Product information

MAKA

Mobile gas cleaning

Mobile, flexible and easy to use activated carbon replacement filters

Product information

MAKA

It couldn't be quicker and easier!

The SILOXA MAKA is a stainless steel (1.4301) exchange adsorber engineered for exceptional durability and reliability. It remains permanently leak-tight and dimensionally stable, even under high operating pressures and temperatures. One of its standout features is its internal thermal insulation, which prevents condensate formation on the container walls – even in low ambient temperatures.

The gas in the adsorber is purified using activated carbon, which effectively removes pollutants, including H_2S, VOCs, and siloxanes. The MAKA features three measuring points on its cover, allowing real-time monitoring of the activated carbon's saturation status at different filter heights. This enables timely planning for carbon replacement, ensuring optimal performance and efficiency.

When the activated carbon in the MAKA reaches its adsorption capacity, the spent unit can be easily replaced with an identical MAKA containing fresh activated carbon.

With the purchase of a SILOXA MAKA, you gain automatic access to our exchange pool. This ensures you always receive a ready-to-use MAKA with fresh carbon in exchange for your spent unit.

A specially designed vacuum system is used to extract the spent activated carbon from the MAKAs at our facility. Each unit is then thoroughly inspected for any damage or wear. Faulty components or insulation are replaced as needed. Finally, the MAKA is refilled with fresh activated carbon and subjected to a rigorous leak test to ensure optimal performance.

By choosing an original MAKA exchange adsorber, you eliminate concerns about wear, deterioration, or repairs. You also benefit from optimal uptake capacity and maximum protection for your plant.

SILOXA offers a comprehensive MAKA replacement service, which includes:

- Delivery using our dedicated service vehicles
- Quick and efficient replacement by trained professionals, facilitated by our exchange pool system
- Removal of spent MAKAs and proper disposal of the spent activated carbon

Alternatively, we also offer our standard MAKA delivery service: We deliver a MAKA pre-filled with fresh activated carbon, which you can install yourself. Once the spent MAKA is ready for pickup, simply let us know, and we will arrange collection.

For more information about our services, visit: https://www.siloxa.com/services

MAKA

SILOXA

Technical specifications

Features

- Available in three sizes: 200 liters, 700 liters, and 1,100 liters
- Filter system ensures a long service life for oxidation catalysts
- Significant extension of maintenance intervals for the CHP
- Prevents deposits in the combustion chamber
- High gas processing availability, operational reliability, and low maintenance requirements
- Compact design
- Additional options can be retrofitted

Basic MAKA configuration

- Replaceable filter design, stainless steel 1.4301
- 2 gas connections (inlet/outlet)
  MAKA 200: DN 50 PN10, MAKA 700: DN 125 PN10, MAKA 1100: DN 150 PN10
- Connecting piece with ball valve for inerting and gas sampling
- Interior heat insulation
- Activated carbon for removal of hydrogen sulphide (H_2S)
- Sampling point to monitor the uptake status of the adsorber
- Operating pressure: -5 to 300 mbar/gauge

Factory assembled

- Delivered ready for use

Technical documentation

- Operating instructions, installation/configuration drawing
- P&ID, circuit diagram, and unit list
- Available in German, English, French, or Italian
  (other languages available for an additional charge)

Operating instructions

When using activated carbon adsorbers for hydrogen sulfide removal, please observe the following: The gas must have an oxygen content of at least 0.5% and no more than 2% by volume for effective hydrogen sulfide removal. Additionally, it is assumed that the gas contains less than 100 mg/m³ of longer-chain hydrocarbons (C5 and above). The operating company is responsible for monitoring the performance of the adsorbers. SILOXA Engineering AG is not liable for any damage resulting from insufficient monitoring of adsorber operation.

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Additional options

Reinforced configuration (HD configuration)
- Designed for an operating pressure of up to 300 mbar

Gas heating
- Flanged tube bundle heat exchanger to heat biogas, with parts in contact with gas made of 1.4571 material
- Gas-side pressure resistance: 0.5 bar (gauge)
- Jacket-side pressure resistance: 6 bar (gauge)
- Gas connections: DN 50, DN 125, or DN 150, DIN 2527 PN 16
- 1” heating connection
- Heating water supply: 700 kg/h, 70-90°C, provided by the customer
- Integration into the gas supply pipe is the responsibility of the customer

H_2S online analysis
- 0-100 ppm gas sensor
- Condensate trap
- Evaluation unit with 4 potential-free contacts, analog output, 4-line illuminated display, 2 alarm thresholds, buzzer, and fault relays
- Power supply and communication connections to be made by the customer, and evaluation if necessary
- Suitable for both indoor and outdoor installation

Air metering unit (for gas containing less than 0.5 vol% O_2)
- Diaphragm pump
- Flow rate indicator with regulating valve
- Controlled by the customer
- TÜV safety test report provided

Installation / commissioning
- The activated carbon adsorber is installed on a foundation to be provided by the customer
- Commissioning and instruction services are provided by us

MAKA 200

MAKA 700

MAKA 1100