Instruction Manual Energy Label tool

Important:

This tool is designed to establish an honest and timeless energy label for attenuators and ventilation systems with acoustic requirements. It will only function when the acoustic requirements are clear and not a subject of discussion.

- The energy label is not product-based but project based. This is done so the right components can be selected for each specific situation.
- The energy label is dependent on the total process flow (air only) of a ventilation system, Don't split up or combine system flows, other than used in the system.
- When the result of an attenuator or ventilation system is evaluated, it is not allowed to use the spectral result. Use the lumped parameter acoustic result in a single value (e.g. dB(A)/dB(C)) and report it together with the label.

1. Choose if you want to evaluate an attenuator or a ventilation system

This makes no difference to the result, the label is intended for the entire ventilation system (including the attenuator, when it is only used for the attenuator, this needs to be mentioned.

2. Enter the spectral incoming noise (including fan contribution) per Octave Band. You may leave irrelevant octave bands open (e.g. 31, 8k, 16k)

3. Enter the specific noise requirements.

Most times this is a single value (e.g. dB(A)/dB(C)) in specific cases additional spectral requirements apply. It is optional to add specific spectral requirements.

4. Specify the requirement type

This can be a sound power level (Lw) or a sound pressure level ate a certain distance (Lp).

5. Specify the configuration (duct to duct, duct to plenum, plenum to duct, plenum to plenum). Plenum stands for open field. This applies for all relatively wide spices in comparison to the duct.

6. Specify volume flow in kg per hour (always air)

7. Specify the air Temperature (default is 15^{o}C).

8. Specify the corresponding pressure drop in reality for either the ventilation system or the attenuator (including expansion and contraction connective pieces), choose the one you aim to evaluate in 1. If it is a predicted pressure drop, this needs to be mentioned in the presentation of the label.