

# There is more to clean environments than meets the eye

## Leading solutions for air monitoring

The new MAS-100 Iso MH<sup>®</sup>



MH = Multi Head

EMD Millipore is a division of Merck KGaA, Darmstadt, Germany

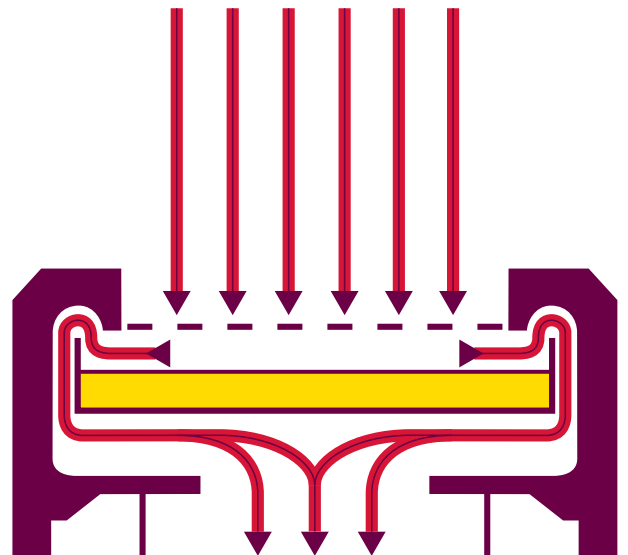
### Advantages of the multi head system

- Manufactured as an IP65 system connecting up to 4 individual sampling heads
- Tubing length: 1 meter from instrument to manifold and 5 – 10 meters from manifold to sampling head (independently calibrated)
- Unique overlapping decontamination cycle
- Lower investment and running costs than equivalent number of single head systems
- Can be expanded
- Innovative double valve system
- Sampling modes: Standard, SQS and CNS
- Alarm and sampling protocols
- Innovative high security decontamination cycle



### The isolator air monitoring system MAS-100 Iso MH®

The MAS-100 Iso MH® is designed for monitoring microbiological contamination of the air in isolators. A unique safety concept permits the installation of various sampling heads for standard 90 – 100 mm Petri dishes at the critical control points while all electronic and moving parts remain outside the critical zone. The MAS-100 Iso MH® has an additional internal pump with flow control for automatic decontamination of the sampling head and the aspiration tube. An innovative double valve system enables the sampling heads to be integrated into the decontamination process of the isolator. To avoid dead spaces the aspiration will continue to run during the change from head 1 to head 2, and so on. Each unit has an air pump and a decontamination pump and is fully autonomous. The MAS-100 Iso MH® is built according to GAMP 5 and corresponds to the ISO 14698 standard. It is a completely validated system designed for the highest demands.



### Functional principle

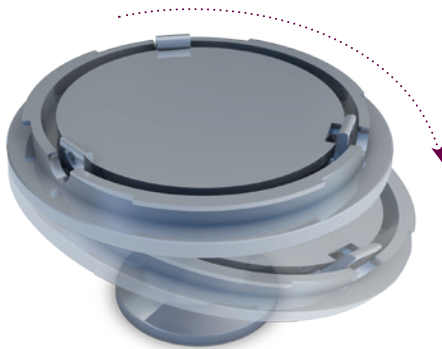
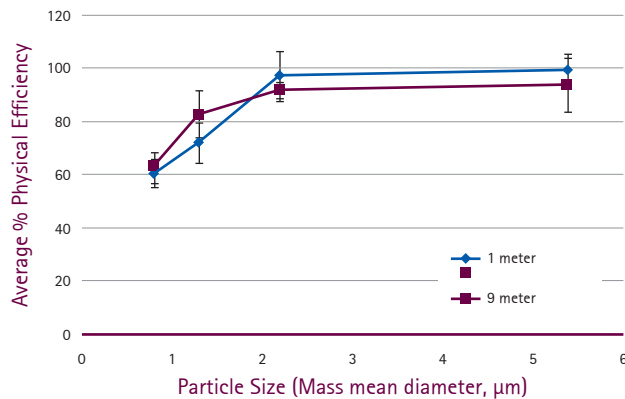
The MAS-100 Iso MH® is a high-performance instrument that is based on the Anderson impaction principle. It directs the airflow onto a standard Petri dish containing agar medium. After a collection cycle, the Petri dish is incubated and the colonies counted.

## heipha® ICR and ICRplus Settle Plates

The heipha® ICR and ICRplus Settle Plates are produced under aseptic conditions, gamma-irradiated and triple-bagged, making them optimal for active air monitoring with MAS-100® Microbial Air Samplers. All of the MAS-100® Air Samplers have been validated according to ISO 14698 using heipha® ICR and ICRplus Settle Plates – they all showed the same reliable results in physical and biological efficiency testing.

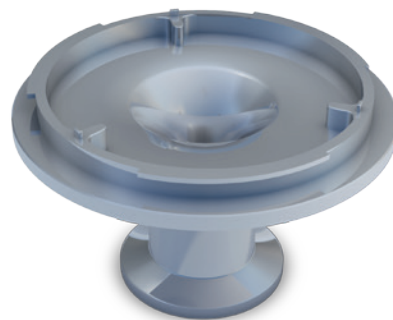


### MAS-100 Iso MH® Physical Efficiency



#### Standard Design:

- Petri dish 90 – 100 mm, adjustable
- Horizontal and vertical flow
- Autoclavable



#### Easy Clean Design:

- Petri dish 90 – 100 mm, not adjustable
- Vertical flow only
- Autoclavable and easy cleaning, no dead spaces

## Key features and benefits

- H<sub>2</sub>O<sub>2</sub> decontamination possible with any tubing length
- Fully meets d50 regulation
- Ethernet or Profibus interface and potential-free in/out contacts
- Easier installation than 4 individual samplers
- Flow rate: 100 SLPM (auto-regulated, flow sensor)
- 10 minutes for a flow of 1m<sup>3</sup>
- Impaction speed: 20 m/s
- 300 x 0.6 mm hole sample head
- Stainless steel or aluminum sample heads
- Small footprint
  - Fewer power connections
  - Fewer computer cable connections
  - Low power consumption
- Each head can be fitted with a filter (opticap 4 inch and 5 inch) for cytotoxic applications
- Same collection principle and efficiency as all other MAS-100® instruments



## Technical Specifications for MAS-100 Iso MH®

Feature	Specification
Sampling head	h x Ø 14 x 5.5 (2.7 kg)
Instrument (control unit only)	l x w x h 38 x 23 x 12 (6.8 kg)
Airflow	100 SLPM
Sampling volume	selectable from 1 – 2,000 litres
Impaction speed	approx. 20 m/sec
Sampling head	Stainless steel
Operation	Over PC
Automatic calibration cycle	
Ethernet, USB, RS232 ports, Digital in/outputs	
Automatic in-line decontamination cycle	

## Ordering Information

Description	Catalog No.
MAS-100 Iso NT MH® Control Unit, 1 head	1.17174.0001
MAS-100 Iso NT MH® Control Unit with Profibus, 1 head	1.17177.0001
MAS-100 Iso NT MH® Control Unit with Ethernet, 1 head	1.17178.0001
MAS-100 Iso NT MH® Control Unit, 2 head	1.17118.0001
MAS-100 Iso NT MH® Control Unit with Profibus, 2 head	1.17144.0001
MAS-100 Iso NT MH® Control Unit with Ethernet, 2 head	1.17145.0001
MAS-100 Iso NT MH® Control Unit, 3 heads	1.17146.0001
MAS-100 Iso NT MH® Control Unit with Profibus, 3 heads	1.17147.0001
MAS-100 Iso NT MH® Control Unit with Ethernet, 3 heads	1.17148.0001
MAS-100 Iso NT MH® Control Unit, 4 heads	1.17149.0001
MAS-100 Iso NT MH® Control Unit with Profibus, 4 heads	1.17155.0001
MAS-100 Iso NT MH® Control Unit with Ethernet, 4 heads	1.17157.0001

## Accessories

Description	Catalog No.
MAS-100 Iso NT® Perforated lid, stainless steel, 300-hole edge protected	1.09189.0001
MAS-100 Iso NT® Perforated lid, stainless steel, 400-hole edge protected	1.09222.0001
MAS-100 Iso NT® Base for sampling head, stainless with Tri-Clamp and gasket	1.09328.0001
MAS-100 Iso NT® Easy clean base for sampling head, stainless steel, with 1 Tri-Clamp & 1 gasket	1.17091.0001
MAS-100 Iso NT® Perforated lid, stainless steel, 300-hole	1.09329.0001
MAS-100 Iso NT® Perforated lid, stainless steel, 400-hole	1.09424.0001
4" Opticap XL 4	KTGRA04TT3
5" Opticap XL 5	KTGRA05TT1
M Air T® Isolator Tubing 3 m	ATBTUBE01
Flexible tube connector	PFO1501
MAS-100 Iso NT® Elbow Joint with 2 Tri-Clamps	1.17083.0001
MAS-100 Iso NT® Tri-Clamp, stainless steel	1.09440.0001
MAS-100 Iso NT® Dust Cover, stainless steel	1.09644.0001
MAS-100 Iso MH® Power supply	1.09784.0001
MAS-100 Iso NT® Silicone gasket	1.170.840.001
MAS-100 Iso NT® Pressure Test Kit	1.170.850.001
MAS-100 Iso NT® Silicone gaskets for easy clean base	1.170.990.001

## Validation Protocol

Description	Catalog No.
Validation Protocol MAS-100 Iso MH®	MAMHLVTP1

## Related products

heipha® ICRplus Settle Plates (lockable)	Package size	Ord. No.
TSA + LTHTh - ICR+ (Tryptic Soy Agar with neutralizers lecithin, Polysorbate (Tween®) 80, histidine and sodium thiosulfate)	20	1.46683.0020
	120	1.46683.0120
TSA + LT - ICR+ (Tryptic Soy Agar with neutralizers lecithin and Polysorbate (Tween®) 80)	20	1.46684.0020
	120	1.46684.0120
TSA - ICR+ (Tryptic Soy Agar)	20	1.46685.0020
	120	1.46685.0120
Chocolate Agar + LTH - ICR+ (Chocolate Agar with neutralizers lecithin, Polysorbate (Tween®) 80 and histidine)	20	1.46686.0020
heipha® ICR Settle Plates (triple-bagged, gamma-irradiated, non-lockable)	Package size	Ord. No.
Sabouraud Dextrose Agar - ICR	20	1.46577.0020
	120	1.46577.0120
Sabouraud Dextrose Agar + LT - ICR (SDA with lecithin and Polysorbate (Tween®) 80)	20	1.46081.0020
	120	1.46081.0120
Sabouraud Dextrose Agar + LTHTh - ICR 30 ml (SDA with lecithin, Polysorbate (Tween®) 80, histidine and thiosulfate)	20	1.46005.0020
	120	1.46005.0120
Sabouraud Dextrose Agar selective + LTHTh - ICR (SDA with lecithin, Polysorbate (Tween®) 80, histidine and thiosulfate and irradiation-resistant antibiotics for growth inhibition of accompanying bacterial flora)	20	1.46016.0020
	120	1.46016.0120
Tryptic Soy Agar - ICR	20	1.46001.0020
	120	1.46001.0120
Tryptic Soy Agar + LT - ICR (TSA with lecithin and Polysorbate (Tween®) 80)	20	1.46050.0020
	120	1.46050.0120
Tryptic Soy Agar + LTHTh - ICR (TSA with lecithin, Polysorbate (Tween®) 80, histidine and thiosulfate)	20	1.46069.0020
	120	1.46069.0120
Tryptic Soy Agar + LT + Cephas - ICR (TSA with lecithin and Polysorbate (Tween®) 80 and specific beta-lactamase mixture for inactivation of a broad spectrum of penicillins, cephalosporins and carbapenems)	20	1.46076.0020
	120	1.46076.0120
Tryptic Soy Agar + LTHTh + Penase - ICR (TSA with lecithin, Polysorbate (Tween®) 80, histidine, thiosulfate and beta-lactamase for inactivation of penicillins)	20	1.46013.0020
	120	1.46013.0120
Vegetable Peptone Agar + LTHTh - ICR (PSA (caseine peptone replaced by vegetable peptone) with lecithin, Polysorbate (Tween®) 80, histidine and thiosulfate)	20	1.46658.0020
		1.46658.0120

## Related Services

- **Validation Protocols**

Save precious time with our comprehensive and regulations compliant validation protocols from validation master plan to final report.

- **IQ/OQ Services**

Simplify the execution of your IQ/OQ. Our highly trained validation engineers will execute the Air Sampler validation protocol for you, in your lab.

- **Service agreements**

Stay compliant and ensure reliability of your Air Sampler over time with our service agreements. Our service agreements include a yearly preventative maintenance, a new calibration certificate, and a performance report as well as extended warranty options. Where available our highly trained service engineers can come into your lab to service your Air Sampler. Not available in all areas.

Please contact your local sales representative for more information or a quotation.



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