



NEW

METLAB ADS-1

PORTABLE ISOKINETIC DUST SAMPLER
FOR DUST SAMPLING ACCORDING TO EN 13284-1

METLAB



EMISSION MONITORING SYSTEMS
www.metlab.se



Advantages of ADS-1



Fully automatic
Isokinetic control



Gravimetric H₂O
determination for
each sample



Fast export of
measurement
data using USB 2.0



Easy report generation
from your data file



Measurements in
accordance with
EN 13284-1



Easy to use and
transport



Robust
construction



Save time during
measurement, data
evaluation and training of
staff

Next generation sampler

With over 50 years of experience in dust sampling, we have now released our most powerful product ever, the ultimate partner for both beginners and experts in dust measurement. Effective, durable, accurate and easy to use.

Simultaneous flow measurement

Together with METLAB's probe system ESS-P, the flow rate is continuously measured in the sampling point in accordance with EN 13284-1

Fast isokinetic control

The ADS-1 automatically adjusts the sampling flow so that the velocity at the nozzle matches the velocity of the flue gases in the duct.

Accurate gravimetric moisture determination

Condensate separators and desiccant bags are weighed before and after the sample, ADS-1 then helps with accurate moisture content determination of the sample gas.

Interactive user interface

The large 7" LCD display makes it easy for the user to navigate and control.

Data transfer:

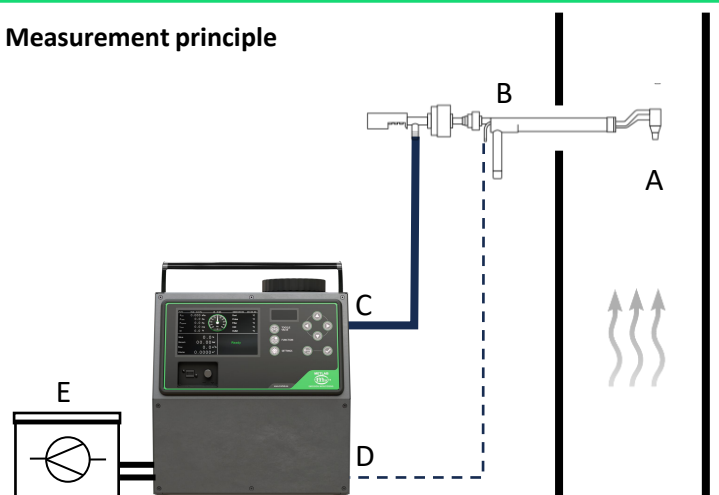
The ADS-1 is equipped with a standard USB 2.0 on the front, which allows you to quickly and easily export data directly to your USB stick.

Report generation with Excel template

From your exported data file, generate a finished report in a few simple steps using Excel template.

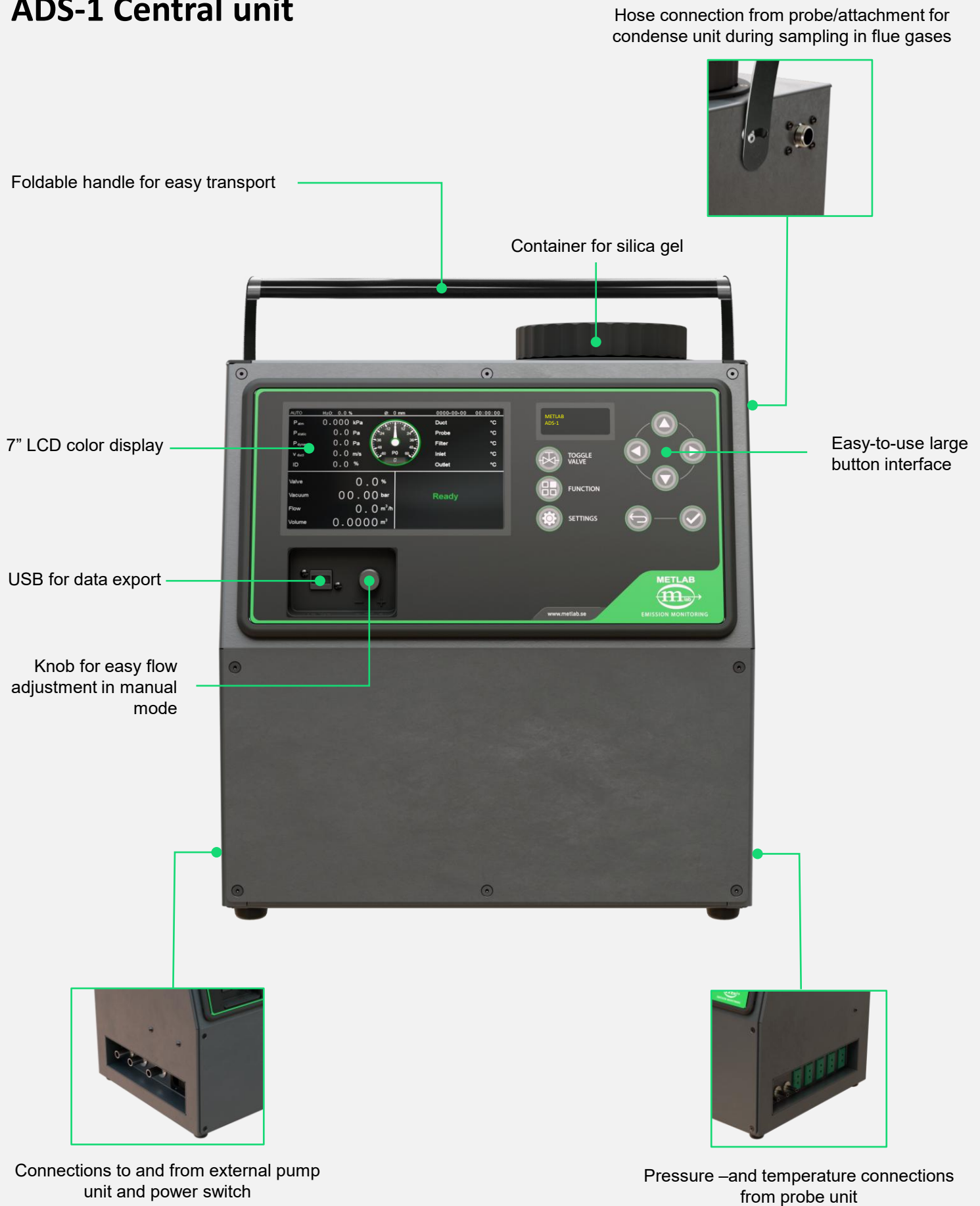


Measurement principle



- A. Isokinetic sampling and simultaneous flow measurement
- B. Heated probe and filter holder (for moist flue gases)
- C. Inlet to ADS-1, condensation separator in case of moist gases
- D. Temperature and pressure connections from probe
- E. External pump unit (6m³/h)

ADS-1 Central unit



General technical specifications	
Display	7" LCD 800x480 Ultra Bright
Button interface	Polycarbonate
Internal memory	32 GB, over 1000h of sampling
Communication	USB 2.0 for export to external memory
Power supply	230 VAC, 50/60Hz
Start up time	Ca 30 seconds
Operating conditions	-10 ... 40°C
Storage temperature	-20 ... 50°C
Dimensions (D x W x H), cm	32 x 39,5 x 42,5
Weight, ADS-1	15 kg
Weight, Pump unit (6m3/h)	16 kg
Differential pressures	Linearity and hysteresis: < +/- 1% FS Accuracy: +/- 0.125% FS
Barometer	Measurement range: 300...1200 hPa Resolution: 1 Pa
Temperatures	Measurement range: -200...1200°C Resolution: 0.1°C Accuracy: +/- 0.5°C
Vacuummeter	Measurement range: 0 ... -1 bar Resolution: 1 Pa
Gas volume	Resolution: 0.1 L
Gas flow	Measurement range: 0.5...6 m³/h Resolution: 0.1 m³/h

Any technical questions?

Get in touch with us today!



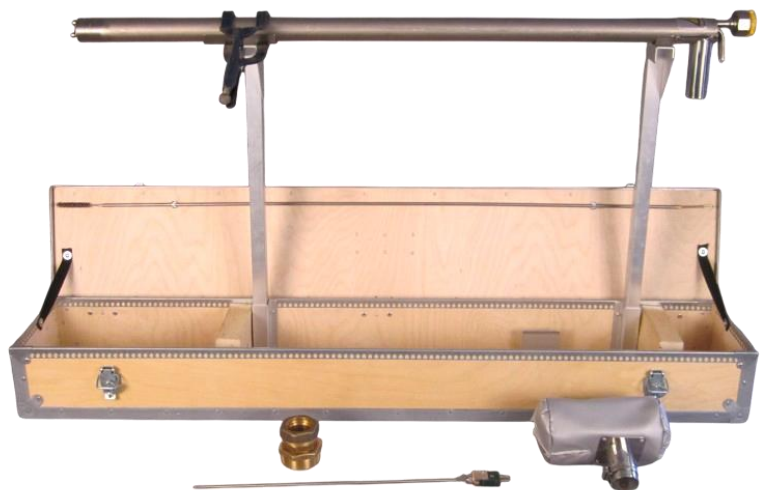
Accessories - Probe

Probe ESS

Lengths	500 ... 3000 mm (other lengths available on request)
Material	Stainless steel or Titanium
Optional models	P: Additional pitot tube for simultaneous velocity measurement in sampling point P-T: Additional type-K thermocouple for duct temperature
Heatable	Yes, requires METLAB power regulator
Filter holder options	47 mm / 90 mm single / 90 mm double / 142 mm double
Placement of filter holder	In-stack/Out-stack (in-stack only with 47 mm filter holder)
Flow measurement	Yes
Compatible probe head	Straight (suitable for 3" measurement port), Bent (suitable for 2" ... 3" measurement port)
Nozzle sizes (mm)	6, 8, 10, 12, 15, 20 (For isokinetic sampling at 2.5 ... 35 m/s)

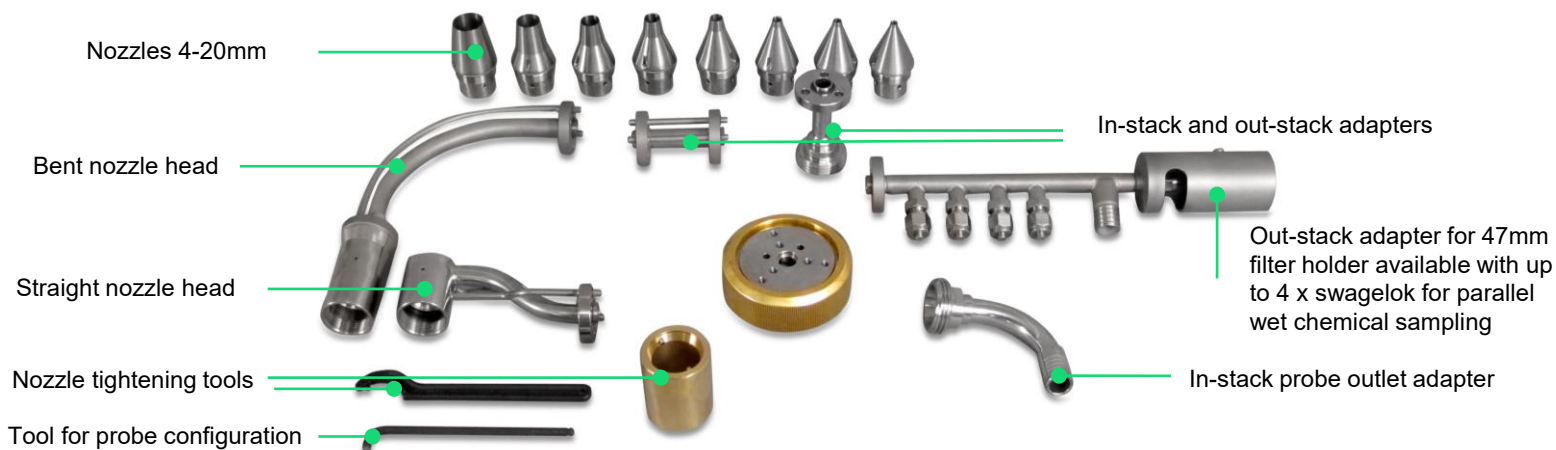


ESS Probe 560 mm with in-stack 47 mm filter holder





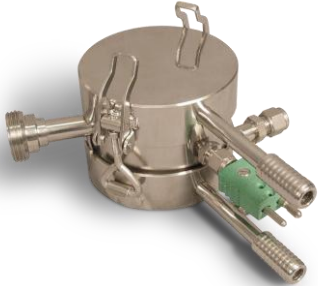
ESS probe, length 1560mm

Modular probe configuration overview – 47mm filter holder example



Parts are available in Stainless steel or Titanium

Accessories – Filter holder

	FH-P47-ESSP	FH-1x90	FH-2x90
			
Material	SS or Titanium	SS or Titanium	SS or Titanium
Filter type	Plane filter	Plane filter	Plane filter
Filter size	47mm	90mm	2 x 90mm
Appropriate ELV*	< 10 – 50 mg/m ³	10 – 100 mg/m ³	10-500 mg/m ³
Placement on probe	In-stack / Out-stack	Out-stack	Out-stack
Temperature reading	Type-K (Out-stack only)	Type-K	Type-K

*ELV = Emission Limit Value

METLAB's filter holder is loaded with filter cassettes that are pre-fitted with filter paper before the sampling process. The cassettes are weighed in and out in their entirety inside a transport case to reduce the risk of contamination or potential loss of the collected sample. The cassettes are typically made of stainless steel but are also available in titanium for cases where metal analysis is to be performed on the filter. For extreme dust levels (500 mg – 5000 mg), there are also filter holders available for two 142 mm flat filters, along with an additional option for a cyclone that can be mounted on the probe for further separation.



Filter cassettes and cases for FH-1x90



Filter cassettes and cases for FH-2x90



Choice of filter paper

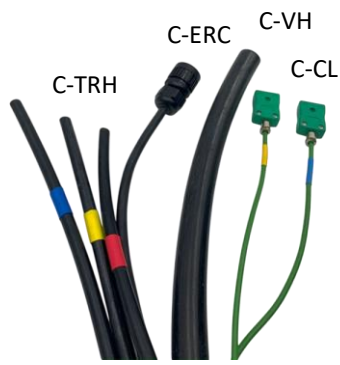
The most common filter paper types are glass fiber and quartz. Glass fiber is significantly more cost-effective and works very well with inert dust and inert gas compositions.

Quartz fiber filters have exceptional heat resistance, excellent chemical resistance, and can withstand acids such as HF and SO₃ without degrading, making them suitable for flue gas measurements, particularly in applications such as waste incineration.

Accessories - Other


Inter-connections, Probe ESS to ADS-1

C-TWH/TRH	Twin or triple hose for differential pressure to probe ESS/ESS-P (EPDM)	5-25m, EPDM
C-ERC	Cable from power controller to probe when using probe heating	5-25m
C-VH	Vacuum hose (EPDM)	5-25m, EPDM
C-CL	Compensation cable for temperature reading	5-25m, Typ K
C-UC	Optional: Combined probe connections "Umbilical"	Flexible corrugated plastic casing, 5–15 m




C-TRH C-ERC C-VH C-CL

Probe connections



C-UC

Combined connections "Umbilical"



VP-6

Vacuum pump incl. hose connections to ADS-1

External pump unit for central unit, ADS-1

VP-6	Vacuum pump in transport case / GAST (6 m³/h)
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Accessories for probe heating

PH-ER	METLAB Power controller for regulation of probe heating
PH-IH	Insulating hood with mount for hot air gun, models fit FH-P47/FH-1x90/FH-2x90
PH-HAG	Hot air gun for heating the filter holder

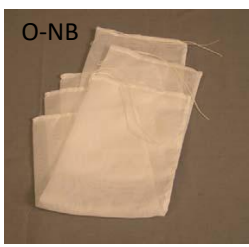
Other accessories

O-SG	Desiccant with indicator
O-NB	Mesh bag for desiccant (Filled with approx. 1 kg each)
O-PS	Probe support
O-PM	Probe support with external thread and lid
O-PC	Clamp for mounting on probe support and probe case
O-FB	Field scale for gravimetric moisture determination




O-SG

Drying agent
(Silica gel)



O-NB

Mesh bag for
desiccant




O-PS

Foldable probe stand



O-PM

Probe mount
2" ... 4"



PH-IH
PH-HAG
PH-ER

Dust probe ESS-P with
accessories for heating

For more information

Please contact info@metlab.se

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