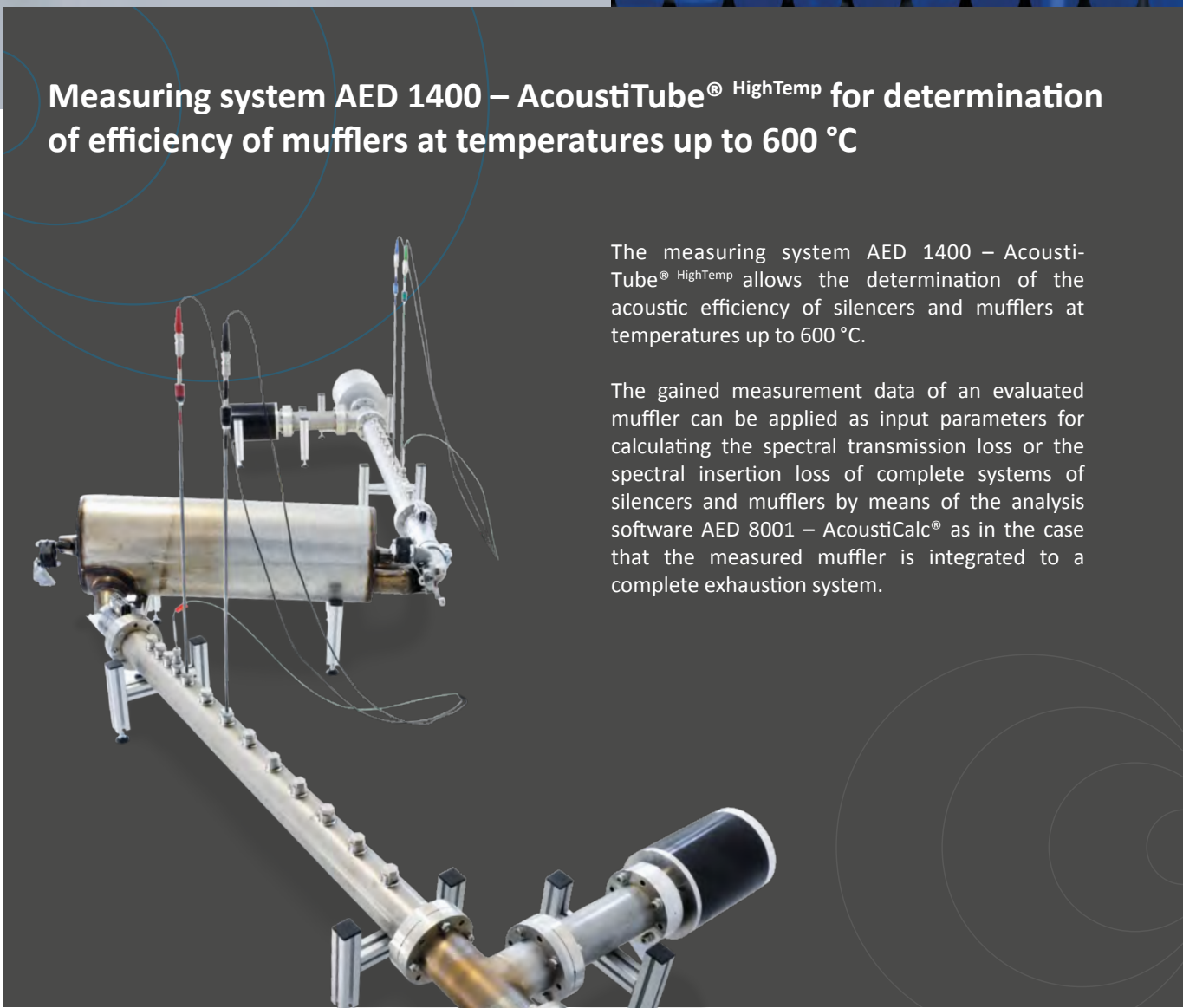


Measuring system AED 1400 – AcoustiTube® HighTemp for determination of efficiency of mufflers at temperatures up to 600 °C

The measuring system AED 1400 – AcoustiTube® HighTemp allows the determination of the acoustic efficiency of silencers and mufflers at temperatures up to 600 °C.

The gained measurement data of an evaluated muffler can be applied as input parameters for calculating the spectral transmission loss or the spectral insertion loss of complete systems of silencers and mufflers by means of the analysis software AED 8001 – AcoustiCalc® as in the case that the measured muffler is integrated to a complete exhaust system.



Measuring system AED 1400 – AcoustiTube[®] HighTemp

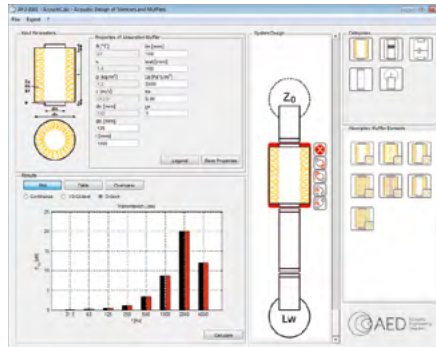
Fields of Application

Among other things, the operational area of the measuring system includes:

- measurement of the spectral transmission loss of silencers and mufflers at high temperatures in a transmission tube
- application of measurement data as input parameters for calculating the spectral transmission loss and the spectral insertion loss of complete systems of silencers and mufflers by means of the analysis software AED 8001 – AcoustiCalc[®] (e. g. installation of a measured muffler within a complete exhaust system)
- application as impedance tube

Software

The measuring system AED 1400 is supported by the analysis software AED 1401.



Calculation of acoustic efficiency of a muffler that was evaluated by the measuring system AED 1400 – AcoustiTube[®] HighTemp within a complete exhaust system by means of the analysis software AED 8001 – AcoustiCalc[®]



- application of the Two Source Method for determining the transmission loss and the transfer matrix of silencers and mufflers as a function of frequency
- comfortable storage and management of measurement data in database system
- direct comparison of measurement results with simulation results of the analysis software AED 8001 – AcoustiCalc[®] by means of the AED Data Viewer
- calculation of third octave band spectra, octave band spectra and average values

Technical Data

Transmission tube system

- consisting of each 2 measuring units, speakers and mufflers
- robust construction
- temperature durability of all components: up to 600 °C
- frequency range: 20 Hz – 3.000 Hz
- high flexibility by 13 selectable positions for microphone probes per measuring unit

Heating system

- consisting of heater and ventilator
- independent feedback control system
- max. temperature: 650 °C (at the output of the heater)
- max. volume flow: 6.000 l/min (ventilator at 3.600 rpm)

Sensors

- 6 microphone probes
- 2 temperature probes

Measurement setup

Measurement of the spectral transmission loss of an exhaust muffler with the measuring system AED 1400 – AcoustiTube[®] HighTemp at temperatures up to 600 °C.

