MD8 Airscan®

Active sampling of airborne viruses, bacteria, yeasts and fungi

Product Information

Monitoring ambient air in cleanrooms and controlled areas in the (c)GMP environment for viable microorganisms is a routine task in the pharmaceutical | biotechnology industry. As a rule, collection of data and subsequent analysis of the results permit trends to be recognized early and problems (OOS*) with bioburden levels exceeding the limits to be prevented.

Active Air Monitoring in Cleanrooms and Controlled Areas

Active monitoring of viable airborne microorganisms is an important instrument for ensuring product quality and safety. Sampling of at least 1 m³ of air is required by regulation standards. In this procedure, care must be taken that turbulence is not caused by, for example, devices such as active air samplers and that sampling is performed isokinetically. The following areas need to be monitored using active sampling of airborne microorganisms:

In the pharmaceutical | biotechnology industry:
- Cleanrooms (grades A–D; ISO classes 5–9)
- Sterility testing isolators
- Filling lines
- Controlled areas, e. g. quality control (QC) laboratories
- Warehouses | raw materials depots
- Personnel airlocks and aseptic transfer chambers for material

* Out of specification

In the food and beverage industry:
- Manufacturing areas and production-related areas
- Quality control (QC) laboratories
- Warehouses | raw materials depots

Diagnostics | Medicine:
- Cleanroom or controlled area
- Filling lines
- Manufacturing areas and production-related areas
- Quality control (QC) laboratories
- Warehouses | raw materials depots

Quality Control

As Sartorius is a recognized supplier of products and services for the pharmaceutical industry, product quality and safety are its number one priorities. To meet stringent quality requirements, 100% final testing of the MD8 Airscan® is performed in manufacturing among the quality control checks carried out. In addition, every stainless steel sampling head is calibrated and adjusted after assembly.

Technical Specifications

Disinfection | Sterilization

Stainless steel sampling heads (bayonet and TC versions)
- IPA (70%)
- Ethanol (70%)
- Peracetic acid (1%)
- Dismozon® (1%)
- Sodium hypochlorite (5%)
- Formaldehyde (4%)
- Flowpath can be disinfected or sterilized | inline with vaporized hydrogen peroxide
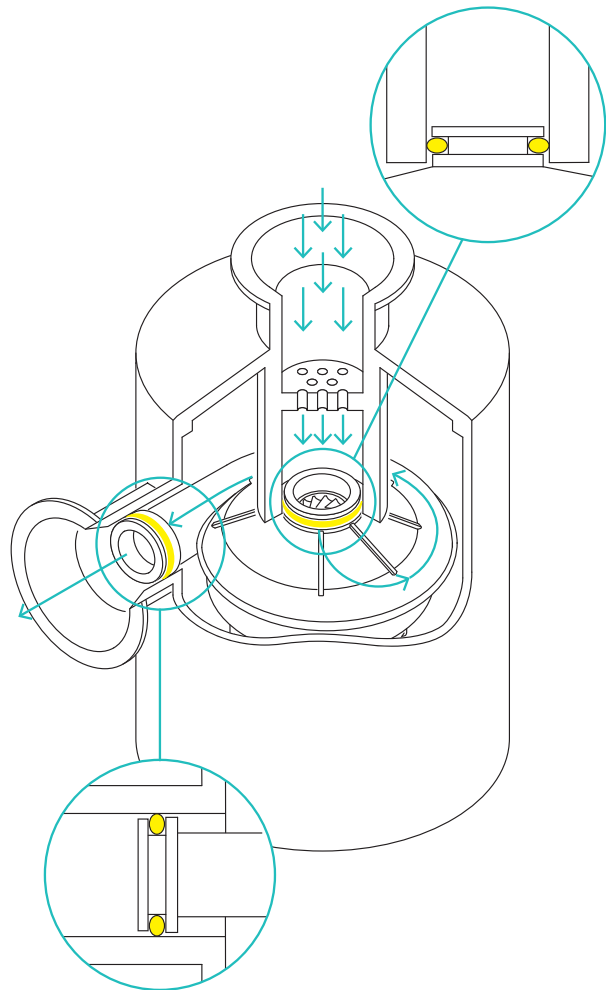
Command unit
- IPA (70%)
- Ethanol (70%)
- Peracetic acid (1%)
- Dismozon® (1%)
- Sodium hypochlorite (5%)
- Formaldehyde (4%)

Specifications of the Stainless Steel Sampling Heads, Bayonet and TC Versions
- Electropolished stainless steel: AISI 316L (German equivalent standard) 1.4404 or better

Types of MD8 Airscan® Stainless Steel Sampling Heads

Stainless steel sampling head with bayonet connector
Specially designed as a "stand-alone" version"
- Type of connector: Bayonet
- Flow capacity: Maximum flow rate capacity: up to 7 m³/h; adjustable in increments of 0.1 m³/h
- Saves the calibration data and actively regulates air flow
- Order No. for sampling head: 16746-01--SHB
- Order No. for bayonet package version: 16746SHBCOM

Contents of package version:
- Command unit with 3 m connecting cable
- Stainless steel sampling head with bayonet flange connector
- Aluminum filter holder*

Stainless steel sampling head with Tri-Clamp connector
Specially designed for integrating into lines
- Type of connector: Tri-Clamp, 50.5 (TC 50.5)
- Maximum flow rate capacity: up to 7 m³/h; adjustable in increments of 0.1 m³/h
- Saves the calibration data and actively regulates air flow
- Order No. for sampling head: 16746-01--SHT
- Order No. for Tri-Clamp package version: 16746SHTCOM

Contents of package version:
- Command unit with 3 m connecting cable
- Stainless steel sampling head with Tri-Clamp connector
- Stainless steel adapter, for connection of TC 50.5 to filter holder
- Aluminum filter holder*

MD8 Airscan® Command Unit
- Plastic material PA6 with 30% glass fiber
- RS-232 interface port for connecting a printer
- 2 status LEDs for displaying operating status and errors
- Stores the test results
- Order No. of the command unit: 16746-01--COM

*The filter holder is also available in an AISI 316L stainless steel version (German equivalent standard 1.4404).

General Information

	Sampling Head with Bayonet Connector	Sampling Head with Tri-Clamp Connector (TC 50.5)
Dimensions (L × W × H) in mm | inches	128 × 112 × 137 | ~5 × 4.4 × 5.4	128 × 112 × 154 | ~5 × 4.4 × 6
Weight in kg | lb	2.6 | ~6	2.6 | ~6
Power supply		
Only through MD8 Airscan® command unit		
Material		
Gaskets	Silicone	Silicone
Surfaces	Stainless steel	Stainless steel

Ambient Conditions

	Unit	Specification
Installation site		
Usual laboratory spaces and cleanrooms as defined by ISO 5 to ISO 9; use in controlled areas: Cleanroom classification A–D	m above sea level ft. above sea level	<3,000 <9,843
Required clearance for air exhaust outlet	mm | inches	>100 | 4
Ambient temperature		
Operation Storage and transportation	°C °C	4–40 4–45
Max. temperature of motor in the sampling head	°C	65
Relative humidity		
Operation Storage	% %	50–80 20–90
Electromagnetic compatibility according to DIN EN 61326-1: Electrical equipment for measurement, control and laboratory use – EMC requirements – Part 1		
Defined immunity to interference: Suitable for use in industrial areas		
Limitation of interference	Class	B

Specifications of the Stainless Steel Sampling Heads, Bayonet and TC Versions

	Unit	Specification
Max. temperature of motor in the sampling head	°C	65
Relative humidity		
Operation Storage	% %	50–80 20–90
Electromagnetic compatibility according to DIN EN 61326-1: Electrical equipment for measurement, control and laboratory use – EMC requirements – Part 1		
Defined immunity to interference: Suitable for use in industrial areas		
Limitation of interference	Class	B

Command Unit Specifications

	Unit	Specification
Dimensions (L × W × H)	mm | inches	282 × 102 × 107 | 11 × 4 × 4.2
Weight	kg | lbs	1.4 | ~3.1

Measurement Parameters

	Unit	Specification
Adjustable volume: adjustable in increments of 0.01 m³		
For gelatin membrane filters	m³	0.01 – 9.99
For cellulose nitrate membrane filters	m³	0.01 – 1.10
Adjustable air flow: adjustable in increments of 0.1 m³		
With gelatin membrane filters	m³/h	1.8 – 7
With cellulose nitrate membrane filters	m³/h	1.8 – 3

Interfaces

RS-232 interface port for connecting a printer
Suitable printer: Sartorius YDP30 (baud: 9600; parity: odd; data bit: 8; stop bit: 1)

Power Supply

Power Supply Unit
Type: Sartorius power supply, model 1000018304

	Unit	Specification
Primary		
Voltage	V_{AC}	100 – 240 ±10%
Frequency	Hz	50 – 60
Power consumption, max.	A	2.0
Secondary		
Voltage	V_{DC}	24 ±5%
Power, max.	A	6.25
Short-circuit protection: Electronic		
Protection class according to DIN EN/IEC 60950-1		I
Installation site according to DIN EN/IEC 60529-1	m above sea level	< 3,000
	ft. above sea level	< 9,843
Installation category (overvoltage) according to IEC 60950-1		II
Contamination level according to IEC 60950-1		2
Connecting cable for power supply	Class	B

Connecting cable according to DIN EN/IEC 60320-1/C14: country-specific, 3-pin;
can be plugged in at both ends
Socket according to DIN EN/IEC 60320-1/C14: 3-pin
Additional data: See label on the power supply

Command Unit and Sampling Head

Power supply for control unit: Only via Sartorius power supply, model 1000018304	Unit	Specification
Voltage	V_{DC}	24 ±5%
Power consumption	A	5.0
Power supply for sampling head: Only through command unit		

Ordering Information

Recommended Accessories and Consumables

Accessories

This table shows a sampling of the range of accessories that can be ordered. Please contact Sartorius for information on additional products.
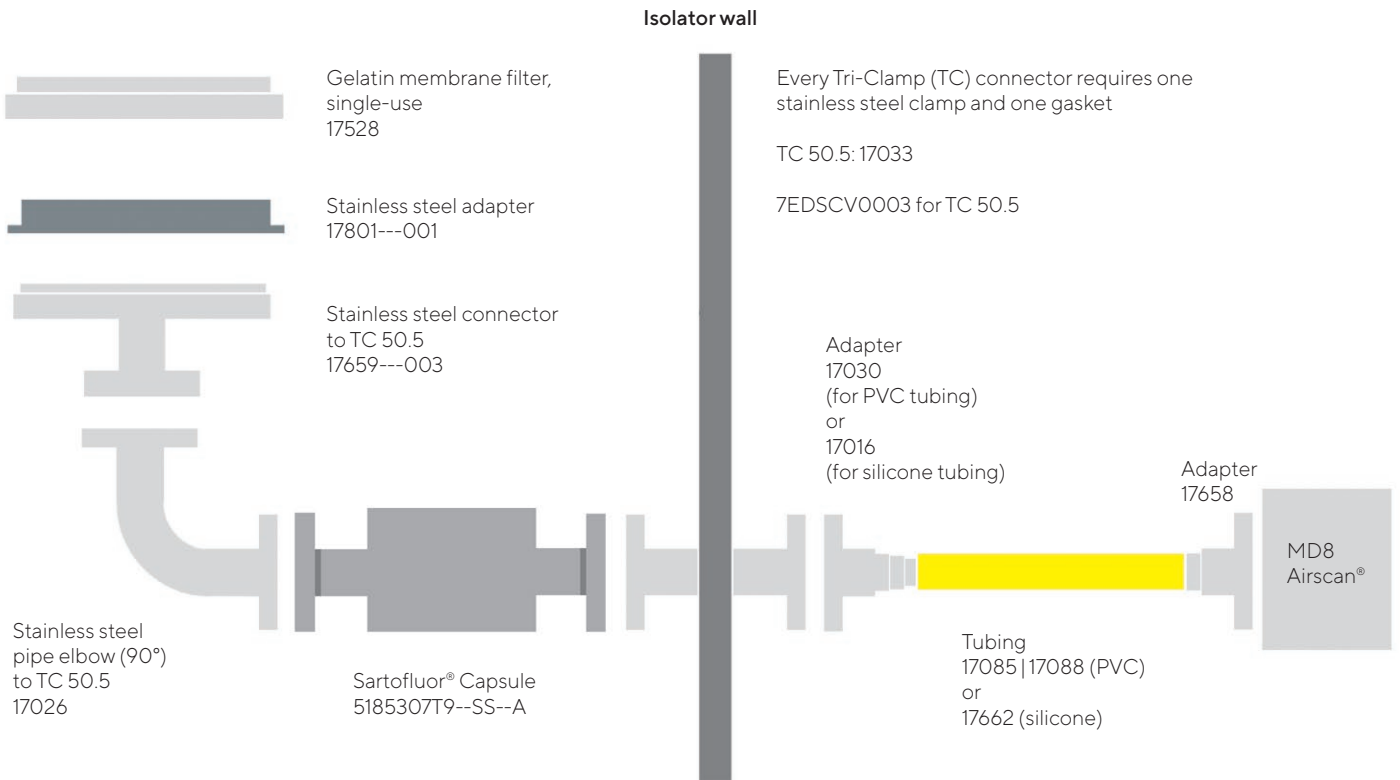
Product		Quantity	Order Number
	Adapter for gelatin membrane filter	1	17801
	Adapter, Tri-Clamp (TC 50.5) to bayonet, stainless steel	1	17659---003
	Adapter, bayonet to Tri-Clamp (TC 50.5), stainless steel	1	1ZAD-0025
	Adapter, TC 50.5 to single-step DN 25 hose barbs, stainless steel. Can be used on the air outlet for conducting exhaust air outside the area.	1	17016
	Clamp for 1" to 1½" Sanitary flange	1	17033

Consumables

This table shows a sampling of the range of consumables that can be ordered. Please contact Sartorius for information on additional products.

Product		Quantity	Order Number
	Gasket for Tri-Clamp TC 50.5 connector, silicone	2	7EDSCV0003
	Sartofluor® capsule, sterilizing-grade air filter, 0.2 µm, 0.2 m² filter area	4	5185307T9--SS--A
	PVC tubing, 2 m (~6.5 ft.) PVC hose, 5 m (~16 ft.)	1 1	17085 17088
	Silicone tubing, 1 m (~ 3.3 ft.)	1	17662
	Quick-connect cable	1	69898530
	Cable for YDP30 printer	1	YCC01-0041M3

Installation of the MD8 Airscan® | Isolator

Isolator wall

Gelatin membrane filter,
single-use
17528

Stainless steel adapter
17801---001

Stainless steel connector
to TC 50.5
17659---003

Stainless steel
pipe elbow (90°)
to TC 50.5
17026

Sartofluor® Capsule
5185307T9--SS--A

Every Tri-Clamp (TC) connector requires one
stainless steel clamp and one gasket

TC 50.5: 17033

7EDSCV0003 for TC 50.5

Adapter
17030
(for PVC tubing)
or
17016
(for silicone tubing)

Adapter
17658

MD8
Airscan®

Tubing
17085 | 17088 (PVC)
or
17662 (silicone)

Sartorius Service

We ensure the quality of your results

From equipment qualification IQ | OQ to regular maintenance:
We offer you just the right choice of services to ensure that you
comply with the high regulatory requirements right from the
beginning, especially in GMP environments. Not only that: we
will take care that your air sampler operates reliably over the
long term.

Get more information at
www.sartorius.com/services