

Schmidlin bathtub foot set (SIA 181) Sound measurement according to standard SIA 181:2020

Test environment:

Geberit AG Engineering Laboratory, Jona
Concrete floor, 22 cm

Measurement by EMPA on July 11, 2007, see also EMPA investigation report no. 446038.2 dated July 19, 2007

Measuring instruments:

Norsonic 840, class 1

Test object:

Schmidlin bathtub foot set (SIA 181), installed with a Schmidlin DUETT bathtub 180x80 cm

Assembly type:

Firmly installed with seal, connected drain and overflow fitting, tiled and siliconed

Requirements according to standard SIA 181:2020:

According to Table 7 of the standard SIA 181:2020, a foot set causes what is known as a "single noise" when used in the transmission room, which falls under the category of "usage noise."

According to Table 6 of the standard SIA 181:2020, the limit value for a room with medium noise sensitivity (bedroom, living room) is **34 dB** for **increased requirements** (for condominiums) and **39 dB** for a room of low noise sensitivity (bathroom, toilet, kitchen.)

The limit value for a room with medium noise sensitivity (bedroom, living room) is **38 dB** for **minimum requirements** (rented apartments) and **43 dB** for a room with low noise sensitivity (bathroom, toilet, kitchen).

Test performance:



Fig. 1: Assembly condition in the stimulus room



Fig. 2: EMPA pendulum drop hammer

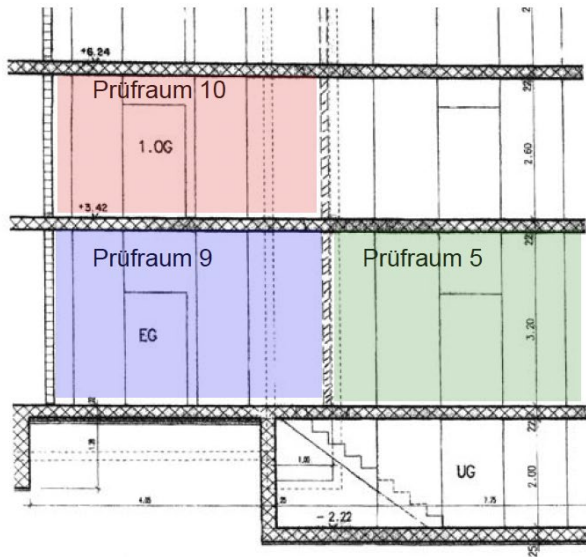


Fig. 3: Test environment

- Legende:**
- Senderaum
 - Empfangsraum vertikal
 - Empfangsraum diagonal

Measurement results:**Measurement result:**

The mean LAF value of the measurements is 53 dB(A.)

Absorption correction K1: -2 dB(A) (non-absorbent, unfurnished room)

Level correction K4: -12 dB(A)

Volume correction Cv: 0 dB(A) (< 200 m³)

Measurement result LHTot: 39 dB(A)

Requirements:A

Requirements according to SIA 181:2020 for a room with medium noise sensitivity (bedroom, living room):

Minimum requirements (LHMin): 38 dB(A)

Increased requirements (LHincreased): 34 dB(A)

Requirements according to SIA 181:2020 for a room with low noise sensitivity (bathroom, toilet, kitchen):

Minimum requirements (LHMin): 43 dB(A)

Increased requirements (LHincreased): 38 dB(A)

Conclusion:

With an average value of 39 dB(A), the Schmidlin DUETT bathtub with the Schmidlin bathtub foot set meets the minimum requirements according to SIA 181:2020 with a raw concrete thickness of 22 cm for a room with low room sensitivity (kitchen, bathroom, toilet) located vertically below the bathroom.

According to empirical data, the increased requirements according to SIA 181:2020 for a room with medium room sensitivity (bedroom, living room) located vertically below the bathroom from a raw concrete ceiling of 29 cm are fulfilled (34 dB), the minimum requirements from a raw concrete ceiling of 23 cm (38 dB.)

For a room with low room sensitivity (bathroom, kitchen, toilet), the increased requirements vertically below the bathroom from a raw concrete ceiling of 23 cm are fulfilled (38 dB), the minimum requirements from a raw concrete ceiling of 17 cm (43 dB.) ش

Place, date:

Oberarth, February 23, 2024