Room-to-room sound attenuation

Sliding doors with sound attenuation Derivation of sound attenuation values

All reference values have been measured on the basis of a practical design. The Rw sound attenuation values specify the expected sound attenuation between the two rooms which are influenced by the wall, the system and the choice of door leaf.

Example walls	System	Thickness of door leaf	Type of door leaf	Estimated sound attenuation effect
				Room to room
				Rw
Wall with minimum acoustic rating of Rw 52 dB Lightweight construction wall with metal stand	without Hawa Acoustics	39 mm	Single door leaf without sealing system	≈ 18 dB
	Hawa Porta 60 HMD Acoustics Hawa Porta 100 HMD Acoustics		Single door leaf, approx. 19 kg/m² acoustic rating of Rw 29 dB	≈ 31 dB
			Chipboard, approx. 25 kg/m² No defined acoustic rating	≈ 30 dB
			Door leaf with medium sound attenuation level approx. 25 kg/m², acoustic rating of Rw 39 dB	≈ 34 dB
Lightweight construction wall with wooden stand	Hawa Junior 100 B Acoustics Hawa Porta 60 HMD Acoustics Hawa Porta 100 HMD Acoustics	44 mm	Single door leaf, approx. 20 kg/m² acoustic rating of Rw 29 dB	≈ 30 dB
			Door leaf with medium sound attenuation level approx. 28 kg/m², acoustic rating of Rw 40 dB	≈ 34 dB
	Hawa Junior 100 B Acoustics	50 mm	Door leaf with high sound attenuation level approx. 33 kg/m², acoustic rating of Rw 42 dB	≈ 35 dB
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Solid wall	without Hawa Acoustics	39 mm	Single door leaf without sealing system	≈ 20 dB
	Hawa Porta 60 HMT Pocket Acoustics Hawa Porta 100 HMT Pocket Acoustics		Single door leaf, approx. 19 kg/m², acoustic rating of Rw 29 dB	≈ 31 dB
			Door leaf with medium sound attenuation level approx. 25 kg/m², acoustic rating of Rw 39 dB	≈ 37 dB
Acoustic ratings for wall construction according to manufacturer. The acoustic values may vary if installed in different wall types.	Hawa Junior 100 B Pocket Acoustics Hawa Porta 60 HMT Pocket Acoustics Hawa Porta 100 HMT Pocket Acoustics	44 mm	Single door leaf, approx. 20 kg/m² acoustic rating of Rw 29 dB	≈ 32 dB
			Door leaf with medium sound attenuation level approx. 28 kg/m², acoustic rating of Rw 40 dB	≈ 39 dB
	Hawa Junior 100 B Pocket Acoustics	50 mm	Door leaf with high sound attenuation level approx. 33 kg/m², acoustic rating of Rw 42 dB	≈ 41 dB

Reference values tested with a lightweight construction wall in accordance with James Hardy (type 1 H 31 / Rw 52 dB), size 2.5 x 2.45 m in accordance with DIN EN ISO 10140-2. Clearance 2.0 x 1.0 m. The sound attenuation relates to the entire structure and specifies which sound attenuation can be expected between the two rooms.

