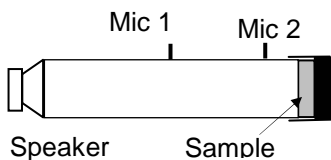


## Kundt's tube



*Kundt's tube Setup*

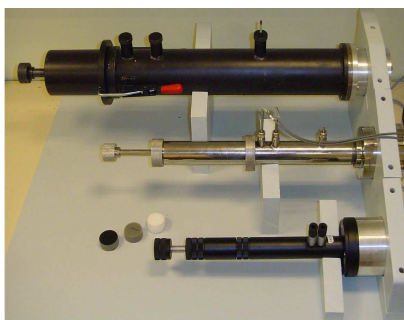
Kundt's tube measurements are the most common way to determine the absorption coefficient and surface impedance of acoustic materials. Tests are run in compliance to the NF EN ISO 10534-2 standard (transfer function method).

### Principle

The sample of tested material is placed in a stationary acoustic field generated by a speaker under normal incidence. The absorption coefficient and the impedance are calculated using the transfer function between two microphones. Relative error between the microphones is eliminated by an inversion procedure.

### Moyens d'essais

Three different diameters of tube are used in CTTM allowing us to adjust the frequency range and the size of the samples.



*CTTM impedance tubes :  
29, 45 et 100 mm diameter*

- **Small diameter Ø 29 mm :**
  - Frequency range : 400 Hz-6,4 kHz,
  - Microphones distance : 20 mm
  - Maximum pressure level : 155 dB (white noise)
- **Medium diameter Ø 45 mm :**
  - Frequency range : 200 Hz-4,3 kHz,
  - Microphones distance : 34 mm
- **Large diameter Ø 100 mm :**
  - Frequency range : 200 Hz-1,9 kHz,
  - Microphones distance : 76 mm
  - Suitable for inhomogeneous materials.



*45 mm diameter tube*

### Customized Kundt's tube

On customer request we can build and provide a complete equipment (tube, microphones, sources, software) according to custom specifications.