

Protokoll

Equivalent sound absorption area according to ISO 354

Measurement of sound absorption in a reverberation room

Client: XAL GmbH, Auer-Welsbach-Gasse 36, AT-8055 Graz Date of test: 30.06.2022

Description: Product name: SONIC ABSORBER RING

Test according to EN ISO 354 with reduced number of measuring points and averaging.
Structure of the test specimen according to EN ISO 354, point 6.2.2.

The structure consists of a total of 2 * SONIC ABSORBER RING (diameter ring: 1280 mm, diameter cut-out luminaire: ~500 mm, d = 50 mm) mounted on 2 pieces of SONIC free standing (diameter base: 470 mm, diameter luminaire top: 500 mm, height: 1,840 mm) randomly distributed at a distance of at least d = 200 cm from each other. The SONIC ABSORBER RING is made of PET felt.

- Distance from the floor to the lower edge of the absorber ring: 1,800 mm.
- Test specimen area (top and bottom): $2 * 2.182 \text{ m}^2 = 4.36 \text{ m}^2$
- Construction height: d ~1,850 mm
- Weight SONIC ABSORBER RING: ~10.18 kg
- Weight SONIC free standing: ~18.12 kg

Empty reverberation room:

Relative humidity: 68,3 %
Temperature: 23,8 °C
Barometric pressure: 97,3 kPa

Reverberation room with object

Relative humidity: 66,3 %
Temperature: 24,2 °C
Barometric pressure: 97,2 kPa

Surface area: 2,18 m²
Room volume: 244,3 m³
Total room area S_T : 240,1 m²

| Frequency f [Hz] | A_T 1/3 octave [m ²] |
|------------------------|--|
| 50 | |
| 63 | |
| 80 | |
| 100 | 0,1 |
| 125 | 0,5 |
| 160 | 0,4 |
| 200 | 0,6 |
| 250 | 0,8 |
| 315 | 1,2 |
| 400 | 1,4 |
| 500 | 1,7 |
| 630 | 2,2 |
| 800 | 2,5 |
| 1000 | 2,5 |
| 1250 | 2,9 |
| 1600 | 2,9 |
| 2000 | 2,6 |
| 2500 | 2,6 |
| 3150 | 2,8 |
| 4000 | 2,6 |
| 5000 | 2,5 |

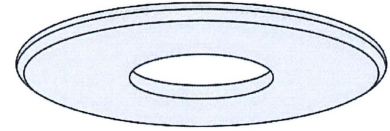
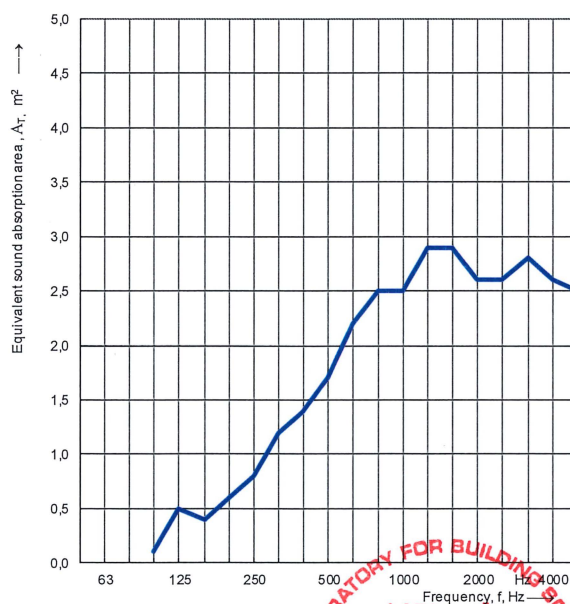
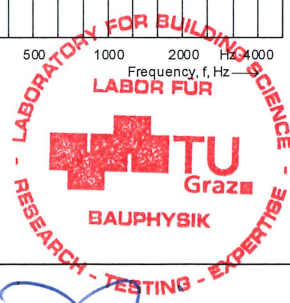


Figure 1: exemplary representation of the test specimen (does not correspond to the actual installation situation)



Name of test institute: Labor für Bauphysik
No. of test report: B22-005-A17009-354a_kaso_Aobj

Date: 30.06.2022 Signature: DIJ. Kasim