

CSM2000

Chell Smoke Meter

- **Fully conforms to SAE ARP1179.**
- **Supplied configured for ICAO Annex 16 Mass Correlation testing (MVPM).**
- **Two x ARP1179 filter holders included.**
- **Quartz and standard SAE filter sizes catered for.**
- **Configured for both mass and volume flow measurement.**
- **Digital control allows tests to be pre-configured.**
- **Leak test function.**
- **System cleanliness test.**
- **Ruggedised sample holders for reliable operation.**
- **Multi point temperature measurement and excellent temperature gradient.**
- **System purge with bypass.**
- **Incorporated stainless steel diaphragm pump.**
- **Ethernet/RS422 interface enables remote control.**
- **Fast and simple to use.**



CSM2000 is a rugged, rack mountable gas turbine engine exhaust smoke measurement system, fully compliant with SAE ARP1179. It is not intended for in-flight testing.

The sampling module is housed in a 10U high case. Gas inlet from the sampling probe (not included) is via a bulkhead fitting on the rear panel, through a trace heated sample line to one or other of the filter paper holders on the front panel.

The sample is pulled through the sampling line by a stainless steel diaphragm vacuum pump achieving a no flow vacuum of 75 kPa and full flow capacity of 33 standard litres per minute. Gas exhausted by the pump is measure by a positive displacement gas meter and totalised in the control module.

Sample flow can be diverted through the bypass line to purge the system of air and allow the flow rate to stabilise, in which case it passes through a coarse filter and a rotameter for flow indication. With the bypass closed, flow passes to a pair of valves that allow the operator to select the filter holder for sampling.

Needle valves downstream of the filter holders allow flow rates to be adjusted without changing the composition of the sample.

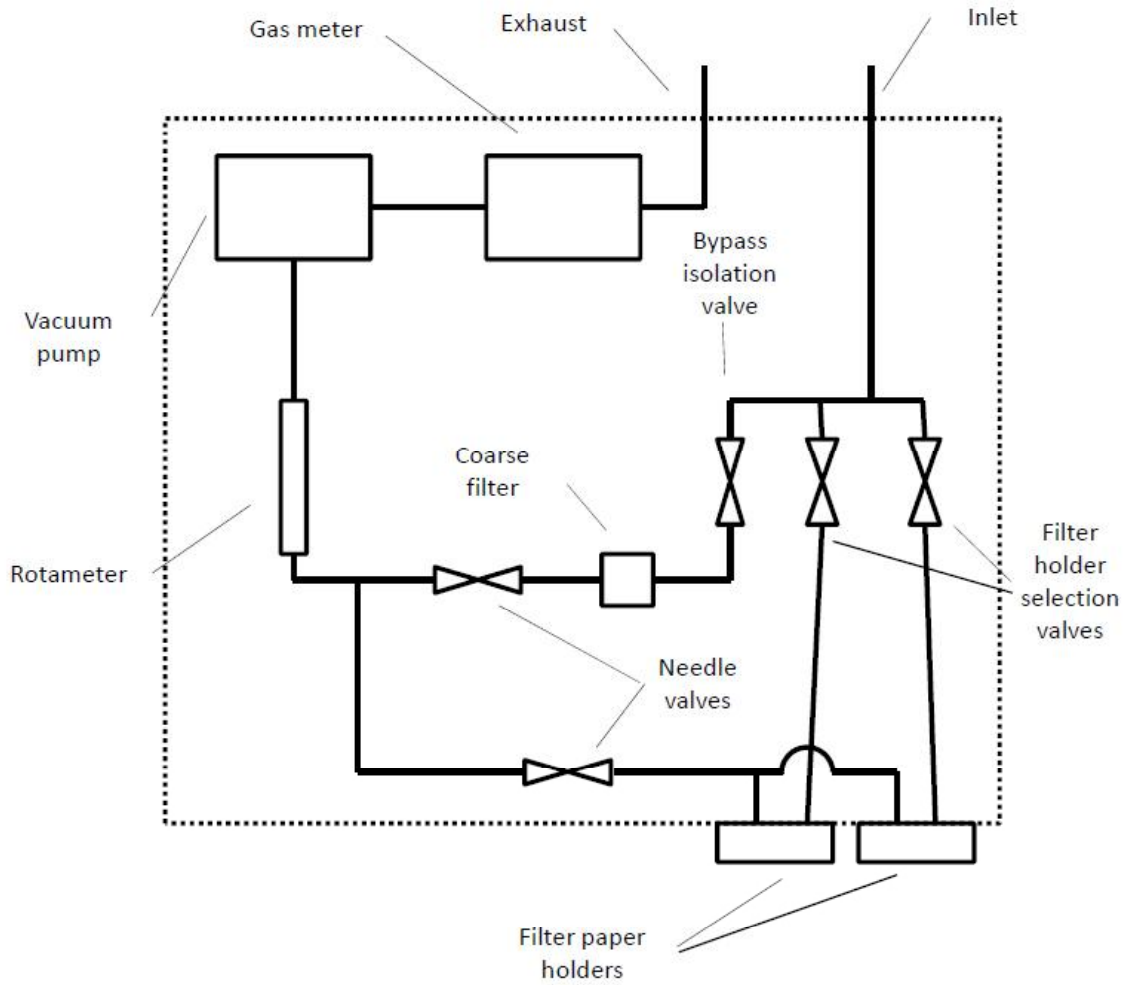
The control unit is housed in a 2U high case and displays totalised sample gas mass volume, sample line temperature, pressure, and leak rate.

CSM 2000 Specifications

Size	Two modules; one 2U electronics module and one 10U pump enclosure.
Services required	220-240 VAC / 50Hz or 110-120 VAC / 60Hz (please specify when ordering)
Ultimate pump vacuum	70 kPa
Maximum pump throughput	33 SLPM
Gas meter accuracy	±1% FS
Operating temperature range	+5 to+90°C
Storage temperature range	-20 to+90°C
Maximum relative humidity	95% at 50°C (non-condensing)

CSM 2000 Filter Holders





Ordering Codes

CSM 2000 Chell Smoke Meter including pump enclosure, control unit and sample holder

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