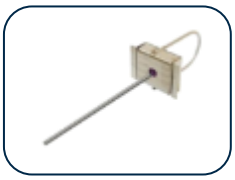
TECHNICAL DATASHEET

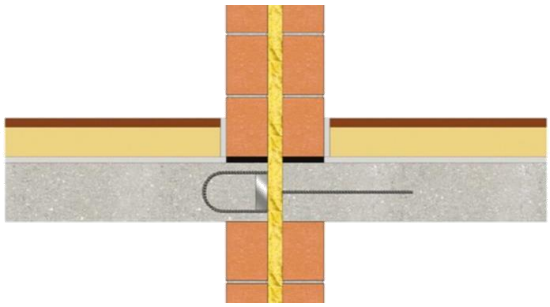


RIBA SILENT

Sound damping bolted tension and compression anchors

REF 12.02.03 - Version V02 - 24/06/2026

Description



RIBA SILENT is an acoustic anchorage that ensures uniaxial transfer of tensile and compressive forces without sound transmission (vibrations) (tested at the Fraunhofer Institute IBP).

It is used wherever an acoustic connection is required between two concrete structures.

The anchorage has an impact sound reduction index of:

$\Delta L^*_{n,w}$ = 33 dB

The system consists of a steel box (stainless-steel), equipped with a stainless-steel stirrup and filled with acoustic insulating material. This box is fixed to the formwork of the first concrete pour. After concreting and removal of the formwork, the stainless-steel anchoring bar is screwed into the designated opening. In this way, the steel anchoring rod is acoustically decoupled.

The length and shape of the anchoring rod can be adapted depending on the application.

Application fields

Acoustic isolation of building connection elements such as, for example:

- parapets,
- double walls,
- stabilization of self-supporting balconies and galleries,
- etc.

Materials

Materialen	
Reinforcement bars	*Standard:* *Ribbed stainless steel, grade 1.4301 (Group II according to technical specifications SIA 2029)* *or, upon request:* *Ribbed stainless steel, grade 1.4462 (Group IV according to technical specifications SIA 2029)*
Acoustic insulation	PUR

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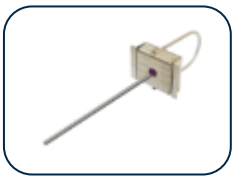

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Design and verification of structural safety

Tension load

$$N_d \leq N_{Rd,t}$$

with :

N_d = design value of the normal force according to SIA 260 and 261

$N_{Rd,t}$ = design value of the tensile strength

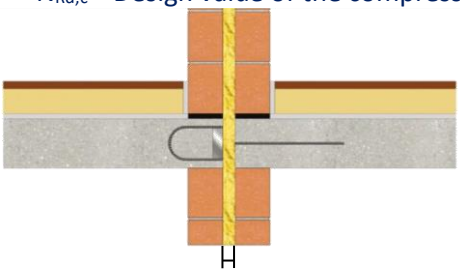
Compression load

$$N_d \leq N_{Rd,c}$$

with :

N_d = design value of the normal force according to SIA 260 and 261

$N_{Rd,c}$ = Design value of the compressive resistance (taking into account buckling resistance)



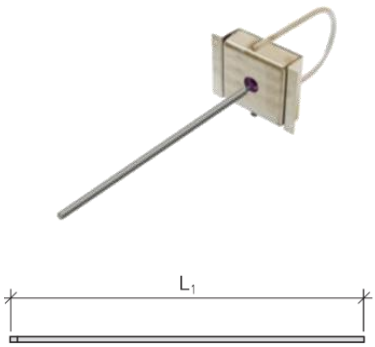
Joint width e

Joint gap « e » = free length of the rod, governing in the case of compressive loading

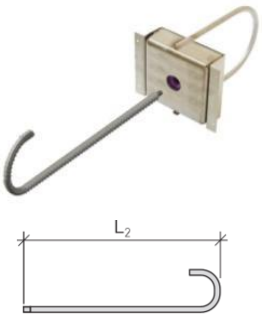
For the insulation in the joint, we recommend the use of mineral wool with a maximum density of 100 kg/m³.

Models – Dimensions - Resistance

a) *Standard models :*



Model A



Model B

Model C

For other models, please contact us.

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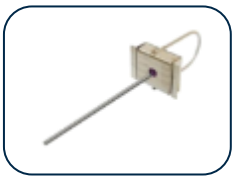

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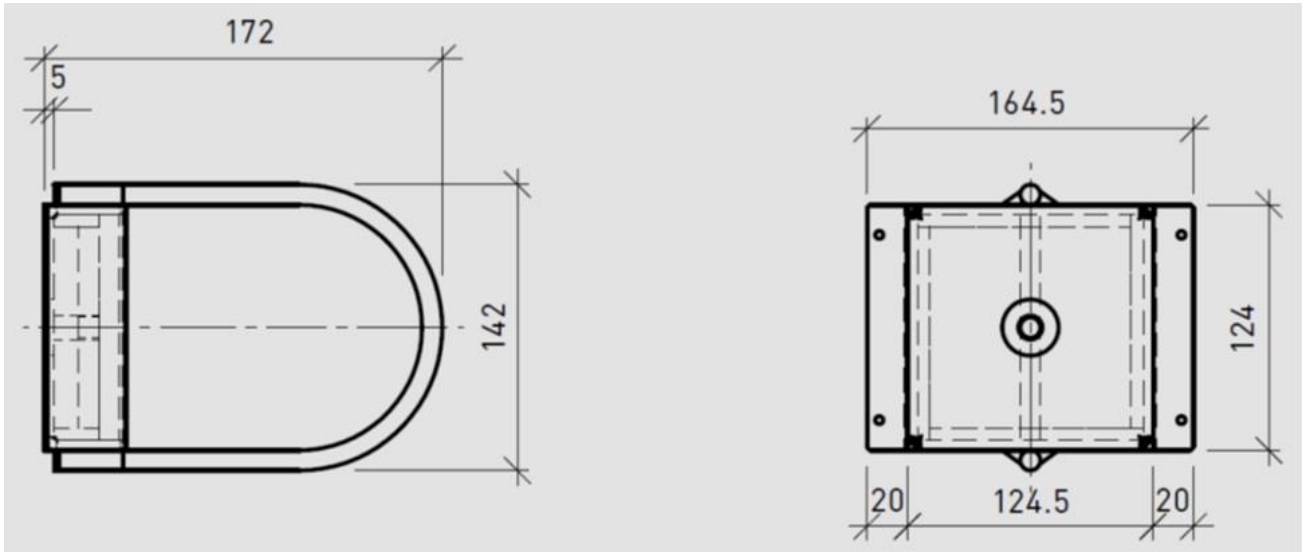
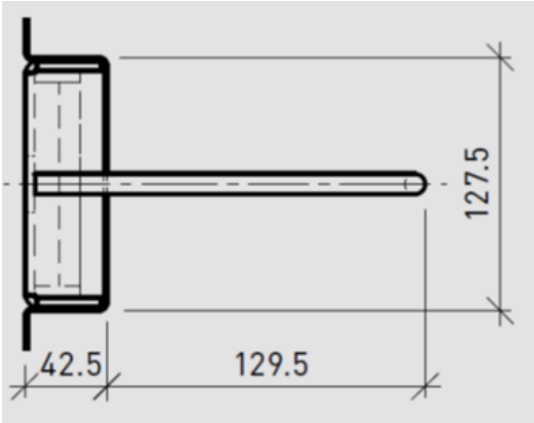
REF 12.02.03 - Version V02 - 24/06/2026

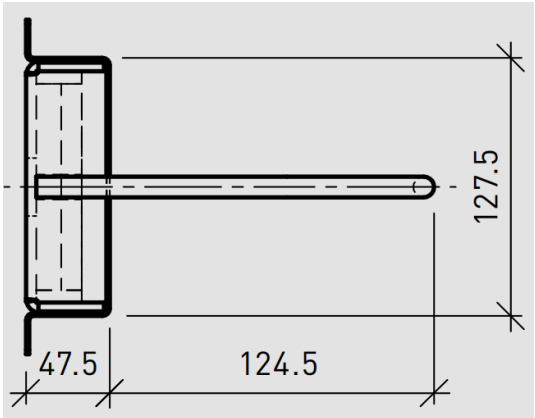
b) Dimensions:



TYPE - 915				
	Model A	Model B	Model C	
Ø(mm)	L_1* (mm)	L_2* (mm)	$L_{2,1}$* (mm)	$L_{2,2}$* (mm)
10	500	400	130	295
12	600	480	144	366
14	700	560	158	436
16	800	640	182	499



TYPE - 917				
	Model A	Model B	Model C	
Ø(mm)	L_1* (mm)	L_2* (mm)	$L_{2,1}$* (mm)	$L_{2,2}$* (mm)
16	800	640	182	499
20	1000	800	210	640



* Custom-made solutions available on request

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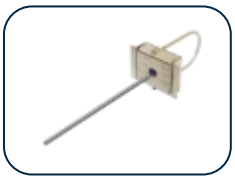

RIBA SILENT

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c) Resistance:

RIBA SILENT 915							
Type	Bar Ø (mm)	Max. joint width (mm)	Tensile strength F_{Rd} (kN)	Compressive strength F_{Rd}(kN) Building element restrained in the transverse direction		Max. deformation in tension (mm)	Max. deformation in compression (mm)
				Yes	No		
915-10	10	40	23,1	23,2	23,2	2,0	1,0
915-12	12	80	23,1	25,0	25,0	2,0	1,0
915-12	12	120	23,1	25,0	22,5	2,0	1,0
915-14	14	160	23,1	25,0	25,0	2,0	1,0
915-16	16	200	23,1	25,0	25,0	2,0	1,0

RIBA SILENT 917							
Type	Bar Ø (mm)	Max. joint width (mm)	Tensile strength F_{Rd} (kN)	Compressive strength F_{Rd}(kN) Building element restrained in the transverse direction		Max Max. deformation in tension (mm)	Max. deformation in compression (mm)
				Yes	No		
917-16	16	40	62,8	62,8	62,8	2,5	1,5
917-16	16	80	62,8	62,8	62,8	2,5	1,5
917-16	16	120	62,8	62,8	57,9	2,5	1,5
917-20	20	160	62,8	62,8	62,8	2,5	1,5
917-20	20	200	62,8	62,8	62,4	2,5	1,5

Instructions for use

The box is fixed to the formwork of the first concrete pour.
After concreting and removal of the formwork, the anchoring rod is screwed into the designated opening.
In this way, the steel anchoring bar is acoustically decoupled.

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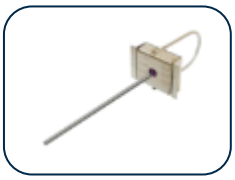

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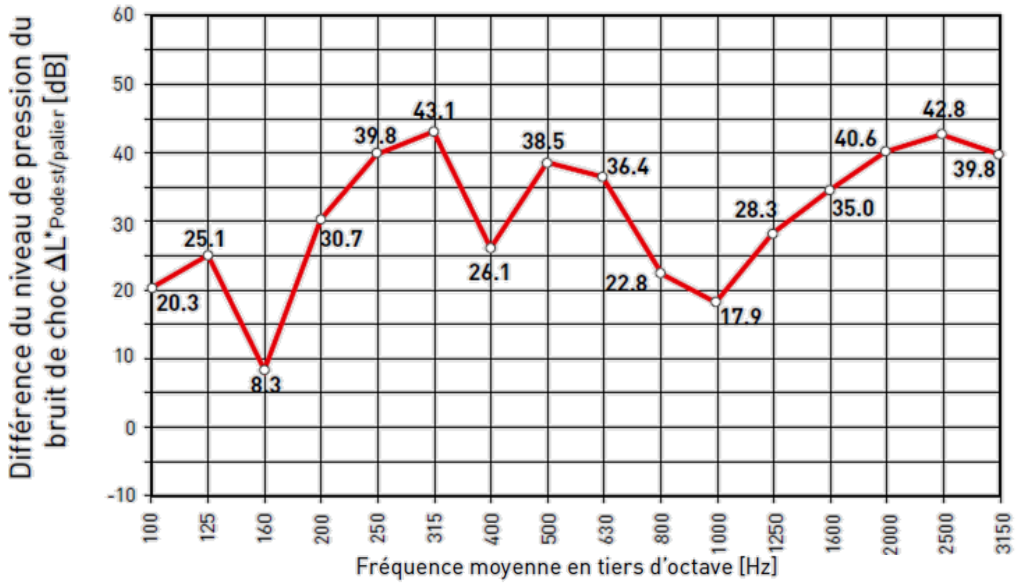
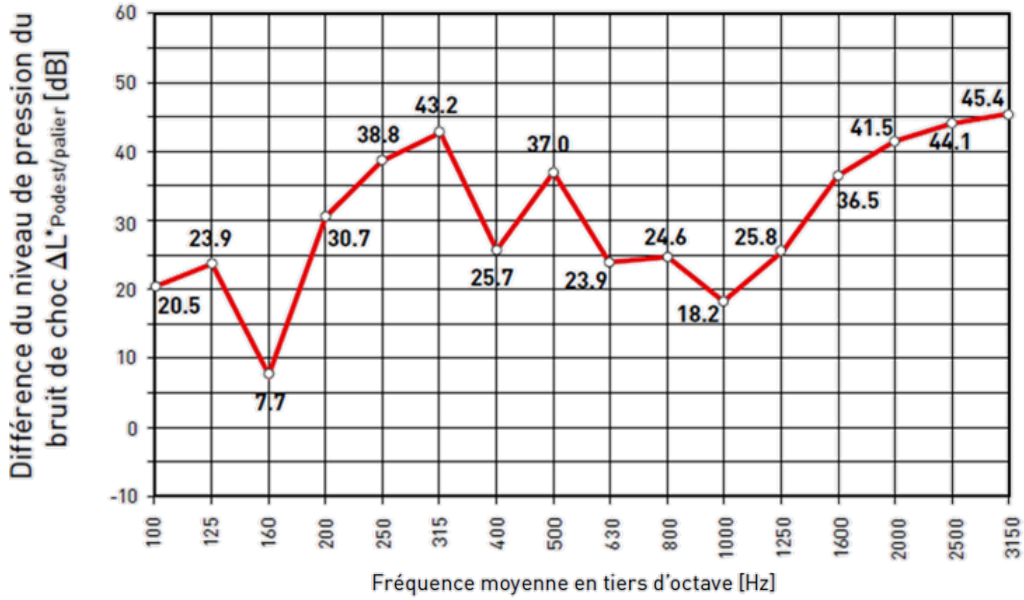
Acoustic performance

RIBA SILENT 915



RIBA SILENT 917



For both RIBA SILENT 915 and 917, the weighted impact sound reduction index is:

ΔL_w = 33 dB

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