The Original CEGRIT – Mk 2
Automatic Isokinetic Particulate Sampler
CEGRIT Variants available:

- A ‘Complete’ CEGRIT – Mk 2 Sampling system.
- A ‘Basic’ CEGRIT – Mk 2 Sampling system.
- A Special CEGRIT – Mk 2 Sampling system with Purge pipe assembly. This device can sample positive static pressure systems (NOT an automatic sampling device). It will require a compressed Air-line connected to the purge pipe to generate a sample and a suitable needle valve to control the sample flow rate manually on site.
Airflow-SP to advise:

- A ‘complete’ CEGRIT – Mk 2 Sampling system comprises of 4 items:

1. Basic CEGRIT – Mk 2 Sampling unit
2. Sample Nozzle
3. Sample Probe

- A ‘Basic’ CEGRIT unit is identical to item 1 above but with items 2, 3 and 4 omitted
Customer requirements:

• Client to advise a suitable Nozzle size for the process velocity and density (9.5mm, 12.7mm, 15.88mm, 19.05mm available).

• Client to specify a preferred length of sample probe. The 2.0 metre probe is the preferred option (other lengths available on request).

• Client to advise if a Heater Jacket is required (110V or 220V jackets available).
Calculating Nozzle size:

To calculate the closest nozzle size available, the following information is required:

\[ \rho = 1.2928 \left( \frac{101325}{P_b + P_s} \times \frac{273.15}{273.15 + T} \right) \]

\[ \Delta p \text{ (Pa)} \text{ (m/s)} = \frac{1}{2} \times \rho \times V^2 \times mf \]

\[ V = \sqrt{\frac{2 \times \Delta p}{\rho \times mf}} \]

\( \rho \) = Gas density being sampled (Kg/m³) for dry air at ntp (0°C) & \( P_b = 101325 \) (Pa)

Or

\( T \) = Gas Temperature (°C)
\( P_s \) = System Static Pressure (Pa)
\( P_b \) = Barometric Pressure (Pa)
\( \Delta p \) = Nozzle Position Pitot Velocity Pressure (Pa)
\( mf \) of Pitot (numerical) = 1
Site Installation:

- Supplied with mounting plate for panel or inspection door siting.
- Supplied with
- A special CEGRIT – Mk 2 Sampling system with Purge pipe assembly. This device can sample positive static pressure ducted systems (NOT a automatic sampling device). It will require a compressed Air-line connected to the purge pipe to generate a sample and a suitable needle valve to control the sample rate manually.