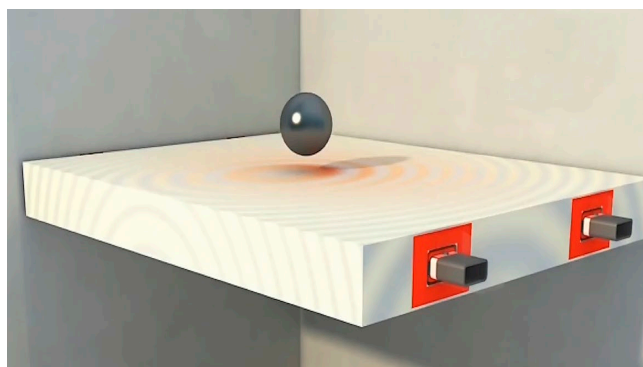


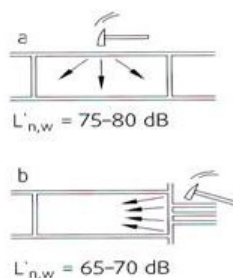
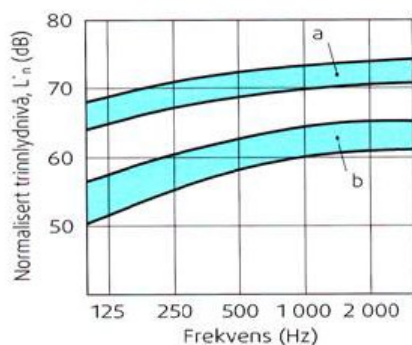
MEMO 47 IMPACT SOUND TRANSMISSION	Dato:	23.06.2022	Sign.:	ELS
	Siste rev.:	23.07.2024	Sign.:	ELS
	Dok. nr.:	K3-10/13	Kontr.:	SB

## IMPACT SOUND TRANSMISSION

- ✓ Step sound is much more in focus, increasing interest
- ✓ Most constructions can't meet the new building standards
- ✓ Step sound transmission from stairs to adjacent rooms
- ✓ Reduces the quality and the value of the building
- ✓ Contractual liability for the contractor towards building standards

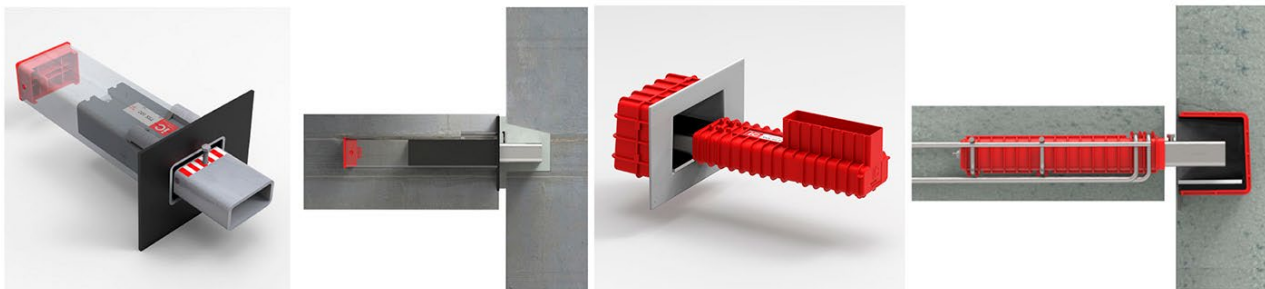


### Stepsound from concrete stairs without sound reducing efforts



Room type	Class B dB	Class C dB
Between residential units, a unit from common areas / common hallway / stairwell	48	53
To a unit from toilet, storage, balcony, terrace etc.	53	58
To a residential unit from business, service business, public garage, roof terrace etc.	43	48

**Recomended solution for apartments TSS 102 or RVK/TSS with IC Box SRU**



Impact sound transmission in landing.

In picture: TSS 102

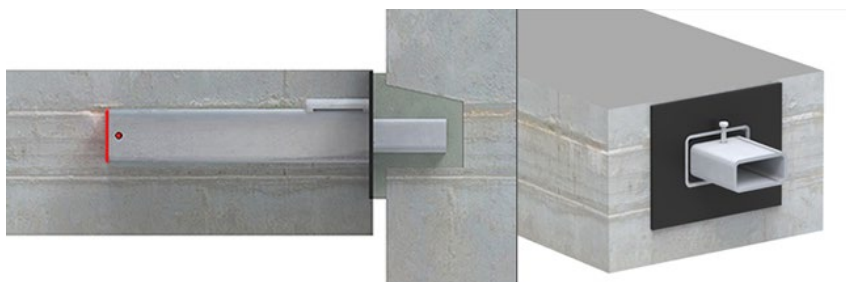
Reduction 20-25dB

Impact sound transmission in wall.

In picture: IC Box SRU TSS/RVK 60p-101

Reduction 20-28dB

**Recomended solution for offices and public buildings. TSS with vertical rubber flange.**



Impact sound transmission in landing.

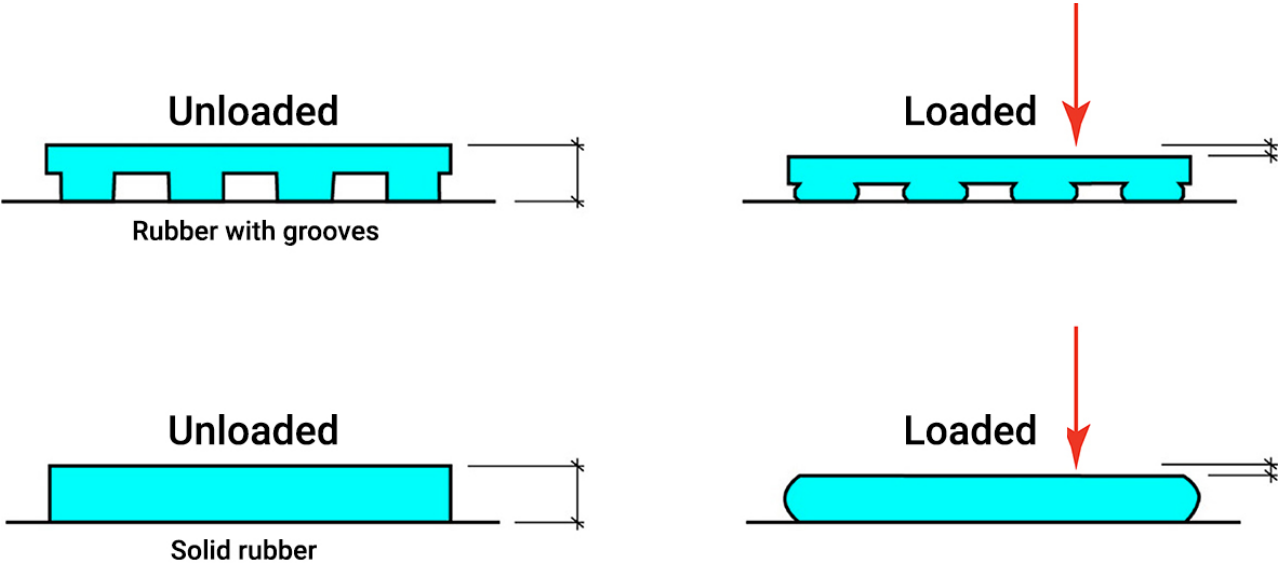
In picture: vertical rubberflange.

Reduction 10-12dB

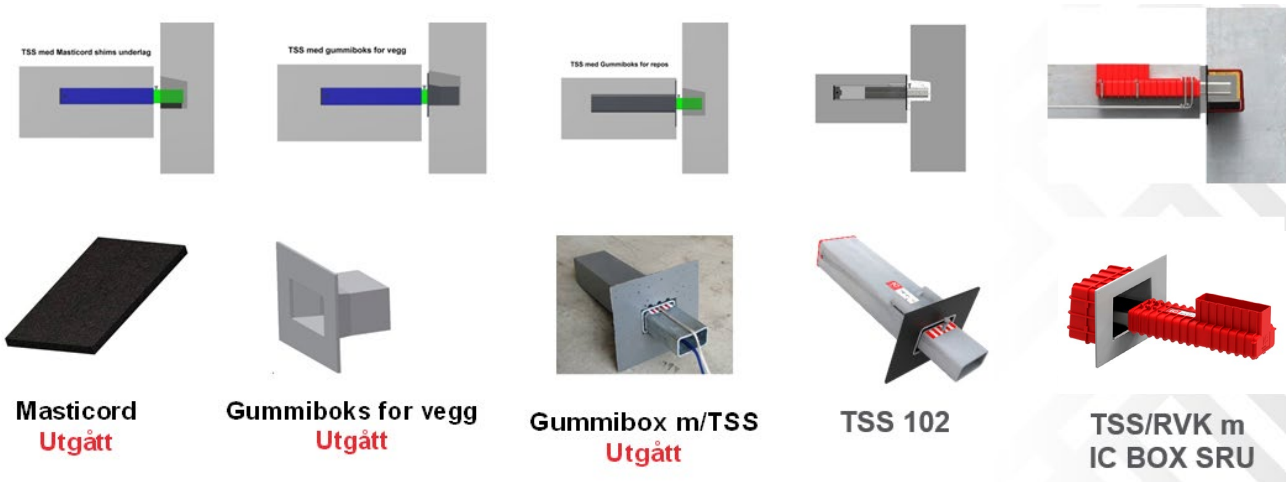
**We have since 2007 been testing and developing products that reduce stepsound.**

Our experience is that if you want to have good sound reduction, you have to use soft rubber eg 58 shore. Then you must have an area of 250 mm<sup>2</sup> pr. kN breaking load.

**The principle for effective sound reduction**



Solid rubber loses its properties as it is unable to expand when cast/fireproof.



**Conclusion:**

**To reduce impact sound you need square**

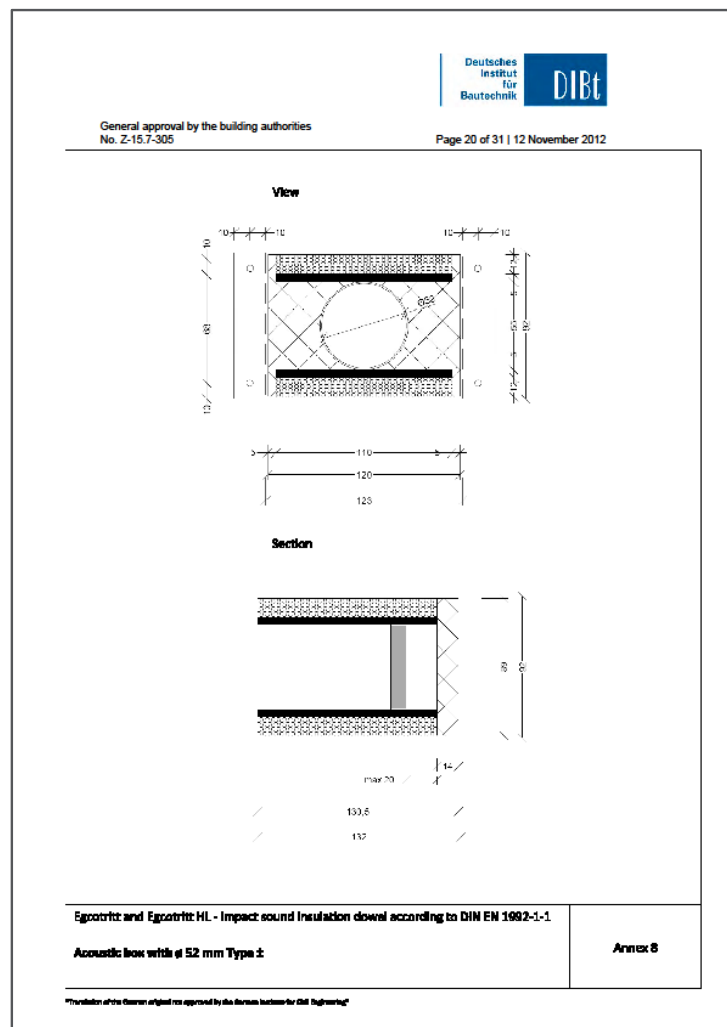
**200-250 mm<sup>2</sup>/ kN ultimate load.**

Reduction : 30 dB = 60 kN ultimate load

Area : 115x110=12650mm<sup>2</sup>/60 kN = 210 mm<sup>2</sup> / kN

TSS 102 = 25 dB. 100 kN

Area : 25000 mm<sup>2</sup> = 250 mm<sup>2</sup> / kN



## Important hints regarding step sound reduction

See also IC academy instalation of stairs

<https://invisibleconnections.no/en/trinnlydsdemping-2/>

1. No casting wider than vertical rubber flange W= 250 x H=200
2. Elastic joint between landing and wall minimum 10 mm
3. Tiles must not be in contact with the wall, minimum 10 mm joint
4. base tiles forbidden



Foto 13. Oversikt



Foto 15. Detalj skiferfliser på trapp og sokkellist



Foto 14. Detalj skiferfliser på trapp og sokkellist



Foto 16. Detalj skiferfliser på trapp og sokkellist  
Et område manglet skifer og avslørte lim som rent ned i fugen.

REVISJON	
Dato:	Beskrivelse:
23.06.2022	Preliminary
28.06.2022	Change memo nb. from memo 34 to memo 47
07.12.2023	Oppdated pictures for recommended solutions and dB.
03.07.2024	Oppdated homepage address.
23.07.2024	Oppdater reduction page 2