

IsoAsh - Isokinetic Flyash Sampling



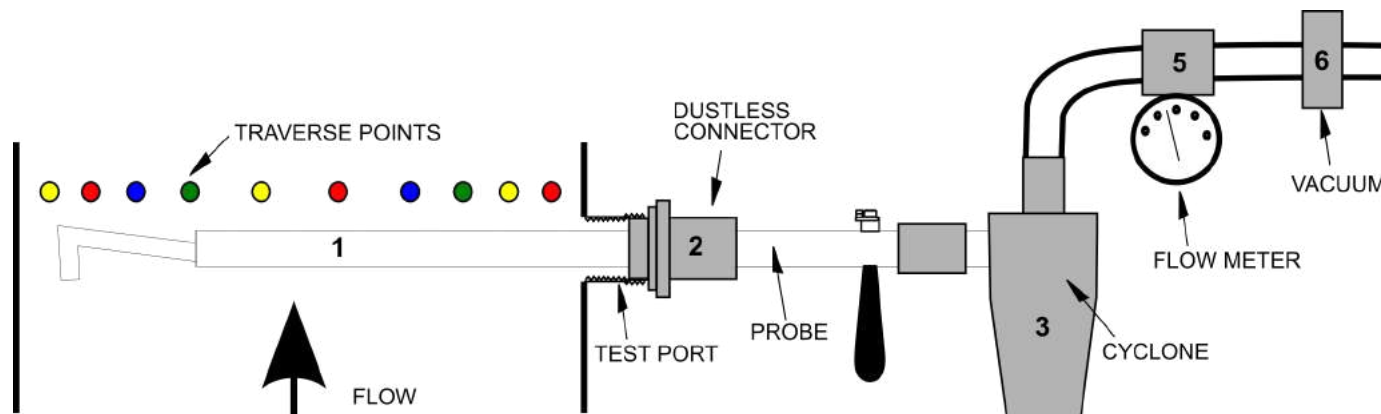
The Isokinetic Flyash Sampling System (IsoAsh) by Airflow Sciences Equipment, LLC (ASE) allows for quick and accurate flyash sampling from ducts and pipes. The IsoAsh is based on two industry test protocols: ASTM D3154 (velocity measurement) and ASME PTC 4.2 (isokinetic sampling). The primary use of 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 Clean Air Pitot (CAP) system. 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 particle size analysis or chemical composition



IsoAsh sampling in a piping system

The complete IsoAsh Sampling System with CAP velocity measurement (ASE part no. ISOASH-SYSTEM-S) provides all the basic equipment needed to sample flyash isokinetically per ASTM and ASME procedures.

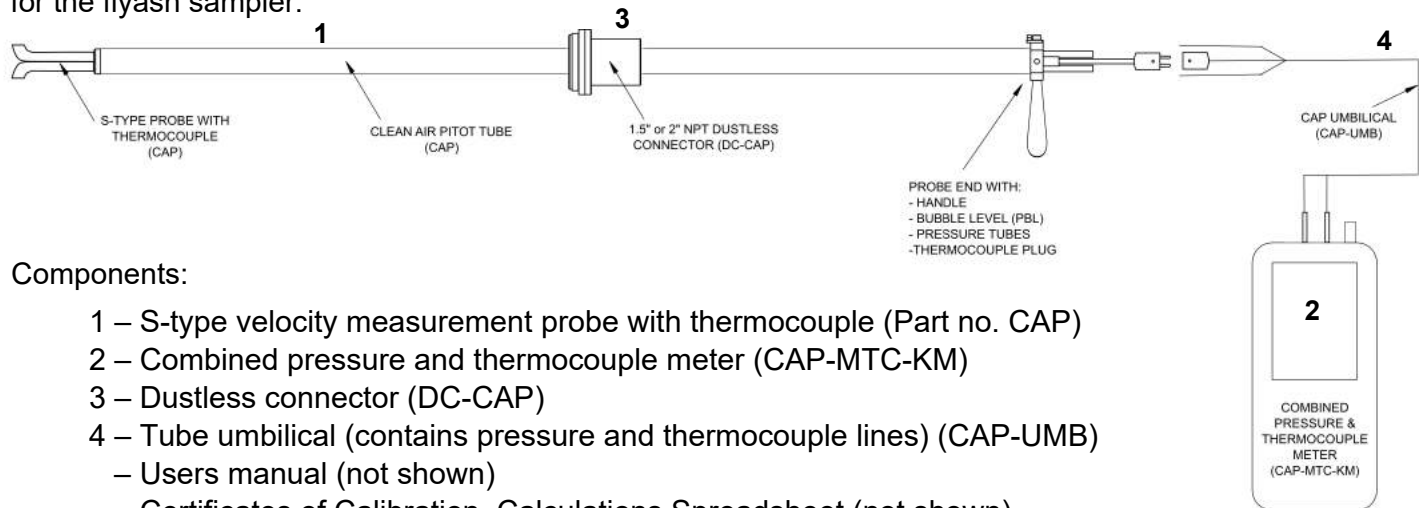


Components:

- 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)
 - CAP Velocity Measurement System (see back)
 - Data Sheet and Calculations Spreadsheet (not shown)
 - Users manual, Certificates of Calibration (not shown)

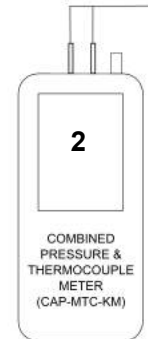
CAP Velocity Measurement System Specifications

The Clean Air Pitot (CAP) system includes the S-type velocity 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 – S-type velocity measurement probe with thermocouple (Part no. CAP)
- 2 – Combined pressure and thermocouple meter (CAP-MTC-KM)
- 3 – Dustless connector (DC-CAP)
- 4 – Tube umbilical (contains pressure and thermocouple lines) (CAP-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] NPT thread



IsoAsh sampling system



IsoAsh sample probe



S-type velocity probe



CAP Velocity Measurement System



Dustless connector