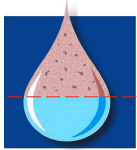


# ADSORBER HM 1

## Heavy Metal Adsorber for Cleaning and Rinsing Baths



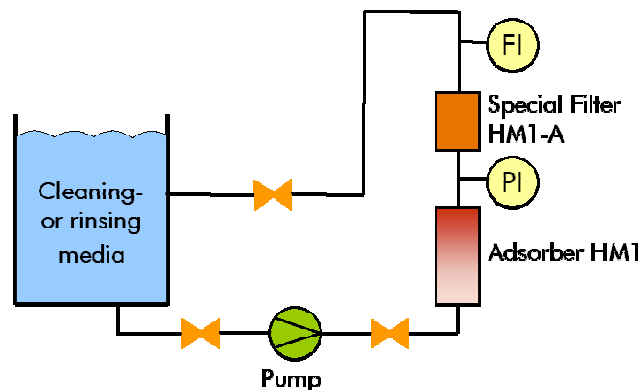
ZESTRON's Adsorber HM 1 was developed for the adsorption of heavy metals from cleaning and rinsing media used in automated cleaning processes across the electronics manufacturing industry. Adsorber HM 1 can be fully regenerated and due to its constant adsorption rate, it enables a continuously high cleaning performance. Known concerns such as the recontamination of heavy metals on less noble metal and components or the development of local galvanic elements can now be circumvented. Another benefit of ZESTRON's Adsorber HM 1 is its ability to significantly reduce the drag-over of heavy metals into the rinse section of the cleaning process. This in turn helps in meeting stringent environmental regulations for the discharge of waste water streams.

The Adsorber HM 1 can be applied in cleaning processes utilizing ZESTRON's cleaning agents VIGON® A 200, VIGON® US, and ZESTRON® FA+.

Technical Data	
Density without media (g/ml)	0,75
Pressure loss factor (kPa x h/m)	0,81
Allowable pressure loss (kPa) / (psi)	320 /46.4
Application temperature (°C / °F)	20-80 / 68-176
Recommended pump characteristics (l/min / bar) / (gallon/min / psi)	80/0,7 / 21/10
Recommended flow rate FI (l/h) / (gallon/h)	300-400 / 80-105
Adapter thread Adsorber HM 1 cartridge (")	¾
Recommended filter cartridge (in ") i.e. "Cuno", "US Filter", etc.	9 ¾

### Process set-up

For information on material compatibility regarding sealings, pumps, casing and fittings, please refer to the Technical Information Sheet 3 of the product applied.



Process recommendation – Cleaning step					
	Cleaning	Rinsing	Drying	Suitable Adsorber*	Suitable Filter*
Spray in air equipment	VIGON® A 200	DI-Water	Hot- or circulating air	Adsorber HM 1/A 200	Special Filter HM1-A
Spray under immersion or ultrasonic	VIGON® US	DI-Water	Hot- or circulating air	Adsorber HM 1/US	Special Filter HM1-A
Spray under immersion or ultrasonic	ZESTRON® FA+	DI-Water	Hot- or circulating air	Adsorber HM 1/FA+	Special Filter HM1-A
Process recommendation – Rinsing step					
Spray under immersion or ultrasonic	ZESTRON Cleaning agent	DI-Water	Hot- or circulating air	Adsorber HM 1/ MPC® Rinse	Special Filter HM1-A
For specific questions in regards to this adsorber process, please consult our application technology team at phone. +49-841-635-140					
* Please note also the point of availability/scope of supply					

TECHNICAL INFORMATION 1

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**Advantages of the adsorber process:**

Due to the adsorption of heavy metals in cleaning or rinsing baths the following process advantages can be achieved:

- A stable cleaning process with superior cleaning results is guaranteed
- No recontamination of heavy metals on less precious metals or components
- Adsorber HM 1 helps to meet the official waste water regulations by minimizing the drag over of heavy metals

**Environmental, health and safety regulations:**

Given appropriate handling no additional precautionary steps are required. However, direct contact with the contents of the adsorber is not recommended.

**Availability/Scope of supply**

The Adsorber HM 1 can be used in cleaning steps with VIGON® A 200, VIGON® US and ZESTRON® FA+ as well as rinsing stages with DI-water.

When placing your order, please state whether the Adsorber is applied in the cleaning stage or rinsing stage.

Art.-No.:	Product name	Comments: For the cleaning step
5030	Adsorber HM 1/A 200	For cleaning process with VIGON® A 200
5031	Adsorber HM 1/A 200 (Replacement cartridge)	For cleaning process with VIGON® A 200
5032	Adsorber HM 1/US	For cleaning process with VIGON® US
5033	Adsorber HM 1/US (Replacement cartridge)	For cleaning process with VIGON® US
5034	Adsorber HM 1/FA+	For cleaning process with ZESTRON® FA+
5035	Adsorber HM 1/FA+ (Replacement cartridge)	For cleaning process with ZESTRON® FA+
M_9999	Special Filter HM 1-A 9"	Suitable for all Adsorber HM 1 processes
Art.-No.:	Product name	Comments: For the rinsing Step
5001	Adsorber HM 1/MPC® Rinse	When rinsing with DI-water
5002	Adsorber HM 1/ MPC® (Replacement cartridge)	When rinsing with DI-water
Art.-No.:	Product name	Comments:
M_9999	Special Filter HM 1-A 9"	Suitable for all Adsorber HM 1 processes

Initial implementation: With your first order, ZESTRON highly recommends to purchase 2 (two) Special Filter HM1 (9") along with your order for Adsorber HM 1 (ready to use 26L/6.8gallons cartridges).

**Adsorber lifetime and monitoring:**

Depending on the loading of heavy metals in the bath the adsorber lifetime may vary between several weeks up to a couple of months. The adsorber lifetime can be easily monitored through commercially available and standardized test kits (i.e. Copper test Merckoquant® 1.10003). Should you have any question, please consult with ZESTRON's Application Technology Labs at: +49-841/635-140.

**Storage:**

Store Adsorber HM 1 in the original cartridge at a temperature between 5-40 °C (41-104 °F). The product has a minimum shelf life of 2 years in factory sealed cartridges.

**Exchange cartridges:**

Loaded cartridges can be returned to the manufacturer and can be replaced with fully regenerated ones.

Your local ZESTRON Sales Partner:

