

IsoAsh: Isokinetic Flyash Sampling



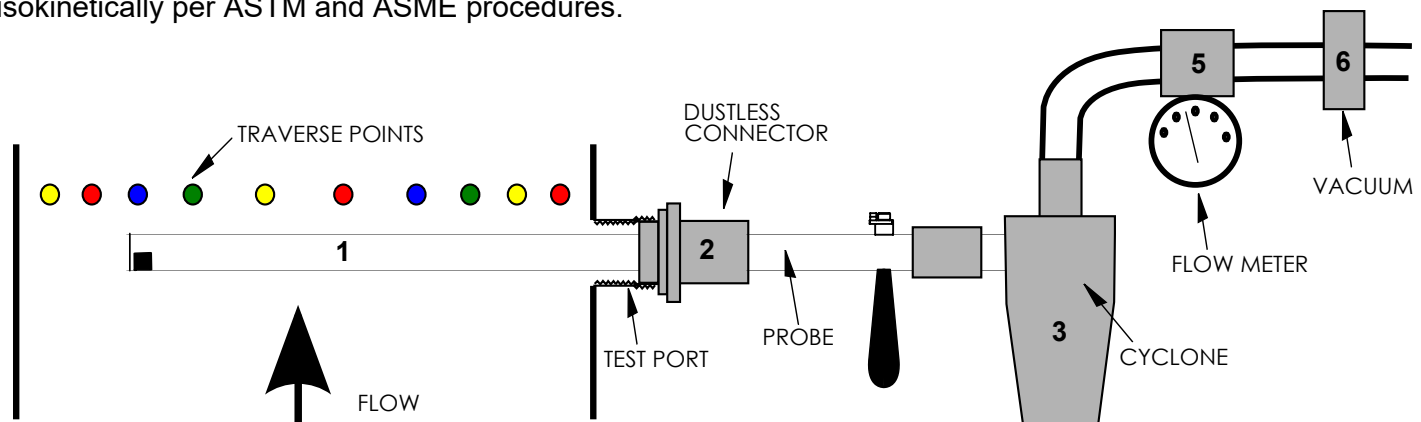
The Isokinetic Flyash Sampling System (IsoAsh) by Airflow Sciences Equipment, LLC (ASE) allows for quick and accurate flyash sampling from ducts and pipes. The IsoAsh is based on two industry test protocols: ASTM D3154 (velocity measurement) and ASME PTC 4.2 (isokinetic sampling). The primary use of the equipment is on small ducts and pipes where EPA Method 5 or 17 is impractical or not required.

The IsoAsh System probes are inserted into the flow stream and positioned at specific locations over the cross section. First, the gas flow velocity is measured using the DAP velocity probe. Then, the flyash extraction is conducted via a vacuum system with the extraction rate set by the operator. The particulate is captured in a cyclone separator and weighed after each test to calculate the particulate flow rate. The samples can be used for fineness or chemical composition testing.



IsoAsh sampling in a piping system

The complete IsoAsh Sampling System by ASE provides all the basic equipment needed to sample flyash isokinetically per ASTM and ASME procedures.

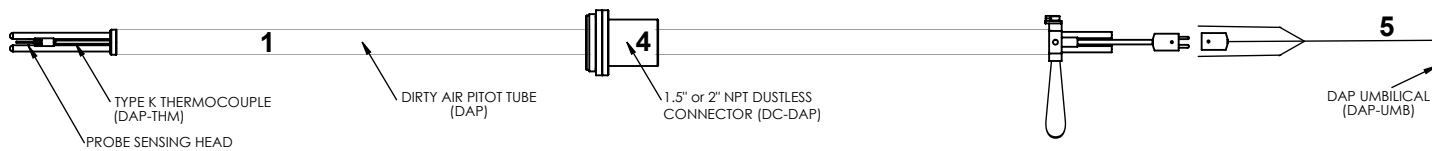


Components:

- 1 – ASME Style Sampling Probe (CP-ASME)
 - 2 – Dustless Connector (DC-ASMECP)
 - 3 – Cyclone Assembly (ASME-CYC)
 - 4 – Sample Jar (IA-CJ)
 - 5 – Flow Meter (IA-FM)
 - 6 – Vacuum Ejector (IA-VAC)
- Stopwatch (not shown)
 - DAP Velocity Measurement System (see back)
 - Data Sheet and Calculations Spreadsheet (not shown)
 - Users manual, Certificates of Calibration (not shown)
 - Carrying Case (Optional, not shown)

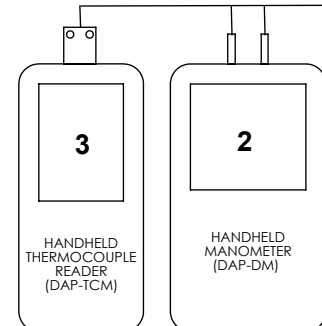
DAP Velocity Measurement System

The DAP system includes the DAP probe and instrumentation for both temperature and velocity measurement. This information is used to determine the isokinetic suction rate for the flyash sampler.



Components:

- 1 – Dirty air pitot velocity measurement probe with thermocouple (Part no. DAP)
- 2 – Handheld digital manometer (DAP-DM)
- 3 – Handheld thermocouple reader (DAP-TCM)
- 4 – Dustless connector (DC-DAP)
- 5 – Tube umbilical (contains pressure and thermocouple lines) (DAP-UMB)
 - Users manual (not shown)
 - Certificates of Calibration, Calculations Spreadsheet (not shown)



IsoAsh: Details and Specifications

The IsoAsh sampling probes can be manufactured to a variety of specifications. Typical features are listed below, though custom orders are available:

- Pipe diameter – 8" to 32" [203 to 812 mm]
- Probe body diameter – 1" [25.4 mm]
- Material – 304 stainless steel
- Dustless connector – 1.5" [38.1 mm] or 2" [50.8 mm] NPT thread



IsoAsh isokinetic flyash sample system



IsoAsh isokinetic flyash sample nozzle



DAP velocity probe



DAP Velocity Measurement System



Dustless connector