle Emission

### Qualification Certificate

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

**hawo GmbH**  
Obrigheim, Germany

has been awarded a Fraunhofer certificate TESTED DEVICE  
bearing the report number HA 2401-1488.

The system HM 5000 DC-VI PRINTPAK MED SEALING EQUIPMENT  
+ INKJET (V2A stainless steel) 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
HM 5000 C INKJET Flow rate = 10 m/min	9
HM 5000 DC-VI PRINTPAK MED Sealing temperature = 180°C Flow rate = 10 m/min Contact pressure ~100 N	7
<b>Overall result</b>	<b>9</b>

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

HA 2401-1488  
Report No. first document

Stuttgart, March 1, 2024  
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, Project Manager Fraunhofer IPA

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**.

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