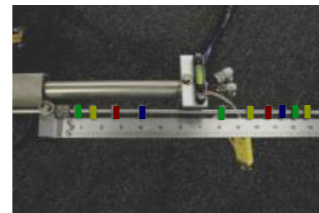


# ADVANCED COAL FLOW MEASUREMENT



The **Advanced Coal Flow Measurement System (ACFM™)** is the most advanced multi point coal sampler available. It provides accurate flow measurements of primary air (using the DAP) and coal flow (using a motorized ISO 9931 probe). The system is fully computer controlled, with automated data acquisition, probe purging to prevent pluggage, and isokinetic extraction rate of particulate. The particulate collection system separates the sample, which is weighed after each test on the integrated weigh scale. The small size and portability allows easy operation by a single person.

The **touch screen and remote** allow a single operator to perform the test.



The **pipe traverse rod** is color-keyed for precision and simplicity.

## INDIA EQUIPMENT SUPPLY

Client	Plant
NTPC	Gadarwara
	Mouda
	Nabinagar
	Darlipali
	Kudgi
	Lara
	Sipat
	Ramagundam
	Rourkela
	Vindhyachal-V
	Kahalgaoon

Client	Plant
MEPL	Thamminapatnam
MPPGCL	Satpura
Singareni	Collieries Co Ltd
TANGEDCO	Ennore
LPGCL	Lalitpur
Bhartiya Rail	Bijlee Co Ltd
NTECL	Vallur
KBUNL	Muzaffarpur TPP
TSGENCO	Manuguru
OPGC	Banaharapalli
Ind-Barath Energy Limited	Utkal
Meenakshi Energy Private Ltd.	Krishnapatnam
Reliance	Sasan

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MEPL	Thamminapatnam
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TSGENCO	Manuguru
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Ind-Barath Energy Limited	Utkal
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### India Representative

ABSR Engineers & Services PVT. LTD.  
Unit No. 208, 2nd Floor. The Terminus,  
BG12, Action Area-1B, New Town,  
Kolkata - 700156, West Bengal, India  
+91-9433325579,9958399557  
info@absr.in



### US Corporate Headquarters

Airflow Sciences Equipment, LLC  
12190 Hubbard Street  
Livonia, MI 48150-1737 USA  
+1-734-525-0300  
info@airflowsciencesequipment.com  
www.airflowsciencesequipment.com



## Flow Measurement Systems for Power Plants

### For Coal Flow Testing

- Combustion optimization
- Burner balance
- Fineness testing
- Improve heat rate
- Reduce emissions

### For Duct Flow Testing

- Fan performance
- Primary and secondary air
- Stack flow measurement
- ESP optimization
- Evaluate pressure losses



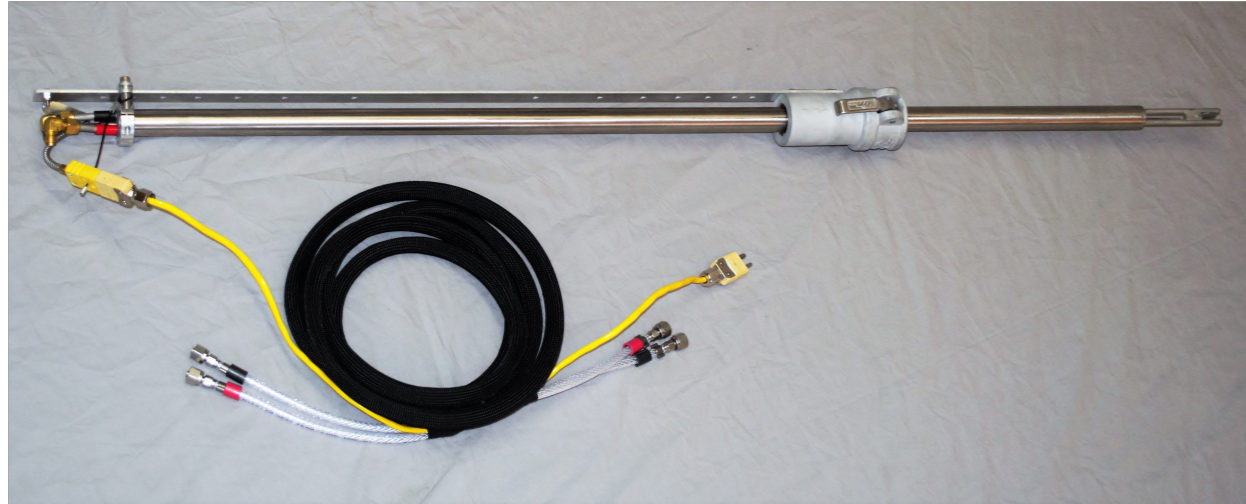
accurate - repeatable - efficient



## DIRTY AIR PITOT (DAP)



The **DAP Test System** measures air velocity, pressure, and temperature, in coal pipes under "dirty air" conditions (i.e., heavily laden with pulverised fuel). The ASE design of the DAP reduces the potential for pluggage of the pressure lines. Knowing the velocity of the transport flow is necessary to balance flow to the burners and for sampling coal for fineness testing.

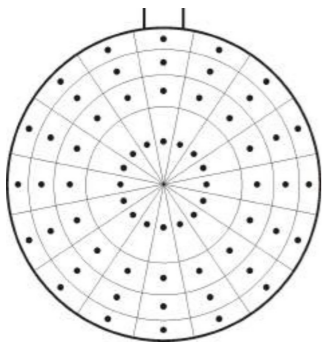


## ISO 9931 COAL SAMPLER



The **ISO 9931 Measurement System** by ASE is ideal for coal pipe sampling. The probe (SwivelSampler™ or RotorProbe™) features four (4) adjustable nozzles that rotate around a center axis. The nozzles are positioned at different radial positions from the center, allowing extraction of particulate over the entire pipe cross section. Isokinetic extraction rate is set using the PLC of the control box, and coal is collected in a cyclone separator.

ISO 9931 Sampling Points



## MOTORIZED ISO 9931 COAL SAMPLER

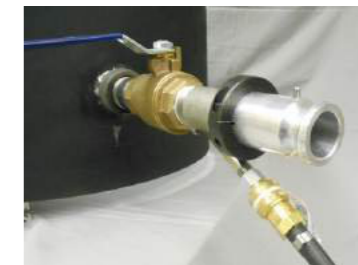


The **ISO 9931 Measurement System with Automatic Probe Actuation (APA)** is utilized to sample particulate flow carried within an air stream. By isokinetically extracting the sample, the particulate flow rate can be determined. The sampling probe, the SwivelSampler™, features four (4) nozzles that rotate around the center axis, and thus the probe is ideally suited for use in round pipe flow systems. The nozzles are positioned at different radial positions from the center representing equal areas. The automatic rotation of the probe head allows the nozzles to extract particulate samples over the entire pipe cross section while entering through a single test port. This increases the test accuracy when there is a gradient in the particulate distribution.

The ISO-APA™ probe with Fast-Lock Dustless Connector automatically connects and aligns the probe for increased efficiency and accuracy of testing. To couple with this feature, the Fast-Lock Seal Air Fitting (shown below, sold separately) mounts on each coal pipe for quick connection and alignment.



The **Fast-Lock Dustless Connector** automatically connects and aligns the DAP and motorized ISO 9931 probe. This improves efficiency and accuracy of testing.



The **Fast-Lock Seal Air Fitting** mounts on each coal pipe for quick probe connection and alignment. Provides a blanket of compressed air for safe and clean testing.

## ASME PTC4.2 SAMPLER



The **ASME PTC4.2 Measurement System** samples pulverized coal using the ASME methodology. A single nozzle is traversed over the pipe cross section using existing test ports. Isokinetic extraction rate is set using the control box, and coal is collected in a cyclone separator.

## DUCT FLOW TESTING

The **3D Probe Data Acquisition System (3DDAS™)** is a computer-controlled data logger and test system for air and gas flow measurement. The 3DDAS™ can:

- Measure in ductwork and stacks
- Determine mass flow rate and velocity profile
- Test with S-type pitot, 3D pitot, or DAP
- Perform testing per EPA Method 2 or 2F

