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Automotive Industry Products AIP MAHA

CVS 8000

Constant Volume Sampler

Exhaust dilution system using critical flow venturis for maintaining a constant exhaust flow as well as exhaust sampling

together for a clean and safe environment

solutions inside

The unit is designed according the legal requirements ECE R83 and EG 70/220 for Europe, Federal Register for USA (§ 86.109, §86.110) and Japan Trias 60.

Impressive characteristics of the CVS 8000:

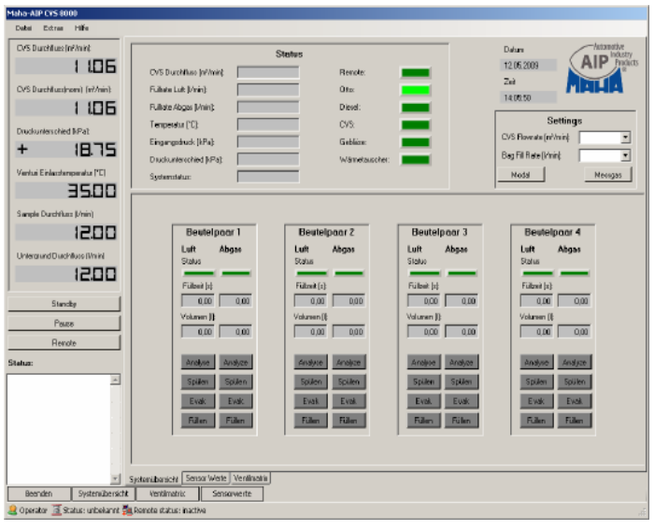
- Easy access for maintenance
- Fast-Response temperature control system
- Fast switching between any of the up to 15 flow rates
- Most compact unit currently available
- Vertical or horizontal outlet pipe to the blower section

CVS 8000 (Constant Volume Sampling)

The MAHA CVS 8000 is installed inside a compact cabinet, which consists of two main segments. The front part of the cabinet, including the internal system components, can be separated and moved out of the way by integrated rolls. This allows easy access to all critical components for maintenance purposes.

The venturi system contains 4 parallel venturis which can be opened and closed using a highly responsive valve system. This allows for fast switching between any of the 15 possible flow rates. The venturis are visible from the front of the system and can be quickly removed for cleaning and maintenance purposes by taking advantage of the two-part designed system cabinet.

The venturi inlet is equipped with a temperature and pressure sensor, allowing the system to automatically calculate the effective flow rate. An additional pressure sensor at the outlet of the venturis is used to maintain a properly working critical venturi system.



Well structured display of the system status, including bag fill rate, CVS flow rate, differential pressure across venturis

Technical Data:

Enclosure:	19“ rack type
Dimensions H x W x D:	(2, 1 x 0, 6 x 0, 8 m)
Weight:	approx. 360 kg
Noise level:	max. 72 dB(A)
Ambient Temperature:	+5°C ... +35°C
Relative Humidity:	10 ... 85%
Power supply (CEKON plug):	400V / 50 Hz, 32 A
Flow levels:	15

Possible binary increments related to max. flow rate

	Venturi 1	Venturi 2	Venturi 3	Venturi 4	Summary
V in m³/min	2	4	8	16	30
V in m³/h	120	240	480	960	1.800

Temperature sensor:	PT 100
Measurement dynamic:	0, 1 s per 62% temperature change
Measurement accuracy:	+/- 0, 2 °C
Pressure sensor:	RS485
Accuracy:	+/- 0, 02 kPa

Electrical Heater

Electrical Power:	15 kW / 3 phase thyristor controlled
Design, material:	stainless steel

Heat exchanger

Design, material:	stainless steel
Exhaust inlet temperature:	< +100°C
Outlet temperature adjustable:	+30°C ... +55°C
Temperature control:	+/- 2°C
Flow max.:	30 m^3/min
Coolant temperature (inlet / outlet):	+18°C / +27°C
Coolant requirement:	max. 25 l/min

Sampling bags

Number:	3 x 4
Material:	Kynar®, Tedlar®
Interface:	AK-Ethernet (optional EtherCAT)

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