Technische Universität Berlin

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Vibration Reduction Indices of Cross Laminated Timber Structures

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Abstract

For a prediction of the acoustical performance of solid wood constructions according to EN 12354 the vibration reduction index K_{ij} is needed. The vibration reduction index K_{ij} can be determined from the direction-averaged junction velocity level difference and the structural reverberation time. Both quantities have to be measured according to EN ISO 10848. Alternatively, in prEN ISO 12354-1:2016 a first proposal to derive the vibration reduction index for T- or cross-junctions is mentioned.

Nevertheless, for a reliable prediction of the sound transmission across junctions of Cross Laminated Timber (CLT) further research results and data are required. This paper documents frequency-dependent vibration reduction indices of L-, T- and cross-junctions measured by six international institutes.

This documentation is part of the master's thesis "Junctions of solid timber constructions – Construction details, acoustical parameters, sound insulation prediction" (in German: Stoßstellen im Massivholzbau – Konstruktionen, akustische Kenngrößen, Schallschutzprognose) at the Technical University Berlin in cooperation with the University of Applied Sciences Rosenheim.

Keywords: Building Acoustics, Prediction, Vibration reduction index, Cross Laminated Timber (CLT)

Contents

Abbreviations

AVG	Arithmetic average of the vibration reduction indices
Churchill	Measurements done at Empa by Claire Churchill, University of Liverpool
CSTB	Center of Building Science and Technology / Centre Scientifique et Technique du Bâtiment, France
Empa	Empa, Switzerland
HFA	Holzforschung Austria, Austria
Holtz	Measurements done at ift Rosenheim by F. Holtz, Germany
HsRo	Rosenheim University of Applied Sciences, Rosenheim, Germany
ID	Description of dataset
ift	ift Rosenheim, Laboratory for Building Acoustics, Stephanskirchen, Germany
in situ	Measurements have been done in field / in realised buildings
lab	Measurements have been done in a laboratory
Max	Maximum of the vibration reduction indices
Min	Minimum of the vibration reduction indices
NRC	National Research Council, Canada
Path	Sound transmission path from one element to another
Schramm	Measurements done at University of Applied Sciences Rosenheim by Markus Schramm, Germany
SD	Standard deviation of the vibration reduction indices
SINTEF	Stiftelsen for industriell og teknisk forskning, SINTEF Building and Infrastructure, Norway
UniBo	University of Bologna / Rotho Blaas GmbH/srl, Italy
VaBDat	“Vibroacoustic Building Database” - Online-Database for acoustical parameters of timber constructions

Abbreviations of the database *VaBDat* (exemplary)

L	L-junction
T	T-junction
X	Cross-junction
h	Horizontal section of a junction (wall-wall-junction)
v	Vertical section of a junction (wall-floor-junction)
b	Material type: board
CLT	Cross Laminated Timber
+	Element with more than one layer (e.g. suspended ceiling, floor covering)
-	Element (left) perpendicular to element (right)
:	Elements are discontinuous (separated by gap)
Lh1-2_bCLT80-bCLT80	L-junction of a 80 mm CLT wall-element (no. 1) and a 80 mm CLT wall-element (no. 2)
Lv1-2_bCLT160-bCLT100	L-junction of a 160 mm CLT floor-element (no. 1) and a 100 mm CLT wall-element (no. 2)
Th1-2:4_bCLT80-bCLT80:bCLT80	T-junction of a 80 mm CLT wall-element (no. 1) and two 80 mm CLT flanking wall-elements separated by gap (no. 2 and 4)
Th2-1-4_bCLT80-bCLT80-bCLT80	T-junction of a 80 mm CLT wall-element (no. 1) and two 80 mm CLT flanking wall-elements (no. 2 and 4)
Th1-24_bCLT80-bCLT80	T-junction of a 80 mm CLT wall-element (no. 1) and a 80 mm CLT flanking wall-element (no. 2 and 4)
Tv2-1:3_bCLT160-bCLT160:bCLT160	T-junction of two 160 mm CLT floor-elements separated by a gap (no. 1 and 3) and a 160 mm CLT wall-element (no. 2)

Tv2-1-4_bCLT80-bCLT160-bCLT80	T-junction of a 160 mm CLT floor-element (no. 1) and two 80 mm CLT flanking wall-elements (no. 2 and 4)
Tv2-13_bCLT80-bCLT160	T-junction of a 160 mm continuous CLT floor-element (no. 1 and 3) and a 80 mm CLT wall-element (no. 2)
Xh2-1:3-4_bCLT100-bCLT100:bCLT100-bCLT100	X-junction of two 100 mm CLT wall-elements separated by a gap (no. 1 and 3) and two 100 mm CLT wall-elements (no. 2 and 4)
Xv2-1:3-4_bCLT80-bCLT160:bCLT160-bCLT80	X-junction of two 160 mm CLT floor-elements separated by a gap (no. 1 and 3) and two 80 mm CLT wall-elements (no. 2 and 4)
Xv2-13-4_bCLT115-bCLT115-bCLT115	X-junction of a 115 mm continuous CLT floor-element (no. 1 and 3) and two 115 mm CLT wall-elements (no. 2 and 4)

Symbols

σ	Standard deviation	dB
e	Distance between fixing elements	cm
f	Frequency	Hz
K_{ij}	Vibration reduction index	dB
$\overline{K}_{\mathrm{ij}}$ and $K_{\mathrm{ij},200-1250}$	Single number rating of vibration reduction index in frequency range from 200 to 1250 Hz	dB
l_{ij}	Common length of element i and element j at a junction	m
m'_2/m'_1	Surface density ratio of element 2 and element 1	-
m'	Surface density	kg/m²
n	Number of data	-

1 Introduction

For a long time timber has been an underused material in multi-storey buildings and urban areas. Nowadays, with an increasing awareness of sustainability and resource management, European countries are challenging each other to build the highest or largest wooden building. Prefabrication as well as efficient assembling on site save time and cost, reduce sound immissions and allow a weather independent construction. Several pilot projects have been realised in recent years. Structural aspects and fire safety have been optimized. Even though structural aspects and fire safety have been continuously optimized and the acoustical performance of timber frame lightweight buildings have been studied intensively, the knowledge of the acoustical properties of solid wood constructions is still in its infancy.

The multi-disciplinary research project “Vibroacoustic analysis in the planning process of timber constructions“ by the Rosenheim University of Applied Sciences, ift Rosenheim and Technical University Munich is a comprehensive study of direct and flanking structure-borne and airborne sound insulation of Cross Laminated Timber (CLT) elements and their junctions. The aim is to optimize and simplify the acoustical planning process of wooden multi-storey buildings and thereby to contribute a further increasing of wooden buildings in Europe.

For a prediction of the acoustical performance of solid wood constructions, the vibration reduction index K_{ij} is needed. The vibration reduction index K_{ij} can be determined from the direction-averaged junction velocity level difference and the structural reverberation time. Both quantities have to be measured according to EN ISO 10848. Alternatively, vibration reduction indices for a T- or cross-junction can be derived according to prEN ISO 12354-1:2016. Nevertheless, for a reliable prediction of the sound transmission across junctions of Cross Laminated Timber further research results and data are required.

Within the scope of a master’s thesis at the Technical University Berlin in cooperation with the University of Applied Sciences Rosenheim a collection of frequency dependent vibration reduction indices has been compiled. Vibration reduction indices of L-, T- and cross-junctions measured by six international institutes are documented in this paper.

The different types of junctions as well as detailed information about each element, the fixing system and the acoustical properties will be transferred to a database, called *VaBDat*. The database *VaBDat* provides input data via XML interface for the sound transmission prediction tool *VBAcoustic*. The University of Applied Sciences Rosenheim and ift Rosenheim have developed both, the database *VaBDat* and the software VBAcoustics within the context of the aforementioned research project.

2 General remarks

The vibration reduction indices in this document have been retrieved from publications of six international institutes. The ID used to identify the dataset is listed in chapter 3.

This documentation of frequency dependent vibration reduction indices focuses on junctions made of CLT elements. CLT elements of various manufacturers and a similar solid wood element have been investigated. L-, T- and cross-junctions with different fixing systems and with or without resilient interlayer are considered. An overview of the investigated configurations is given in chapter 4. Sound transmission paths across junctions with panelling, floor covering, installation walls or suspended ceilings have no relevance in these comparisons. Ift Rosenheim, Empa and SINTEF have done measurements with CLT junctions and further layering.

In some constructions cork or construction sealing of EPDM has been used as an interlayer. The dynamic stiffness of the cork interlayer has been investigated in detail at ift Rosenheim and has to be treated individually. The frequency dependent vibration reduction index of constructions with EPDM behaves like across junctions without resilient interlayer. Therefore these are rated as junctions *without resilient layer.*

In chapter 5 the single number values for the vibration reduction index $\overline{K}_{ij}$ are presented with regards to the type of junction and the transmission path. $\overline{K}_{ij}$ is the average of the frequency range from 200 Hz to 1250 Hz. These values have been determined from the average among the available measured datasets from the different institutes.

In chapter 6 frequency dependent vibration reduction indices are presented for each junction type (averaged among the available data). In a diagram the average vibration reduction index and the standard deviation are shown. In addition, the average values, the minimum, the maximum and the standard deviation are shown in a table. A further table contains the measured source data referenced with the ID.

In chapter 7 the results of further analysis on the data are presented. This includes: comparisons of the averaged measured values with data calculated according to the standard prEN ISO 12354-1:2016.

The tables in chapter 8 contain all dataset, which have been collected and analysed. The tables show single number rating for the vibration reduction indices $\overline{K}_{ij}$ as well as frequency dependent data. For the results in chapter 4 to 7 only the frequency dependent data has been considered.

Detailed information about this collection of vibration reduction indices of CLT structures as well as a commented comparison can be found in the attached excel file and in the main part of the master's thesis "Junctions of solid timber constructions – Construction details, acoustical parameters, sound insulation prediction" (in German: "Stoßstellen im Massivholzbau – Konstruktionen, akustische Kenngrößen, Schallschutzprognose"). The level of detail depends on data that has been available.

3 List of institutes

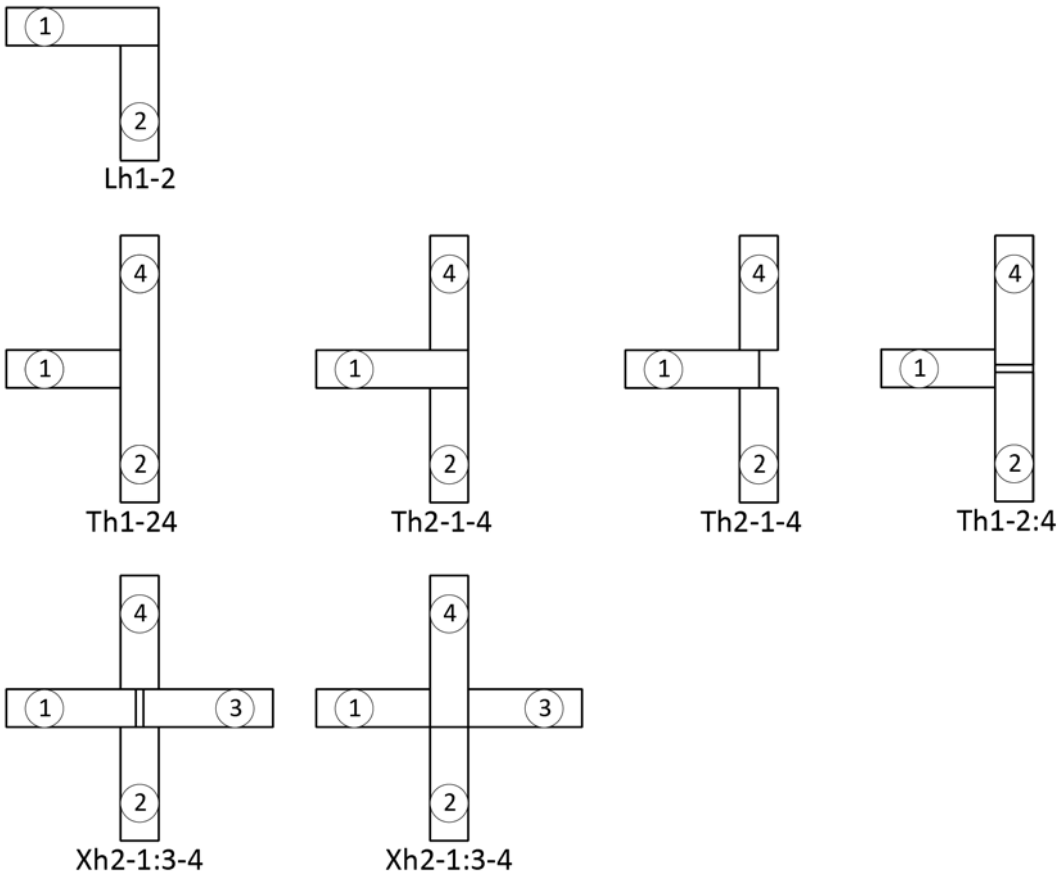
The following institutes have provided the vibration reduction indices:

Institutes	Contact person	ID
CSTB Center of Building Science and Technology 24 rue Jospeh Fourier F – 38400 Saint-Martin-d'Hères www.cstb.fr	Catherine Guigou-Carter	CSTB [1] [2]
Empa, Swiss Federal Laboratories for Materials Science and Technology Laboratory for Acoustics/Noise Control Überlandstrasse 129 CH-8600 Dübendorf www.empa.ch/akustik	Stefan Schoenwald, Ph.D. Hans-Martin Tröbs, B.Eng. Claire Churchill	Empa [3] [4] [5] Churchill
ift Rosenheim GmbH Laboratory Building Acoustics Lackermannweg 26 D-83071 Stephanskirchen www.ift-rosenheim.de	Prof. Dr.-Ing. Andreas Rabold Camille Châteauvieux-Hellwig	ift [6]
National Research Council Canada Government of Canada CA - Ottawa - Ontario www.nrc-cnrc.gc.ca	Christoph Hoeller Jeffrey Mahn	NRC [7] [8]
Rotho Blaas GmbH/srl Via Dell' Adige 2/1 I-39040 Cortaccia (BZ) www.rothoblaas.co	Eng. Alice Speranza	UniBo [9]
SINTEF Building & Infrastructure Høgskoleringen 7 B NO-7465 Trondheim www.sintef.no/byggforsk	Anders Homb	SINTEF [10] [11] [12]
University of Applied Sciences Rosenheim Laboratory for sound measurements LaSM Hochschulstr.1 D-83024 Rosenheim www.fh-rosenheim.de	Prof. Dr. Ulrich Schanda Simon Mecking, M.Sc.	HsRo [6]
University of Bologna Department of Industrial Engineering via Terracini 34 I-40131 Bologna www.unibo.it	Ing. Federica Morandi, PhD	UniBo [9]

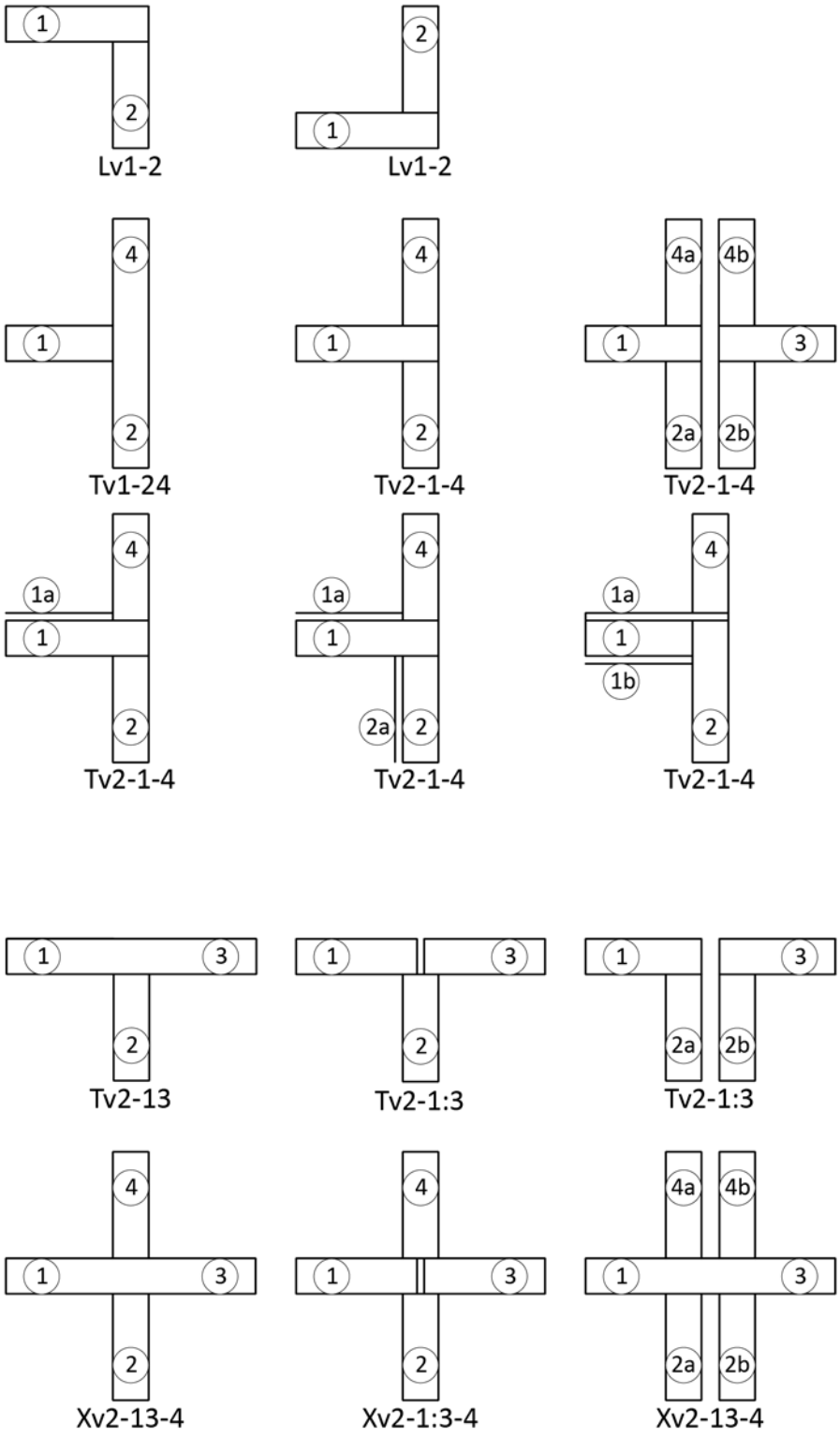
4 Investigated junction types

4.1 Measured in laboratories

4.1.1 Wall-wall junctions

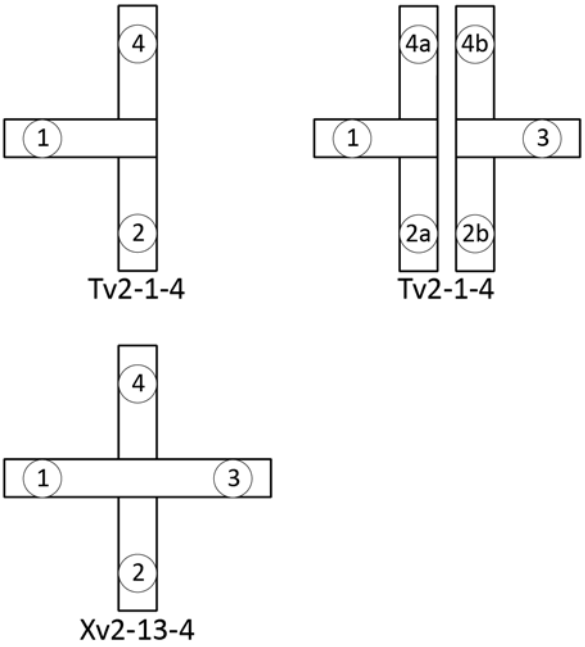


4.1.2 Wall-floor junctions



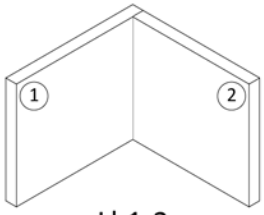
4.2 Measured in situ in a realised building

4.2.1 Wall-floor junctions

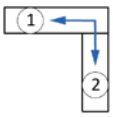


5 Single number rating for the vibration reduction indices

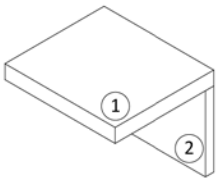
5.1 Junctions without resilient layer



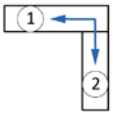
Lh1-2



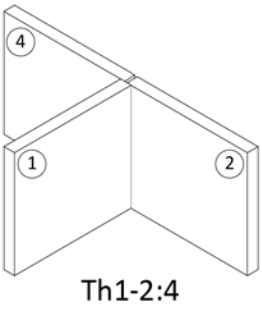
$\overline{K}_{12}$ = 9.8 dB σ = 2.9 dB n = 6



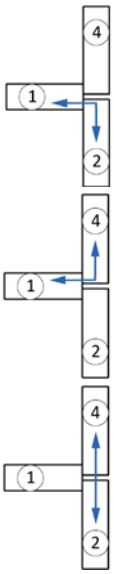
Lv1-2



$\overline{K}_{12}$ = 10.2 dB σ = 0.9 dB n = 16



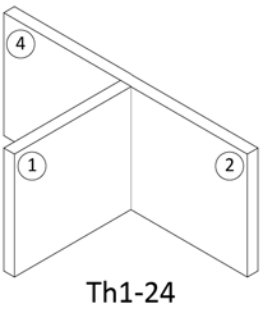
Th1-2:4



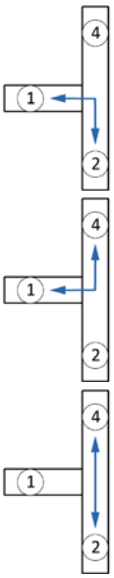
$\overline{K}_{12}$ = 13.7 dB σ = 3.2 dB n = 3

$\overline{K}_{14}$ = 9.9 dB σ = - n = 1

$\overline{K}_{24}$ = 14.8 dB σ = 1.9 dB n = 4



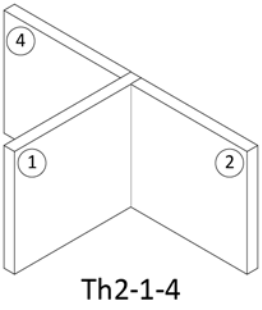
Th1-24



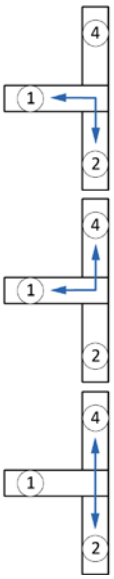
$\overline{K}_{12}$ = 10.3 dB σ = 2.9 dB n = 13

$\overline{K}_{14}$ = 12.6 dB σ = 1.8 dB n = 10

$\overline{K}_{24}$ = 7.6 dB σ = 2.6 dB n = 16



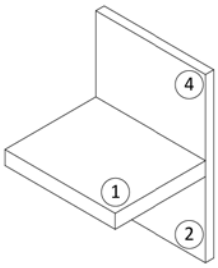
Th2-1-4



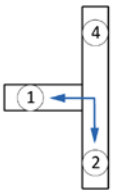
$\overline{K}_{12}$ = 10.6 dB σ = 4.3 dB n = 6

$\overline{K}_{14}$ = 10.1 dB σ = 2.0 dB n = 9

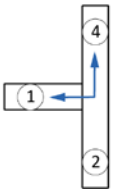
$\overline{K}_{24}$ = 16.8 dB σ = 2.6 dB n = 13



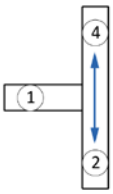
Tv1-24



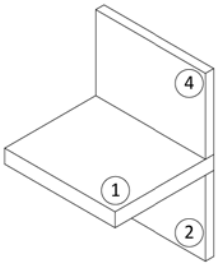
$\overline{K}_{12}$ = 10.5 dB σ = - n = 2



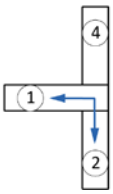
$\overline{K}_{14}$ = 9.8 dB σ = - n = 2



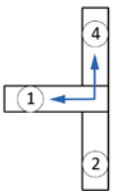
$\overline{K}_{24}$ = 4.4 dB σ = - n = 2



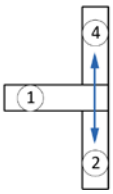
Tv2-1-4



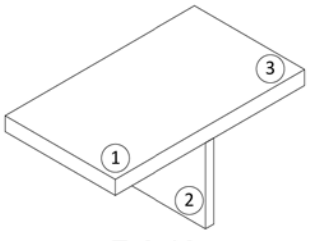
$\overline{K}_{12}$ = 12.2 dB σ = 1.4 dB n = 8



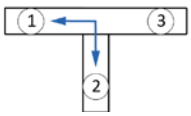
$\overline{K}_{14}$ = 13.0 dB σ = 1.9 dB n = 8



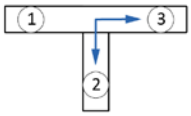
$\overline{K}_{24}$ = 20.8 dB σ = 3.1 dB n = 12



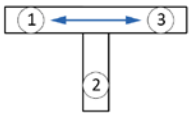
Tv2-13



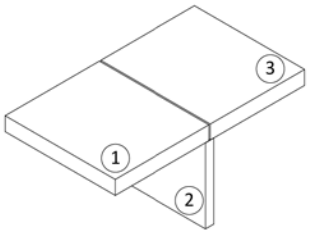
$\overline{K}_{12}$ = 13.8 dB σ = 0.6 dB n = 3



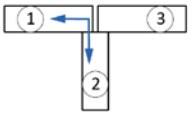
$\overline{K}_{23}$ = 14.2 dB σ = 1.1 dB n = 3



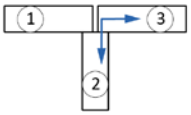
$\overline{K}_{13}$ = 3.1 dB σ = 0.8 dB n = 5



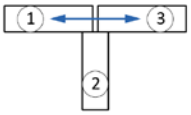
Tv2-1:3



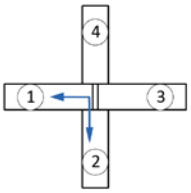
$\overline{K}_{12}$ = 12.5 dB σ = 0.7 dB n = 3



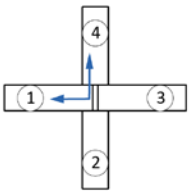
$\overline{K}_{23}$ = 12.3 dB σ = 0.4 dB n = 3



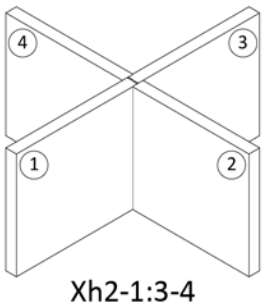
$\overline{K}_{13}$ = 13.2 dB σ = 2.7 dB n = 5



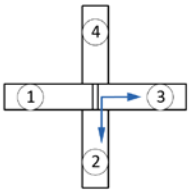
$\overline{K}_{12}$ = 15.2 dB σ = 0.9 dB n = 4



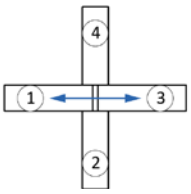
$\overline{K}_{14}$ = 9.7 dB σ = - n = 1



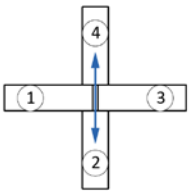
Xh2-1:3-4



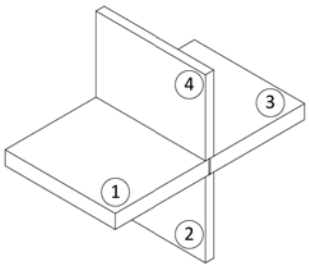
$\overline{K}_{23}$ = 10.4 dB σ = 0.4 dB n = 4



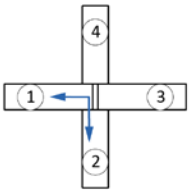
$\overline{K}_{13}$ = 13.6 dB σ = 1.5 dB n = 5



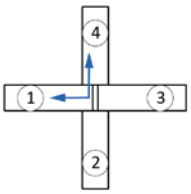
$\overline{K}_{24}$ = 16.4 dB σ = 3.1 dB n = 5



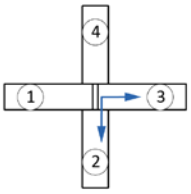
Xv2-1:3-4



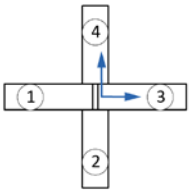
$\overline{K}_{12}$ 11.8 dB = σ = - n = 1



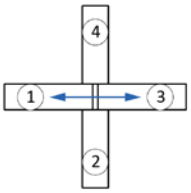
$\overline{K}_{14}$ = 16.2 dB σ = - n = 1



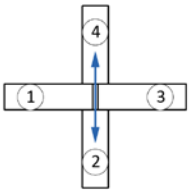
$\overline{K}_{23}$ = 12.2 dB σ = - n = 2



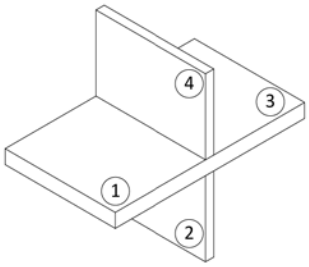
$\overline{K}_{34}$ = 14.7 dB σ = - n = 2



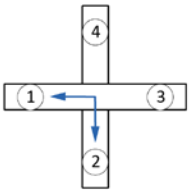
$\overline{K}_{13}$ = 9.0 dB σ = - n = 2



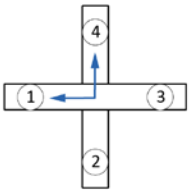
$\overline{K}_{24}$ = 21.4 dB σ = - n = 1



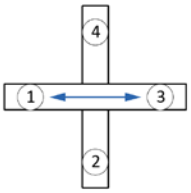
Xv2-13-4



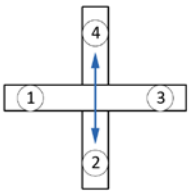
$\overline{K}_{12}$ = 16.3 dB σ = - n = 1



$\overline{K}_{14}$ = 20 dB σ = - n = 1



$\overline{K}_{13}$ = 6.7 dB σ = 4.5 dB n = 3



$\overline{K}_{24}$ = 25,6 dB σ = - n = 1

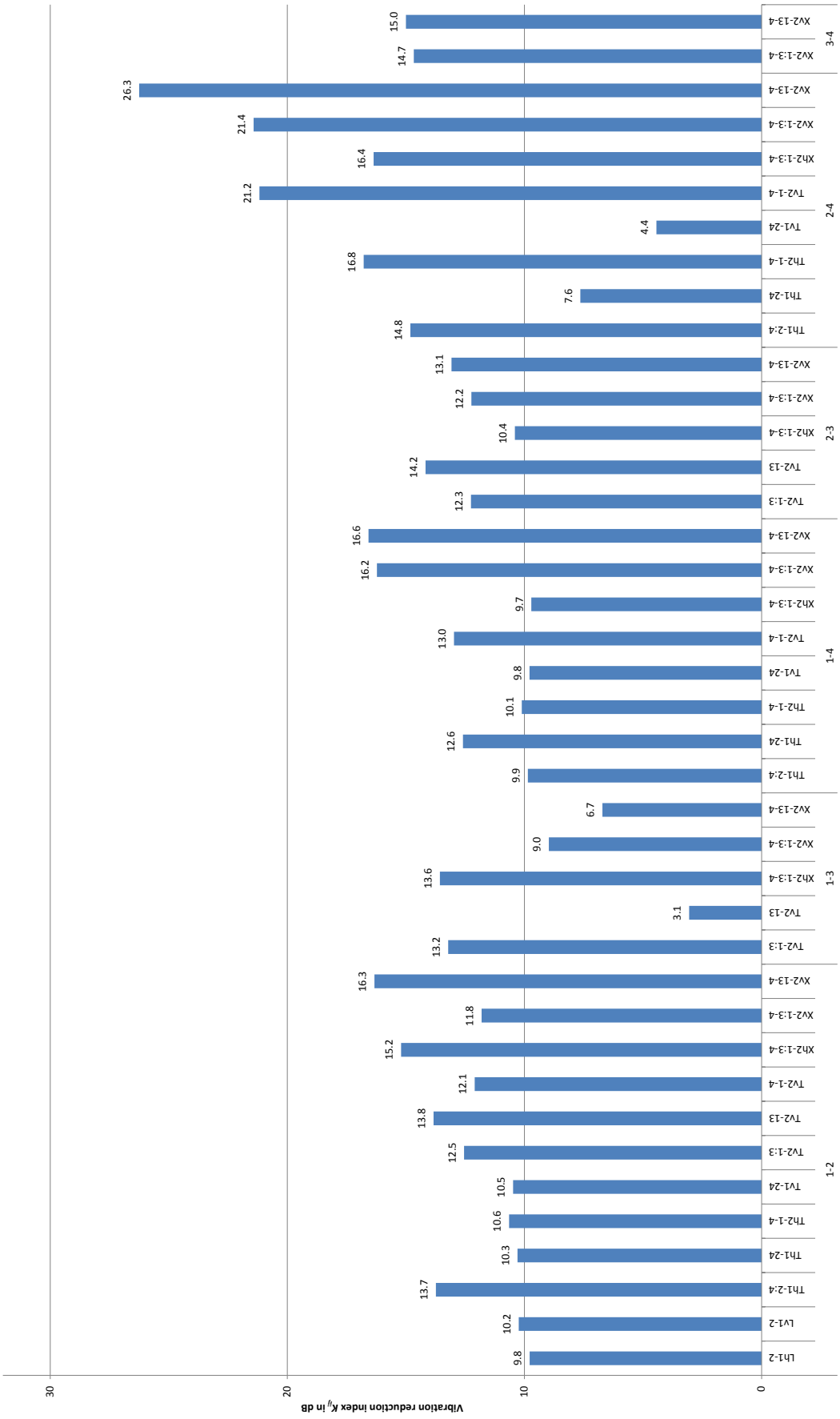
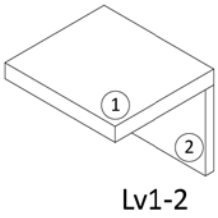
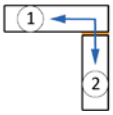


Figure 1 Single number rating $\bar{K}_{12}$ of the vibration reduction index for L-, T- and cross junctions without resilient interlayer

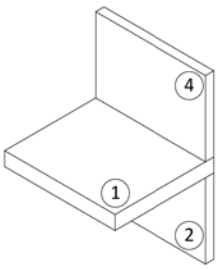
5.2 Junctions with resilient layer



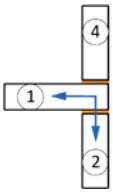
Lv1-2



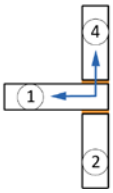
$\overline{K}_{12}$ = 15.2 dB σ = 4.5 dB n = 17



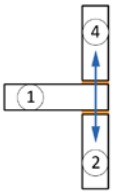
Tv2-1-4



$\overline{K}_{12}$ = 19.6 dB σ = - n = 1



$\overline{K}_{14}$ = 16.6 dB σ = - n = 1



$\overline{K}_{24}$ = 30.1 dB σ = - n = 1

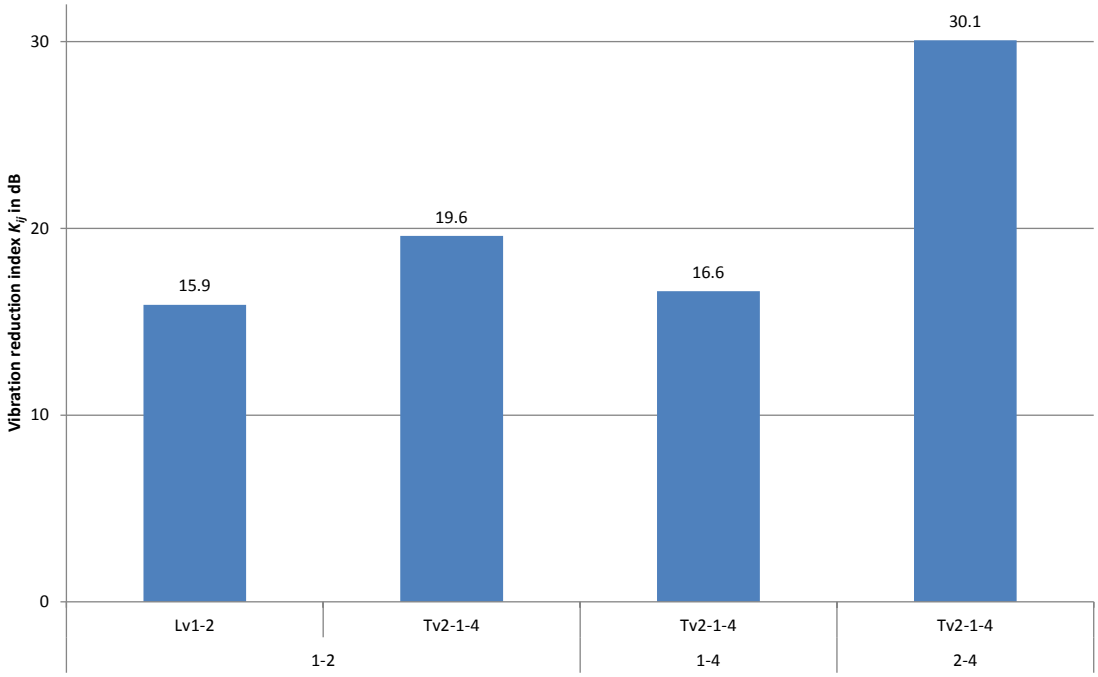
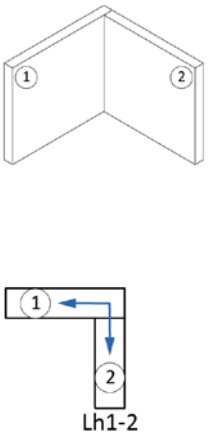


Figure 2 Single number rating of the vibration reduction index for L und T-junctions with resilient interlayer

6 Frequency dependent vibration reduction indices

6.1 Vibration reduction indices of L-junctions



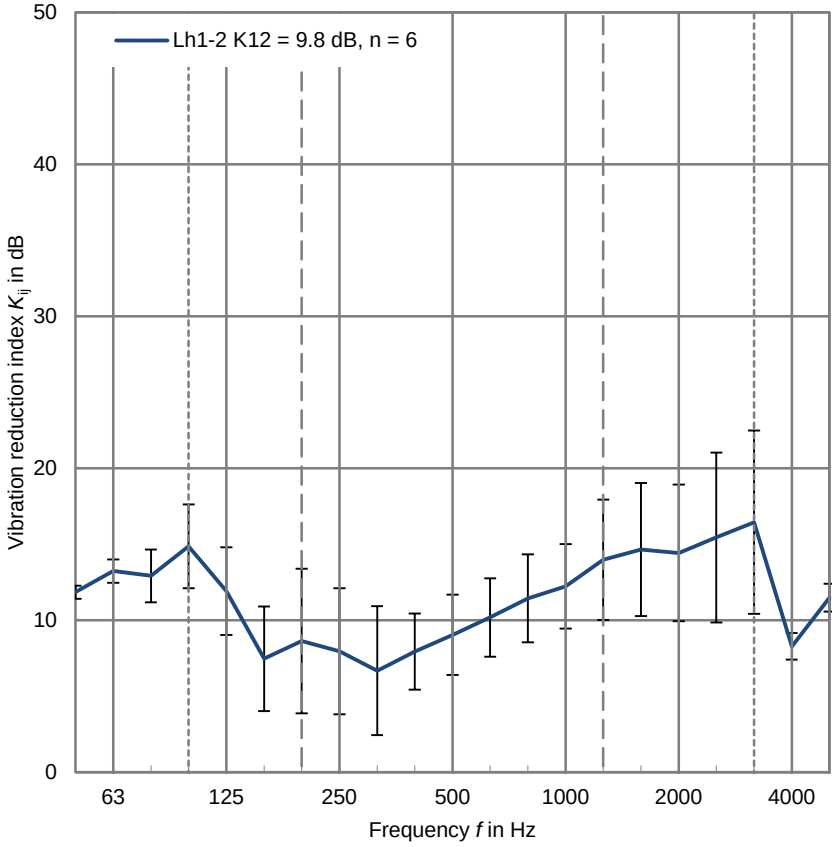


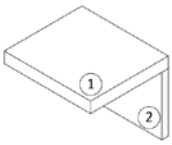
Figure 3 Average of the vibration reduction index for L-junction (Lh1-2) wall-wall without resilient layer, path 1-2, $\overline{K}_{12}$ = 9.8 dB, n = 6

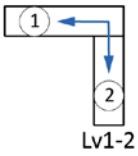
Table 1 Vibration reduction index for L-junction (Lh1-2) wall-wall without resilient layer, path 1-2, $\overline{K}_{12}$ = 9.8 dB, n = 6

	Vibration reduction index K_{ij} in dB																						
	$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz	n
Min	5.5	11.4	12.5	11.2	11.4	9.4	2.9	2.1	2.3	0.2	3.7	4.6	6.6	7.5	7.8	7.2	6.9	7.7	7.2	7.8	7.4	10.6	
AVG	9.8	11.8	13.2	12.9	14.9	11.9	7.5	8.6	8.0	6.7	7.9	9.0	10.2	11.4	12.2	14.0	14.6	14.4	15.4	16.4	8.3	11.5	6
Max	13.7	12.3	14.0	14.7	19.0	16.7	12.9	14.5	12.0	10.8	11.7	12.8	15.0	15.5	16.0	19.7	18.8	19.8	22.5	23.0	9.1	12.4	
SD	2.9	0.4	0.8	1.7	2.8	2.9	3.4	4.8	4.2	4.2	2.5	2.6	2.6	2.9	2.8	4.0	4.4	4.5	5.6	6.0	0.9	0.9	

Table 2 Vibration reduction indices for L-junction (Lh1-2) wall-wall without resilient layer, path 1-2

ID	Junction type	Path	Vibration reduction index K_{ij} in dB																				
			$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz
Churchill_02	Lh1-2	1-2	7.8	12.3	12.5	11.2	12.6	10.8	9.1	9.5	7.4	6.8	7.7	7.6	8.3	7.5	7.8	7.2	6.9	7.7	7.2	7.8	7.4	10.6
Churchill_03	Lh1-2	1-2	11.3	11.4	14.0	14.7	16.9	9.7	12.9	11.8	12.0	10.6	9.5	9.7	10.8	11.0	12.8	13.0	11.0	9.1	8.9	9.0	9.1	12.4
UniBo_01	Lh1-2	1-2	5.5	-	-	-	12.8	9.4	3.9	2.3	2.3	0.2	3.7	4.6	6.6	8.1	9.6	11.7	15.0	15.4	15.9	16.8	-	-
UniBo_02	Lh1-2	1-2	8.1	-	-	-	11.4	9.8	2.9	2.1	2.7	1.8	6.3	8.3	10.1	12.6	12.9	16.1	18.3	16.9	19.6	22.2	-	-
UniBo_03	Lh1-2	1-2	13.7	-	-	-	16.5	15.1	6.4	11.5	11.3	9.8	11.7	12.8	15.0	15.5	16.0	19.7	18.8	19.8	22.5	23.0	-	-
UniBo_04	Lh1-2	1-2	12.4	-	-	-	19.0	16.7	9.6	14.5	12.0	10.8	8.7	11.2	10.2	13.9	14.3	16.1	17.9	17.7	18.5	19.9	-	-





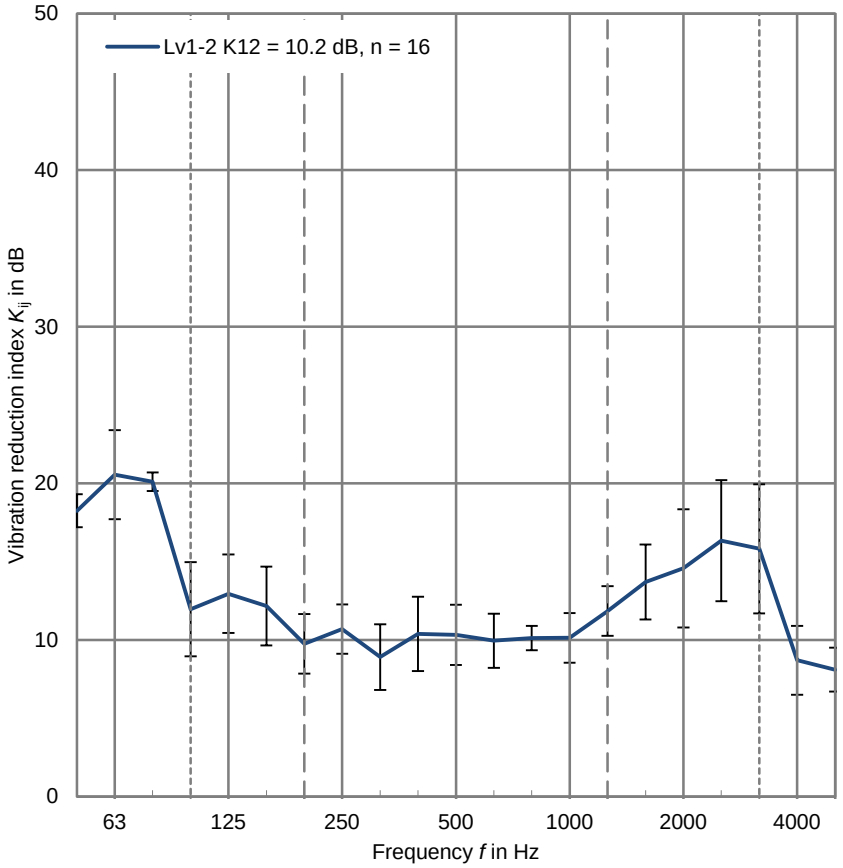


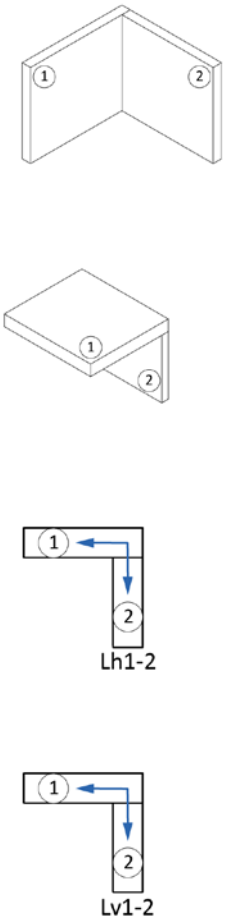
Figure 4 Average of the vibration reduction index for L-junction (Lv1-2) wall-floor without resilient layer, path 1-2, $\overline{K}_{12}$ = 10,2 dB, n = 16

Table 3 Vibration reduction index for L-junction (Lv1-2) wall-floor without resilient layer, path 1-2, $\overline{K}_{12}$ = 10,2 dB, n = 16

Vibration reduction index K_{ij} in dB																							
	$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz	n
Min	8.9	17.2	17.7	19.5	8.4	8.0	9.4	6.5	7.9	6.0	5.9	7.3	7.0	7.7	6.8	8.1	8.6	6.2	8.1	5.9	6.5	6.7	
AVG	10.2	18.3	20.6	20.1	12.0	13.0	12.2	9.8	10.7	8.9	10.4	10.3	10.0	10.1	10.1	11.8	13.7	14.6	16.3	15.8	8.7	8.1	16
Max	12.3	19.3	23.4	20.7	18.5	17.5	19.8	13.0	14.6	12.9	14.7	14.6	13.5	11.1	13.4	14.8	16.9	21.3	22.8	23.2	10.9	9.5	
SD	0.9	1.1	2.9	0.6	3.0	2.5	2.5	1.9	1.6	2.1	2.4	1.9	1.7	0.8	1.6	1.6	2.4	3.8	3.9	4.1	2.2	1.4	

Table 4 Vibration reduction indices for L-junction (Lv1-2) wall-floor without resilient layer, path 1-2

ID	Junction type	Path	Vibration reduction index K_{ij} in dB																					
			$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz
HsRo_01	Lv1-2	1-2	10.4	19.3	23.4	20.7	15.5	14.4	14.7	13.0	12.1	12.0	10.6	10.9	10.0	9.8	6.8	8.1	8.6	8.9	10.4	9.1	10.9	9.5
HsRo_02	Lv1-2	1-2	12.3	17.2	17.7	19.5	11.9	17.5	19.8	12.9	14.6	12.9	13.6	14.6	12.7	9.5	11.4	8.8	9.4	6.2	8.1	5.9	6.5	6.7
UniBo_15	Lv1-2	1-2	10.0	-	-	-	9.7	8.0	11.8	7.5	10.0	7.6	11.4	11.1	10.4	10.0	9.8	12.3	15.9	16.5	17.4	13.3	-	-
UniBo_16	Lv1-2	1-2	8.9	-	-	-	8.4	10.0	12.1	6.5	11.3	6.0	10.3	10.1	8.6	7.7	8.3	11.3	15.2	15.9	16.4	14.2	-	-
UniBo_17	Lv1-2	1-2	9.3	-	-	-	8.6	11.6	11.5	6.8	9.9	6.8	9.7	10.0	9.0	10.5	9.8	11.4	14.1	17.0	18.5	15.5	-	-
UniBo_18	Lv1-2	1-2	10.0	-	-	-	9.0	11.5	13.7	9.3	9.3	8.5	9.7	8.7	10.6	11.0	11.3	11.9	12.8	14.3	15.0	16.5	-	-
UniBo_19	Lv1-2	1-2	11.3	-	-	-	9.1	15.8	9.4	9.3	9.2	7.1	14.7	11.5	13.5	10.7	13.4	11.7	14.4	14.4	16.8	18.2	-	-
UniBo_19	Lv1-2	1-2	10.6	-	-	-	15.6	11.7	12.4	8.7	10.2	8.0	13.2	12.5	9.2	10.8	10.3	12.5	13.8	14.6	15.1	16.7	-	-
UniBo_20	Lv1-2	1-2	9.6	-	-	-	12.3	11.6	10.1	8.4	7.9	7.2	10.0	8.8	9.4	11.1	11.9	11.8	13.7	13.5	16.7	15.4	-	-
UniBo_21	Lv1-2	1-2	9.2	-	-	-	8.4	15.5	9.8	9.2	9.6	9.3	6.2	7.3	7.2	10.4	11.5	12.1	14.6	14.2	18.9	17.3	-	-
UniBo_22	Lv1-2	1-2	9.6	-	-	-	10.6	14.2	10.0	10.3	9.9	7.8	8.5	8.3	8.7	10.5	10.6	12.1	13.1	12.6	14.4	15.6	-	-
UniBo_28	Lv1-2	1-2	10.5	-	-	-	15.2	10.6	10.1	11.2	10.5	9.3	8.7	9.2	10.6	10.3	10.3	14.1	16.7	20.2	22.8	21.9	-	-
UniBo_29	Lv1-2	1-2	9.4	-	-	-	13.8	14.6	10.6	11.5	10.4	7.0	5.9	7.7	9.7	9.7	10.0	12.6	15.2	18.0	21.2	18.2	-	-
UniBo_33	Lv1-2	1-2	11.0	-	-	-	13.1	13.8	14.2	10.6	11.6	12.8	12.2	10.6	12.2	9.7	8.1	11.2	9.9	10.2	11.2	13.5	-	-
UniBo_35	Lv1-2	1-2	10.2	-	-	-	11.7	15.6	12.1	9.4	11.9	10.1	9.5	11.0	7.0	10.1	9.9	12.8	14.8	15.4	17.3	18.6	-	-
UniBo_36	Lv1-2	1-2	11.5	-	-	-	18.5	10.8	12.3	11.5	12.8	10.1	12.0	12.9	10.4	10.0	8.7	14.8	16.9	21.3	21.2	23.2	-	-



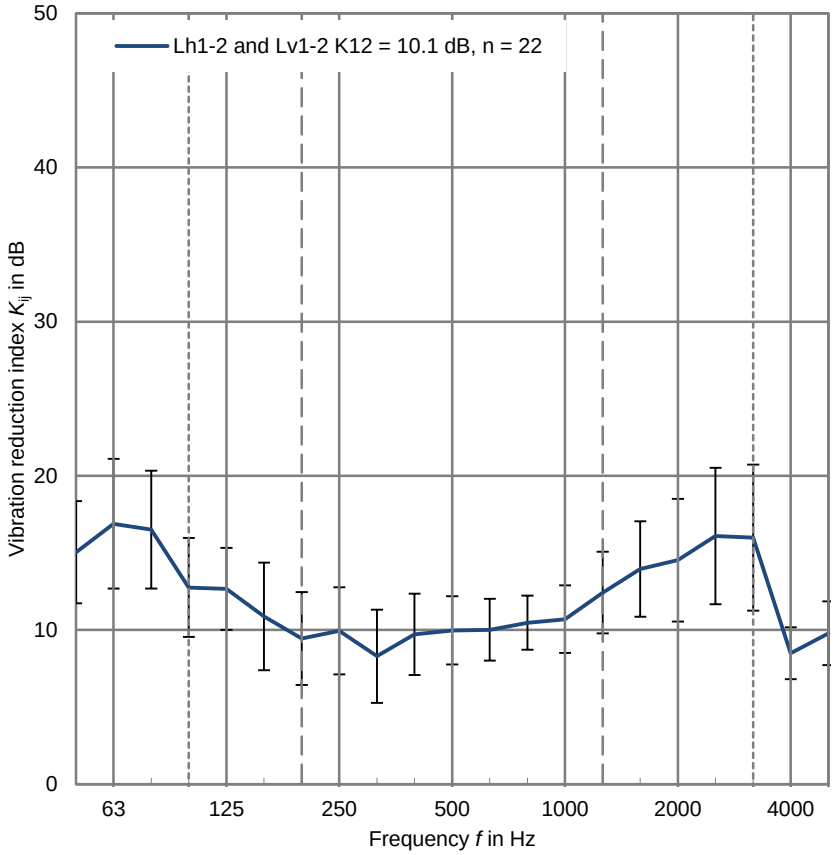


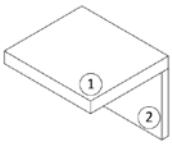
Figure 5 Average of the vibration reduction index for L-junction (Lh1-2 and Lv1-2) wall-wall and wall-floor without resilient layer, path 1-2, $\overline{K}_{12}$ = 10.1 dB, n = 22

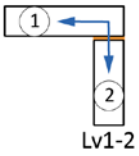
Table 5 Vibration reduction index for L-junction (Lh1-2 and Lv1-2) wall-wall and wall-floor without resilient layer, $\overline{K}_{12}$ = 10.1 dB, n = 22

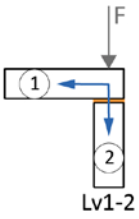
Vibration reduction index K_{ij} in dB																							
	$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz	n
Min	5.5	11.4	12.5	11.2	8.4	8.0	2.9	2.1	2.3	0.2	3.7	4.6	6.6	7.5	6.8	7.2	6.9	6.2	7.2	5.9	6.5	6.7	
AVG	10.1	15.0	16.9	16.5	12.8	12.7	10.9	9.4	10.0	8.3	9.7	10.0	10.0	10.5	10.7	12.4	14.0	14.5	16.1	16.0	8.5	9.8	22
Max	13.7	19.3	23.4	20.7	19.0	17.5	19.8	14.5	14.6	12.9	14.7	14.6	15.0	15.5	16.0	19.7	18.8	21.3	22.8	23.2	10.9	12.4	
SD	1.7	3.3	4.2	3.8	3.2	2.7	3.5	3.0	2.8	3.0	2.6	2.2	2.0	1.8	2.2	2.6	3.1	4.0	4.4	4.7	1.7	2.1	

Table 6 Vibration reduction indices for L-junction (Lh1-2 and Lv1-2) wall-wall and wall-floor without resilient layer

ID	Junction type	Path	Vibration reduction index K_{ij} in dB																					
			$K_{ij,200:1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz
HsRo_01	Lv1-2	1-2	10.4	19.3	23.4	20.7	15.5	14.4	14.7	13.0	12.1	12.0	10.6	10.9	10.0	9.8	6.8	8.1	8.6	8.9	10.4	9.1	10.9	9.5
HsRo_02	Lv1-2	1-2	12.3	17.2	17.7	19.5	11.9	17.5	19.8	12.9	14.6	12.9	13.6	14.6	12.7	9.5	11.4	8.8	9.4	6.2	8.1	5.9	6.5	6.7
UniBo_15	Lv1-2	1-2	10.0	-	-	-	9.7	8.0	11.8	7.5	10.0	7.6	11.4	11.1	10.4	10.0	9.8	12.3	15.9	16.5	17.4	13.3	-	-
UniBo_16	Lv1-2	1-2	8.9	-	-	-	8.4	10.0	12.1	6.5	11.3	6.0	10.3	10.1	8.6	7.7	8.3	11.3	15.2	15.9	16.4	14.2	-	-
UniBo_17	Lv1-2	1-2	9.3	-	-	-	8.6	11.6	11.5	6.8	9.9	6.8	9.7	10.0	9.0	10.5	9.8	11.4	14.1	17.0	18.5	15.5	-	-
UniBo_18	Lv1-2	1-2	10.0	-	-	-	9.0	11.5	13.7	9.3	9.3	8.5	9.7	8.7	10.6	11.0	11.3	11.9	12.8	14.3	15.0	16.5	-	-
UniBo_19	Lv1-2	1-2	11.3	-	-	-	9.1	15.8	9.4	9.3	9.2	7.1	14.7	11.5	13.5	10.7	13.4	11.7	14.4	14.4	16.8	18.2	-	-
UniBo_19	Lv1-2	1-2	10.6	-	-	-	15.6	11.7	12.4	8.7	10.2	8.0	13.2	12.5	9.2	10.8	10.3	12.5	13.8	14.6	15.1	16.7	-	-
UniBo_20	Lv1-2	1-2	9.6	-	-	-	12.3	11.6	10.1	8.4	7.9	7.2	10.0	8.8	9.4	11.1	11.9	11.8	13.7	13.5	16.7	15.4	-	-
UniBo_21	Lv1-2	1-2	9.2	-	-	-	8.4	15.5	9.8	9.2	9.6	9.3	6.2	7.3	7.2	10.4	11.5	12.1	14.6	14.2	18.9	17.3	-	-
UniBo_22	Lv1-2	1-2	9.6	-	-	-	10.6	14.2	10.0	10.3	9.9	7.8	8.5	8.3	8.7	10.5	10.6	12.1	13.1	12.6	14.4	15.6	-	-
UniBo_28	Lv1-2	1-2	10.5	-	-	-	15.2	10.6	10.1	11.2	10.5	9.3	8.7	9.2	10.6	10.3	10.3	14.1	16.7	20.2	22.8	21.9	-	-
UniBo_29	Lv1-2	1-2	9.4	-	-	-	13.8	14.6	10.6	11.5	10.4	7.0	5.9	7.7	9.7	9.7	10.0	12.6	15.2	18.0	21.2	18.2	-	-
UniBo_33	Lv1-2	1-2	11.0	-	-	-	13.1	13.8	14.2	10.6	11.6	12.8	12.2	10.6	12.2	9.7	8.1	11.2	9.9	10.2	11.2	13.5	-	-
UniBo_35	Lv1-2	1-2	10.2	-	-	-	11.7	15.6	12.1	9.4	11.9	10.1	9.5	11.0	7.0	10.1	9.9	12.8	14.8	15.4	17.3	18.6	-	-
UniBo_36	Lv1-2	1-2	11.5	-	-	-	18.5	10.8	12.3	11.5	12.8	10.1	12.0	12.9	10.4	10.0	8.7	14.8	16.9	21.3	21.2	23.2	-	-
Churchill_02	Lh1-2	1-2	7.8	12.3	12.5	11.2	12.6	10.8	9.1	9.5	7.4	6.8	7.7	7.6	8.3	7.5	7.8	7.2	6.9	7.7	7.2	7.8	7.4	10.6
Churchill_03	Lh1-2	1-2	11.3	11.4	14.0	14.7	16.9	9.7	12.9	11.8	12.0	10.6	9.5	9.7	10.8	11.0	12.8	13.0	11.0	9.1	8.9	9.0	9.1	12.4
UniBo_01	Lh1-2	1-2	5.5	-	-	-	12.8	9.4	3.9	2.3	2.3	0.2	3.7	4.6	6.6	8.1	9.6	11.7	15.0	15.4	15.9	16.8	-	-
UniBo_02	Lh1-2	1-2	8.1	-	-	-	11.4	9.8	2.9	2.1	2.7	1.8	6.3	8.3	10.1	12.6	12.9	16.1	18.3	16.9	19.6	22.2	-	-
UniBo_03	Lh1-2	1-2	13.7	-	-	-	16.5	15.1	6.4	11.5	11.3	9.8	11.7	12.8	15.0	15.5	16.0	19.7	18.8	19.8	22.5	23.0	-	-
UniBo_04	Lh1-2	1-2	12.4	-	-	-	19.0	16.7	9.6	14.5	12.0	10.8	8.7	11.2	10.2	13.9	14.3	16.1	17.9	17.7	18.5	19.9	-	-







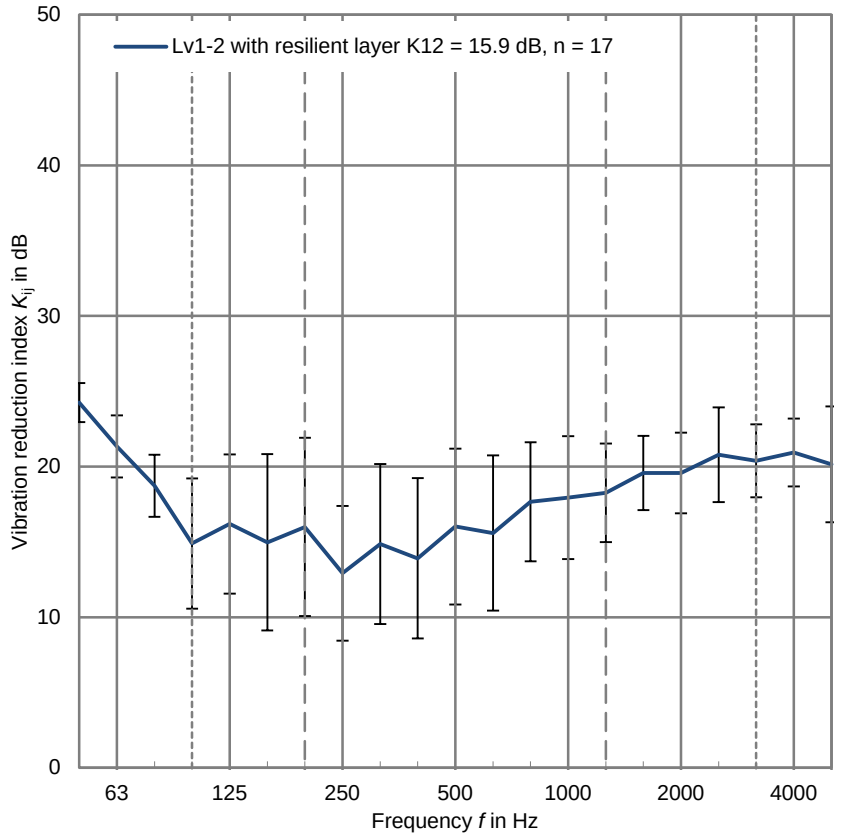


Figure 6 Average of the vibration reduction index for L-junction (Lv1-2) wall-floor with resilient layer and with/without additional load, path 1-2, $\overline{K}_{12}$ = 15.9 dB, n = 17

Table 7 Vibration reduction index for L-junction (Lv1-2) wall-floor with resilient layer and with/without additional load, path 1-2, $\overline{K}_{12}$ = 15.9 dB, n = 17

Vibration reduction index K_{ij} in dB																							
	$K_{ij,200-1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz	n
Min	11.2	21.2	19.1	15.9	8.7	8.9	7.1	9.5	7.2	8.4	6.1	8.7	9.4	14.0	13.0	12.6	15.9	13.9	16.2	15.1	16.4	13.3	
AVG	15.9	24.3	21.3	18.7	14.9	16.2	15.0	16.0	12.9	14.9	13.9	16.0	15.6	17.7	17.9	18.3	19.6	19.6	20.8	20.4	20.9	20.1	17
Max	24.0	25.2	24.7	21.9	22.1	24.2	24.1	25.8	21.6	25.1	22.5	24.4	24.1	24.1	25.5	25.9	24.9	25.0	28.5	25.1	24.1	24.1	
SD	4.5	1.3	2.1	2.1	4.3	4.6	5.9	5.9	4.5	5.3	5.3	5.2	5.1	4.0	4.1	3.3	2.5	2.7	3.1	2.4	2.2	3.8	

Table 8 Vibration reduction indices for L-junction (Lv1-2) wall-floor with resilient layer and with/without additional load, path 1-2

ID	Junction type	Path	Vibration reduction index K_{ij} in dB																						
			$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz
HsRo_03	Lv1-2	1-2	17.2	24.8	-	15.9	19.1	19.3	19.3	19.6	10.1	15.1	15.9	18.2	19.1	18.8	17.1	21.1	20.4	21.2	19.2	20.8	20.1	15.3
HsRo_04	Lv1-2	1-2	21.7	24.9	23.0	16.3	19.7	21.0	24.1	23.4	17.8	20.2	22.5	22.1	21.6	22.8	23.2	21.1	21.5	19.2	18.7	19.8	22.7	22.2
HsRo_05	Lv1-2	1-2	22.1	24.0	19.1	20.1	20.6	24.2	23.8	24.6	16.7	21.2	21.2	23.9	22.9	23.8	24.0	20.9	21.9	20.0	18.4	18.9	20.4	21.9
HsRo_06	Lv1-2	1-2	22.7	24.6	19.7	19.6	18.8	20.3	19.3	24.8	21.1	25.0	19.0	22.3	23.0	23.2	22.9	23.1	23.5	22.4	22.3	23.3	24.1	23.2
HsRo_07	Lv1-2	1-2	24.0	21.2	19.5	21.9	22.1	21.3	23.5	25.8	21.6	25.1	19.7	24.4	24.1	24.1	25.5	25.9	24.9	22.5	23.0	19.7	21.0	24.1
HsRo_08	Lv1-2	1-2	20.0	25.1	24.7	17.4	19.4	20.8	20.8	20.6	17.4	18.8	19.5	19.9	19.8	21.8	22.4	19.9	19.6	18.3	17.3	18.0	21.8	21.0
HsRo_09	Lv1-2	1-2	18.6	25.2	22.0	19.9	16.3	21.5	19.4	20.3	15.1	16.7	18.1	19.7	18.8	20.6	20.9	16.8	19.6	16.0	16.8	15.1	16.4	13.3
UniBo_23	Lv1-2	1-2	11.8	-	-	-	10.9	8.9	7.1	10.6	7.4	9.6	10.2	12.5	11.8	14.1	14.8	15.3	17.1	17.4	21.5	21.2	-	-
UniBo_24	Lv1-2	1-2	12.6	-	-	-	11.6	9.4	11.6	12.0	7.2	11.0	10.3	13.7	11.9	15.1	15.6	16.7	17.9	22.2	25.6	22.1	-	-
UniBo_25	Lv1-2	1-2	11.5	-	-	-	8.7	14.4	8.7	10.0	10.7	9.5	6.1	9.8	9.4	14.1	16.1	18.1	18.1	17.8	21.3	19.1	-	-
UniBo_26	Lv1-2	1-2	11.7	-	-	-	9.5	13.6	8.7	11.8	9.0	10.1	7.2	8.7	10.4	14.2	17.0	16.5	18.4	20.0	23.1	19.7	-	-
UniBo_27	Lv1-2	1-2	11.4	-	-	-	9.7	15.3	9.0	11.2	9.2	9.3	6.6	10.6	9.7	14.0	16.3	15.8	16.7	17.8	22.1	21.8	-	-
UniBo_30	Lv1-2	1-2	11.2	-	-	-	10.6	15.0	8.8	9.6	9.2	8.4	7.7	10.0	11.3	14.3	14.2	16.3	20.0	18.6	20.8	18.7	-	-
UniBo_34	Lv1-2	1-2	14.4	-	-	-	12.0	14.6	11.8	13.2	12.8	15.2	15.9	14.9	15.7	15.9	13.9	12.6	16.2	18.5	17.8	17.5	-	-
UniBo_34	Lv1-2	1-2	13.0	-	-	-	16.3	13.7	14.4	13.8	13.4	12.7	11.4	10.0	13.3	14.3	13.3	14.3	15.9	13.9	16.2	21.9	-	-
UniBo_37	Lv1-2	1-2	13.2	-	-	-	12.6	10.8	13.6	11.1	9.2	13.3	11.3	16.5	10.2	14.6	14.9	17.4	19.6	25.0	28.5	25.1	-	-
UniBo_38	Lv1-2	1-2	13.3	-	-	-	15.3	11.2	10.6	9.5	11.7	11.5	13.8	15.1	12.0	14.5	13.0	18.6	21.6	22.0	20.8	23.7	-	-

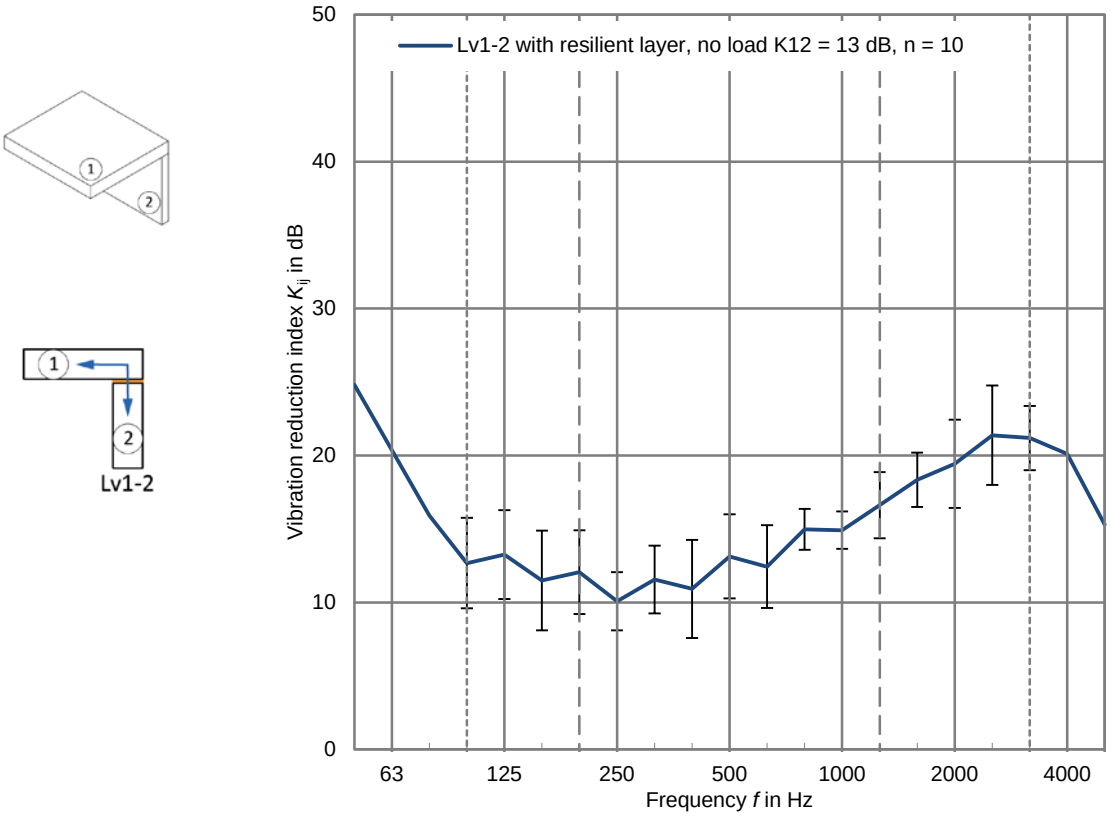


Figure 7 Average of the vibration reduction index for L-junction (Lv1-2) wall-floor with resilient layer without additional load path 1-2, $\overline{K}_{12}$ = 13 dB, n = 10

Table 9 Vibration reduction index for L-junction (Lv1-2) wall-floor with resilient layer without additional load path 1-2, $\overline{K}_{12}$ = 13 dB, n = 10

	Vibration reduction index K_{ij} in dB																						
	$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz	n
Min	11.2	24.8	#NV	15.9	8.7	8.9	7.1	9.5	7.2	8.4	6.1	9.8	9.4	14.0	13.0	12.6	15.9	13.9	16.2	17.5	20.1	15.3	
AVG	13.0	24.8	#NV	15.9	12.7	13.3	11.5	12.1	10.1	11.6	10.9	13.1	12.4	15.0	14.9	16.6	18.4	19.4	21.4	21.2	20.1	15.3	10
Max	17.2	24.8	#NV	15.9	19.1	19.3	19.3	19.6	13.4	15.2	15.9	18.2	19.1	18.8	17.1	21.1	21.6	25.0	28.5	25.1	20.1	15.3	
SD	1.7	#NV	#NV	#NV	3.1	3.0	3.4	2.9	2.0	2.3	3.3	2.9	2.8	1.4	1.3	2.3	1.9	3.0	3.4	2.2	#NV	#NV	

Table 10 Vibration reduction indices for L-junction (Lv1-2) wall-floor with resilient layer without additional load path 1-2

ID	Junction type	Path	Vibration reduction index K_{ij} in dB																					
			$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz
HsRo_03	Lv1-2	1-2	17.2	24.8	#NV	15.9	19.1	19.3	19.3	19.6	10.1	15.1	15.9	18.2	19.1	18.8	17.1	21.1	20.4	21.2	19.2	20.8	20.1	15.3
UniBo_23	Lv1-2	1-2	11.8	-	-	-	10.9	8.9	7.1	10.6	7.4	9.6	10.2	12.5	11.8	14.1	14.8	15.3	17.1	17.4	21.5	21.2	-	-
UniBo_24	Lv1-2	1-2	12.6	-	-	-	11.6	9.4	11.6	12.0	7.2	11.0	10.3	13.7	11.9	15.1	15.6	16.7	17.9	22.2	25.6	22.1	-	-
UniBo_25	Lv1-2	1-2	11.5	-	-	-	8.7	14.4	8.7	10.0	10.7	9.5	6.1	9.8	9.4	14.1	16.1	18.1	18.1	17.8	21.3	19.1	-	-
UniBo_27	Lv1-2	1-2	11.4	-	-	-	9.7	15.3	9.0	11.2	9.2	9.3	6.6	10.6	9.7	14.0	16.3	15.8	16.7	17.8	22.1	21.8	-	-
UniBo_30	Lv1-2	1-2	11.2	-	-	-	10.6	15.0	8.8	9.6	9.2	8.4	7.7	10.0	11.3	14.3	14.2	16.3	20.0	18.6	20.8	18.7	-	-
UniBo_34	Lv1-2	1-2	14.4	-	-	-	12.0	14.6	11.8	13.2	12.8	15.2	15.9	14.9	15.7	15.9	13.9	12.6	16.2	18.5	17.8	17.5	-	-
UniBo_34	Lv1-2	1-2	13.0	-	-	-	16.3	13.7	14.4	13.8	13.4	12.7	11.4	10.0	13.3	14.3	13.3	14.3	15.9	13.9	16.2	21.9	-	-
UniBo_37	Lv1-2	1-2	13.2	-	-	-	12.6	10.8	13.6	11.1	9.2	13.3	11.3	16.5	10.2	14.6	14.9	17.4	19.6	25.0	28.5	25.1	-	-
UniBo_38	Lv1-2	1-2	13.3	-	-	-	15.3	11.2	10.6	9.5	11.7	11.5	13.8	15.1	12.0	14.5	13.0	18.6	21.6	22.0	20.8	23.7	-	-

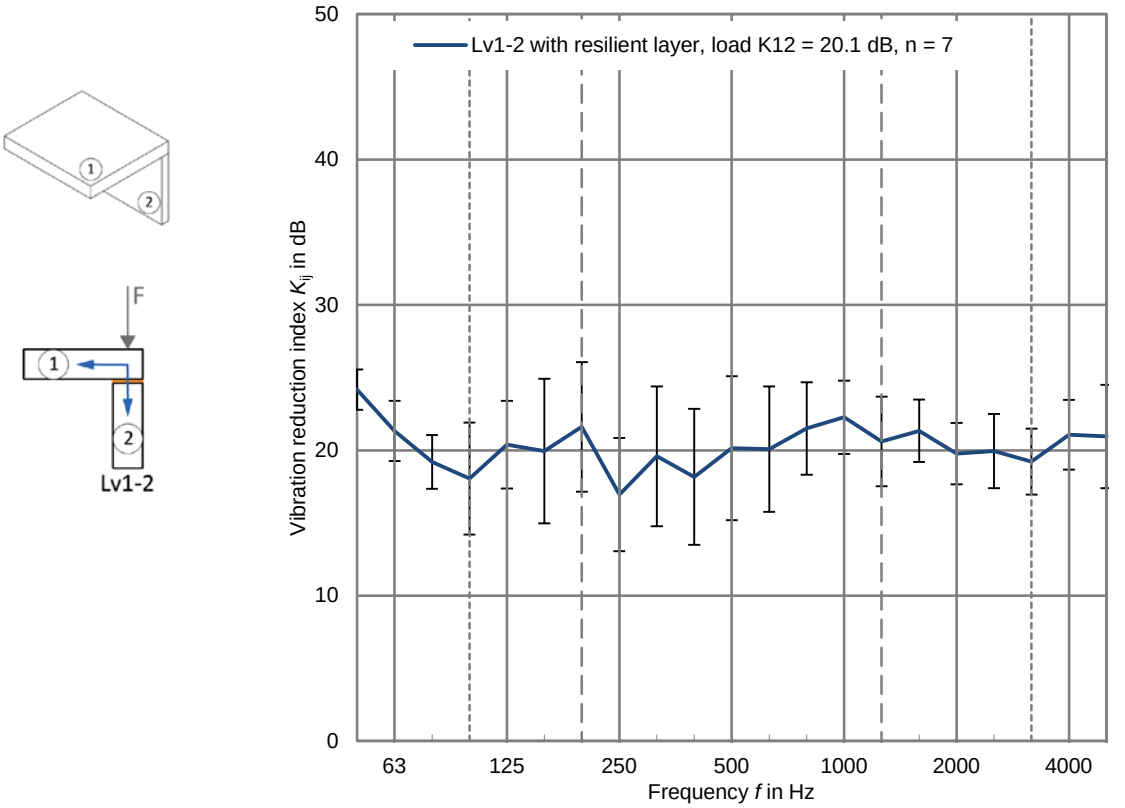


Figure 8 Average of the vibration reduction index for L-junction (Lv1-2) wall-floor with resilient layer and additional load, path 1-2, $\overline{K}_{12}$ = 20.1 dB, n = 7

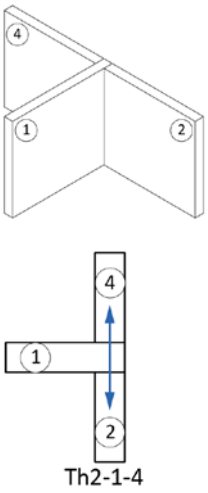
Table 11 Vibration reduction index for L-junction (Lv1-2) wall-floor with resilient layer and additional load, path 1-2, $\overline{K}_{12}$ = 20.1 dB, n = 7

	Vibration reduction index K_{ij} in dB																						
	$K_{ij,200-1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz	n
Min	11.7	21.2	19.1	16.3	9.5	13.6	8.7	11.8	9.0	10.1	7.2	8.7	10.4	14.2	17.0	16.5	18.4	16.0	16.8	15.1	16.4	13.3	
AVG	20.1	24.2	21.3	19.2	18.1	20.4	19.9	21.6	17.0	19.6	18.2	20.1	20.1	21.5	22.3	20.6	21.3	19.8	19.9	19.2	21.1	21.0	7
Max	24.0	25.2	24.7	21.9	22.1	24.2	24.1	25.8	21.6	25.1	22.5	24.4	24.1	24.1	25.5	25.9	24.9	22.5	23.1	23.3	24.1	24.1	
SD	3.8	1.4	2.1	1.8	3.9	3.0	5.0	4.5	3.9	4.8	4.7	5.0	4.3	3.2	2.5	3.1	2.2	2.1	2.6	2.3	2.4	3.6	

Table 12 Vibration reduction indices for L-junction (Lv1-2) wall-floor with resilient layer and additional load, path 1-2

			Vibration reduction index K_{ij} in dB																				
ID	Junction type	Path	$K_{ij,200-1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz
HsRo_04	Lv1-2	1-2	21.7	24.9	23.0	16.3	19.7	21.0	24.1	23.4	17.8	20.2	22.5	22.1	21.6	22.8	23.2	21.1	21.5	19.2	18.7	19.8	22.7	22.2
HsRo_05	Lv1-2	1-2	22.1	24.0	19.1	20.1	20.6	24.2	23.8	24.6	16.7	21.2	21.2	23.9	22.9	23.8	24.0	20.9	21.9	20.0	18.4	18.9	20.4	21.9
HsRo_06	Lv1-2	1-2	22.7	24.6	19.7	19.6	18.8	20.3	19.3	24.8	21.1	25.0	19.0	22.3	23.0	23.2	22.9	23.1	23.5	22.4	22.3	23.3	24.1	23.2
HsRo_07	Lv1-2	1-2	24.0	21.2	19.5	21.9	22.1	21.3	23.5	25.8	21.6	25.1	19.7	24.4	24.1	24.1	25.5	25.9	24.9	22.5	23.0	19.7	21.0	24.1
HsRo_08	Lv1-2	1-2	20.0	25.1	24.7	17.4	19.4	20.8	20.8	20.6	17.4	18.8	19.5	19.9	19.8	21.8	22.4	19.9	19.6	18.3	17.3	18.0	21.8	21.0
HsRo_09	Lv1-2	1-2	18.6	25.2	22.0	19.9	16.3	21.5	19.4	20.3	15.1	16.7	18.1	19.7	18.8	20.6	20.9	16.8	19.6	16.0	16.8	15.1	16.4	13.3
UniBo_26	Lv1-2	1-2	11.7	-	-	-	9.5	13.6	8.7	11.8	9.0	10.1	7.2	8.7	10.4	14.2	17.0	16.5	18.4	20.0	23.1	19.7	-	-

6.2 Vibration reduction indices of T-junctions



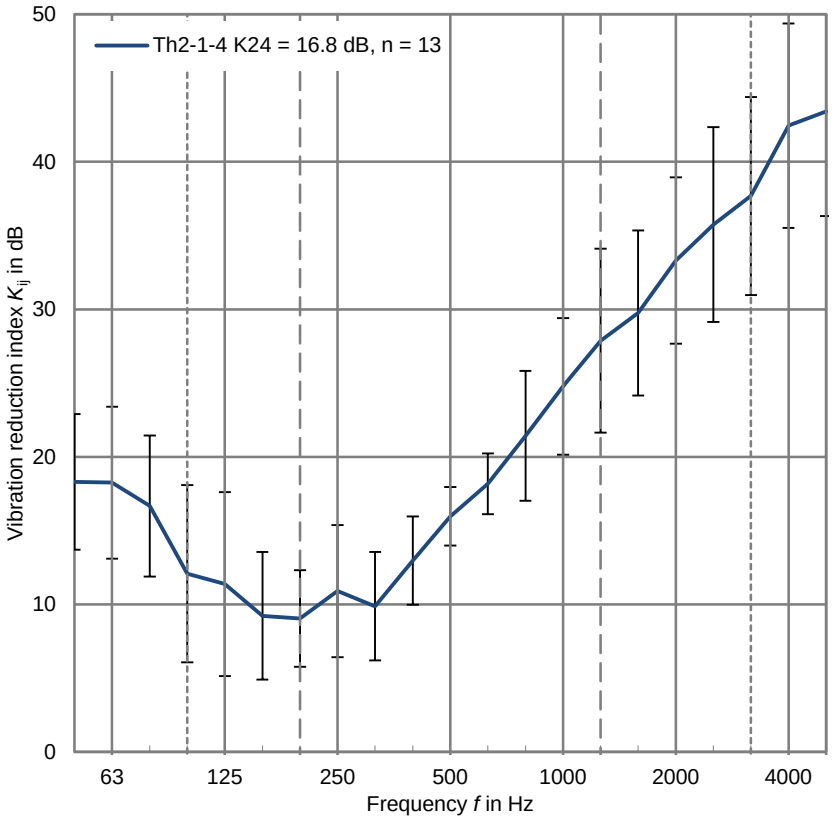


Figure 9 Average of the vibration reduction index for T-junction (Th2-1-4) wall-wall without resilient layer, path 2-4, $\overline{K}_{24}$ = 16.8 dB, n = 13

Table 13 Vibration reduction index for T-junction (Th2-1-4) wall-wall without resilient layer, path 2-4, $\overline{K}_{24}$ = 16.8 dB, n = 13

Vibration reduction index K_{ij} in dB																							
	$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz	n
Min	13.5	11.5	11.3	10.7	3.7	-0.2	2.6	3.3	4.8	4.3	8.4	12.9	15.2	14.6	16.4	18.3	20.7	23.1	23.4	26.5	29.3	29.1	
AVG	16.8	18.3	18.3	16.7	12.1	11.4	9.2	9.0	10.9	9.9	13.0	16.0	18.2	21.4	24.8	27.9	29.8	33.3	35.7	37.7	42.4	43.4	13
Max	22.6	23.3	24.8	23.8	23.1	24.3	15.1	15.2	19.7	18.0	18.5	19.0	22.1	27.9	31.8	37.5	38.3	38.9	43.2	46.1	49.8	49.7	
SD	2.6	4.6	5.2	4.8	6.0	6.2	4.3	3.3	4.5	3.7	3.0	2.0	2.1	4.4	4.6	6.2	5.6	5.6	6.6	6.7	6.9	7.1	

Table 14 Vibration reduction indices for T-junction (Th2-1-4) wall-wall without resilient layer, path 2-4

			Vibration reduction index K_{ij} in dB																				
ID	Junction type	Path	$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz
UniBo_05	Th2-1-4	2-4	16.9	-	-	-	8.6	9.2	7.2	7.7	10.3	9.8	12.6	16.0	20.9	21.2	25.6	28.1	29.6	33.4	34.9	37.8	-	-
UniBo_06	Th2-1-4	2-4	15.2	-	-	-	3.7	4.3	7.5	5.2	5.6	4.3	14.9	15.4	17.6	19.5	26.4	27.8	27.8	34.2	38.8	43.8	-	-
UniBo_07	Th2-1-4	2-4	14.1	-	-	-	4.4	-0.2	2.9	7.9	14.6	13.4	9.4	13.7	16.5	14.7	16.7	20.0	23.4	27.1	28.4	29.6	-	-
UniBo_08	Th2-1-4	2-4	15.9	-	-	-	7.4	9.8	12.1	11.9	13.4	9.9	14.5	15.4	16.1	18.5	22.2	21.0	21.8	26.2	28.7	29.2	-	-
UniBo_09	Th2-1-4	2-4	17.4	-	-	-	10.3	8.2	2.6	3.3	9.8	7.3	15.0	18.6	18.3	27.9	25.9	30.6	30.7	37.4	39.7	41.2	-	-
UniBo_10	Th2-1-4	2-4	16.4	-	-	-	7.3	5.1	3.3	6.7	6.9	7.2	14.5	18.0	17.9	20.2	25.6	30.8	31.4	37.4	39.3	41.1	-	-
UniBo_31	Th2-1-4	2-4	13.5	-	-	-	15.7	16.0	13.6	6.5	6.4	8.8	9.5	15.2	18.4	17.7	20.2	18.9	24.7	24.7	23.4	28.5	-	-
ift_21	Th2-1-4	2-4	19.1	22.6	24.8	22.3	23.1	24.3	12.6	13.5	17.2	13.4	14.6	12.9	15.2	23.2	28.7	33.3	38.3	38.9	43.1	43.7	43.6	44.8
ift_22	Th2-1-4	2-4	14.9	18.8	19.2	15.8	21.0	14.6	6.4	8.2	4.8	5.4	8.4	13.6	17.2	20.9	24.2	31.6	31.2	35.9	37.9	37.6	43.4	47.5
ift_23	Th2-1-4	2-4	22.6	20.8	21.1	14.5	18.0	18.8	14.6	15.2	19.7	18.0	18.5	17.3	19.5	26.8	31.8	36.3	36.1	38.1	42.2	46.1	49.4	48.9
ift_24	Th2-1-4	2-4	19.1	23.3	21.7	23.8	16.7	12.2	11.1	9.1	7.5	7.3	11.8	18.3	22.1	27.7	30.8	37.5	37.0	38.4	43.2	46.0	49.8	49.7
ift_31	Th2-1-4	2-4	19.6	11.5	11.4	12.9	12.3	14.3	15.1	12.0	13.6	13.1	15.9	19.0	20.9	25.7	27.6	28.2	34.2	38.3	39.4	38.8	39.2	40.6
ift_37	Th2-1-4	2-4	13.5	12.8	11.3	10.7	8.7	11.2	10.9	10.5	12.0	10.4	9.1	14.2	15.7	14.6	16.4	18.3	20.7	23.1	25.6	26.5	29.3	29.1

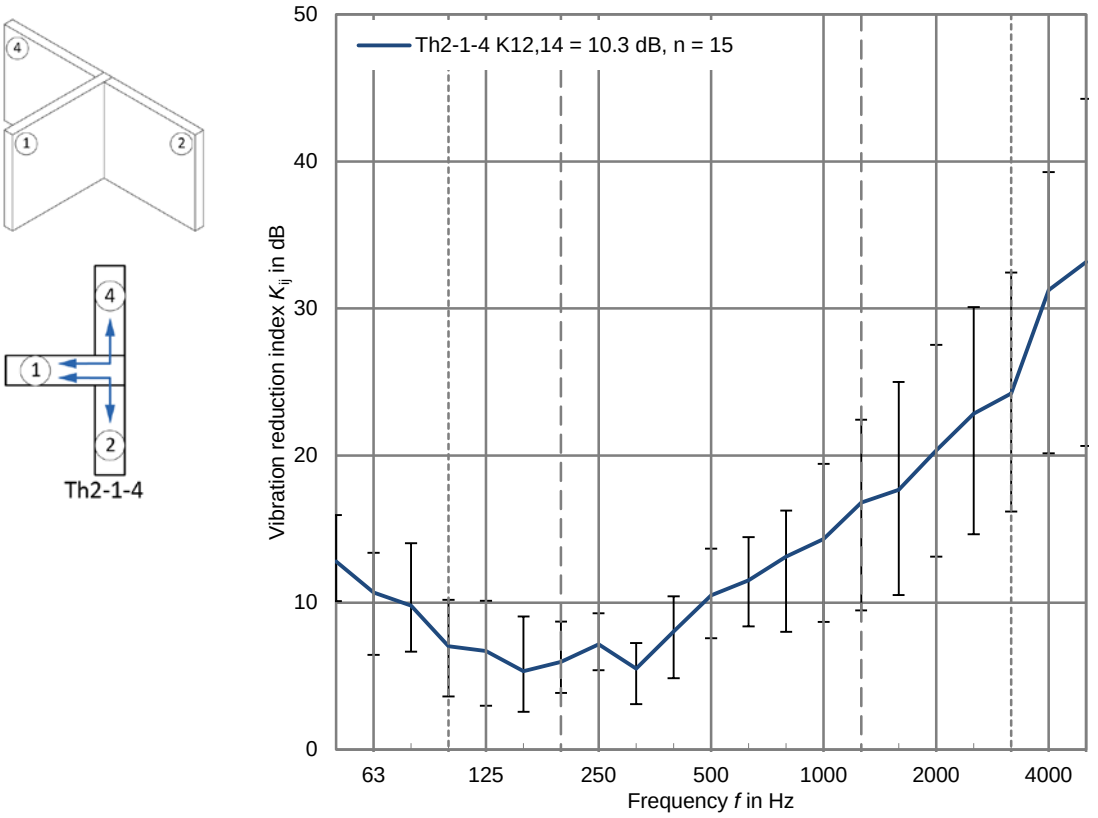


Figure 10 Average of the vibration reduction index for T-junction (Th2-1-4) wall-wall without resilient layer, paths 1-2 and 1-4, $\overline{K}_{12,14}$ = 10.3 dB, n = 15

Table 15 Vibration reduction index for T-junction (Th2-1-4) wall-wall without resilient layer, paths 1-2 and 1-4, $\overline{K}_{12,14}$ = 10.3 dB, n = 15

	Vibration reduction index K_{ij} in dB																						
	$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz	n
Min	5.0	9.8	6.8	6.8	1.3	-1.7	-2.0	0.4	3.8	1.3	0.9	6.7	7.3	5.1	6.1	8.9	9.4	10.3	11.3	13.3	16.0	13.9	
AVG	10.3	12.8	10.7	9.8	7.0	6.7	5.3	6.0	7.2	5.5	8.0	10.5	11.5	13.1	14.3	16.8	17.7	20.4	22.9	24.2	31.2	33.2	15
Max	17.2	17.3	17.2	14.6	15.1	12.6	9.6	9.9	11.0	10.2	12.3	16.5	18.9	25.3	25.8	34.4	37.1	35.8	40.9	43.1	46.8	49.6	
SD	3.2	2.7	4.2	3.1	3.4	3.7	2.7	2.1	1.8	2.4	3.2	2.9	3.1	5.1	5.6	7.3	7.2	7.2	8.2	8.0	11.1	12.5	

Table 16 Vibration reduction indices for T-junction (Th2-1-4) wall-wall without resilient layer, paths 1-2 and 1-4

ID	Junction type	Path	Vibration reduction index K_{ij} in dB																					
			$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz
UniBo_05	Th2-1-4	1-4	8.9	-	-	-	6.9	7.6	5.9	5.5	5.9	5.9	7.3	8.0	11.0	10.8	12.8	12.6	14.6	16.0	18.2	19.2	-	-
UniBo_06	Th2-1-4	1-4	9.7	-	-	-	1.3	4.7	4.2	5.1	5.8	1.3	9.5	9.5	12.0	12.9	14.8	16.5	16.5	20.8	24.0	25.6	-	-
UniBo_07	Th2-1-4	1-4	12.9	-	-	-	8.1	12.6	6.2	8.7	11.0	8.4	10.0	13.2	18.9	16.7	16.2	13.4	16.2	24.5	23.5	28.3	-	-
UniBo_07	Th2-1-4	1-2	5.0	-	-	-	3.2	-1.7	-2.0	0.4	3.8	2.7	0.9	6.7	7.4	6.4	6.1	10.5	10.7	10.8	11.3	13.3	-	-
UniBo_08	Th2-1-4	1-4	11.1	-	-	-	6.3	9.3	9.6	9.9	9.8	5.7	8.7	11.5	12.6	12.1	14.5	15.1	15.2	20.1	24.1	22.6	-	-
UniBo_08	Th2-1-4	1-2	8.1	-	-	-	7.9	12.0	7.3	6.6	8.2	4.3	6.3	7.8	8.4	9.4	11.2	11.0	11.2	14.9	16.0	15.5	-	-
UniBo_09	Th2-1-4	1-4	11.1	-	-	-	4.4	4.3	3.5	5.8	7.4	3.7	7.6	12.4	12.0	15.9	16.7	18.4	19.1	20.5	24.3	26.2	-	-
UniBo_10	Th2-1-4	1-4	10.6	-	-	-	4.6	2.6	2.0	4.3	4.8	4.1	10.2	11.0	13.2	15.3	15.3	17.4	17.2	21.7	24.7	25.8	-	-
UniBo_31	Th2-1-4	1-4	7.3	-	-	-	10.2	7.0	8.1	6.4	6.4	5.1	6.7	7.6	7.3	7.9	8.2	9.7	12.7	12.9	12.6	15.5	-	-
ift_22	Th2-1-4	1-2	14.5	17.3	17.2	13.6	15.1	12.6	6.1	6.6	6.6	5.4	9.7	13.3	13.7	20.1	24.3	31.1	29.1	31.4	35.3	34.4	41.2	42.8
ift_24	Th2-1-4	1-2	17.2	14.4	16.0	14.6	12.3	6.0	4.4	7.6	7.4	10.2	12.0	16.5	15.8	25.3	25.8	34.4	37.1	35.8	40.9	43.1	46.8	49.6
ift_31	Th2-1-4	1-4	12.6	10.8	8.5	7.5	7.6	4.9	4.4	6.4	7.8	8.6	12.3	14.3	12.6	14.9	15.9	20.5	20.9	26.2	27.7	28.1	31.4	35.7
ift_31	Th2-1-4	1-2	11.9	10.3	8.0	7.3	5.9	6.3	7.0	5.3	7.0	8.0	11.6	11.0	10.7	13.6	18.3	21.8	22.4	25.8	30.6	32.0	33.4	37.3
ift_37	Th2-1-4	1-4	6.8	9.8	7.6	9.1	7.4	6.4	5.2	3.9	7.0	3.0	3.2	7.5	8.7	10.3	8.6	8.9	9.4	10.3	14.7	17.6	18.6	19.8
ift_37	Th2-1-4	1-2	7.1	14.1	6.8	6.8	4.3	5.9	8.1	6.9	8.6	6.1	4.7	7.2	8.3	5.1	6.1	10.8	12.8	13.6	14.9	16.2	16.0	13.9

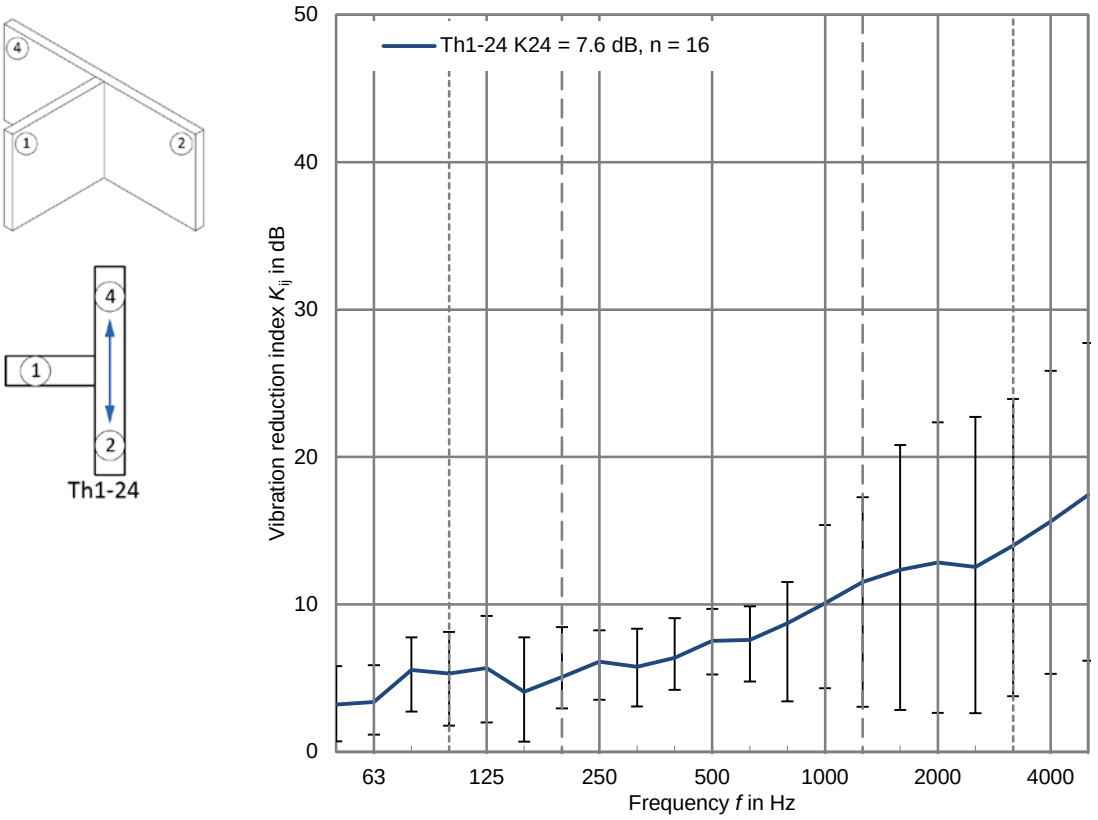


Figure 11 Average of the vibration reduction index for T-junction (Th1-24) wall-wall without resilient layer, path 2-4, $\overline{K}_{24}$ = 7.6 dB, n = 16

Table 17 Vibration reduction index for T-junction (Th1-24) wall-wall without resilient layer, path 2-4, $\overline{K}_{24}$ = 7.6 dB, n = 16

	Vibration reduction index K_{ij} in dB																						
	$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz	n
Min	3.7	-1.1	-1.2	2.2	0.7	0.4	-0.2	2.0	0.9	0.2	3.8	3.3	2.3	0.0	0.7	-2.0	-2.4	-3.1	-2.1	-1.7	-0.7	0.4	
AVG	7.6	3.2	3.4	5.5	5.3	5.7	4.1	5.1	6.1	5.8	6.4	7.5	7.6	8.7	10.1	11.5	12.3	12.8	12.5	14.0	15.6	17.4	16
Max	13.0	10.6	8.4	11.9	12.8	11.0	14.0	10.1	11.5	10.4	11.7	11.3	12.3	17.2	19.0	25.9	29.0	27.7	26.5	28.3	32.3	39.3	
SD	2.6	2.5	2.2	2.8	3.5	3.7	3.4	2.1	2.6	2.7	2.2	2.3	2.8	5.3	5.8	8.5	9.5	10.2	9.9	10.2	10.3	11.2	

Table 18 Vibration reduction indices for T-junction (Th1-24) wall-wall without resilient layer, path 2-4

ID	Junction type	Path	Vibration reduction index K_{ij} in dB																				
			$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz
Churchill_01	Th1-24	2-4	8.9	10.6	8.4	11.9	12.8	11.0	9.4	9.2	8.2	7.4	9.6	10.3	9.2	9.1	9.0	7.9	7.2	6.7	4.8	5.6	3.7	7.7
ift_12	Th1-24	2-4	8.8	2.5	1.9	5.5	4.8	8.8	2.5	6.7	6.4	4.9	5.9	9.5	7.7	11.6	10.8	15.7	17.8	23.4	18.8	22.1	21.4	24.0
ift_13	Th1-24	2-4	10.0	2.2	3.4	5.2	7.9	10.9	2.4	5.7	6.9	4.7	8.6	11.3	7.8	14.6	12.8	17.5	18.4	22.2	24.2	24.3	24.0	31.9
ift_14	Th1-24	2-4	9.3	0.5	3.1	5.3	6.7	7.7	5.3	3.7	4.1	4.6	7.5	9.7	9.7	12.9	15.5	16.3	16.3	18.4	21.4	19.2	22.0	22.8
ift_15	Th1-24	2-4	10.1	1.2	0.1	2.9	4.2	8.7	5.9	3.8	9.2	6.5	9.0	6.3	7.8	12.1	15.7	20.9	22.4	27.7	26.5	27.9	27.0	31.9
ift_16	Th1-24	2-4	13.0	1.2	1.3	3.4	4.3	8.4	3.6	5.3	11.5	10.4	11.7	8.4	7.7	17.2	19.0	25.9	29.0	27.1	25.8	23.7	25.6	30.1
ift_17	Th1-24	2-4	9.6	-1.1	-1.2	2.2	1.8	6.3	2.6	6.5	7.1	4.2	4.6	7.0	8.1	11.2	15.9	22.2	28.6	24.9	23.0	28.3	32.3	39.3
ift_25	Th1-24	2-4	6.6	4.6	6.6	8.4	3.6	0.6	3.8	5.1	6.8	7.0	6.3	4.8	3.9	3.2	7.3	14.6	10.7	14.9	9.4	11.3	11.0	9.4
ift_26	Th1-24	2-4	8.7	3.5	3.8	5.5	7.9	8.9	14.0	10.1	7.3	4.7	3.9	6.0	9.0	11.0	12.9	13.4	11.6	13.1	11.9	11.2	16.1	16.1
ift_27	Th1-24	2-4	7.1	3.2	4.3	8.8	10.4	6.8	5.0	4.6	3.1	2.6	5.4	3.3	11.0	10.1	11.9	11.7	12.4	8.6	11.7	18.3	20.4	16.3
ift_28	Th1-24	2-4	7.9	2.5	3.4	9.1	10.4	6.0	4.7	4.7	2.5	1.9	5.1	5.6	12.3	12.3	13.3	13.8	14.6	12.6	15.2	19.9	20.8	17.9
ift_29	Th1-24	2-4	6.0	3.4	4.5	7.7	2.1	1.4	0.9	2.0	0.9	0.2	4.3	4.6	11.2	10.5	12.3	8.2	10.9	10.4	13.0	14.4	20.0	14.8
ift_32	Th1-24	2-4	4.3	4.0	3.0	2.4	0.7	0.4	1.3	3.7	5.8	8.3	5.7	9.7	4.1	1.2	1.2	-0.9	0.0	-0.2	-1.0	-1.2	0.5	6.1
ift_33	Th1-24	2-4	3.7	4.9	4.1	2.3	1.7	1.6	2.4	4.2	6.5	8.4	5.4	8.1	2.3	0.0	0.7	-2.0	-2.4	-3.1	-2.1	-1.7	2.4	4.5
ift_34	Th1-24	2-4	4.5	3.4	2.8	3.1	1.6	1.8	1.8	3.9	7.4	8.2	5.3	9.3	4.1	1.6	1.4	-1.1	-1.2	-1.3	-1.3	0.4	3.4	5.5
ift_35	Th1-24	2-4	3.7	4.9	4.7	5.0	4.2	1.7	-0.2	2.2	3.9	8.3	3.8	6.4	5.5	1.0	1.6	0.3	1.0	-0.2	-0.7	0.5	-0.7	0.4

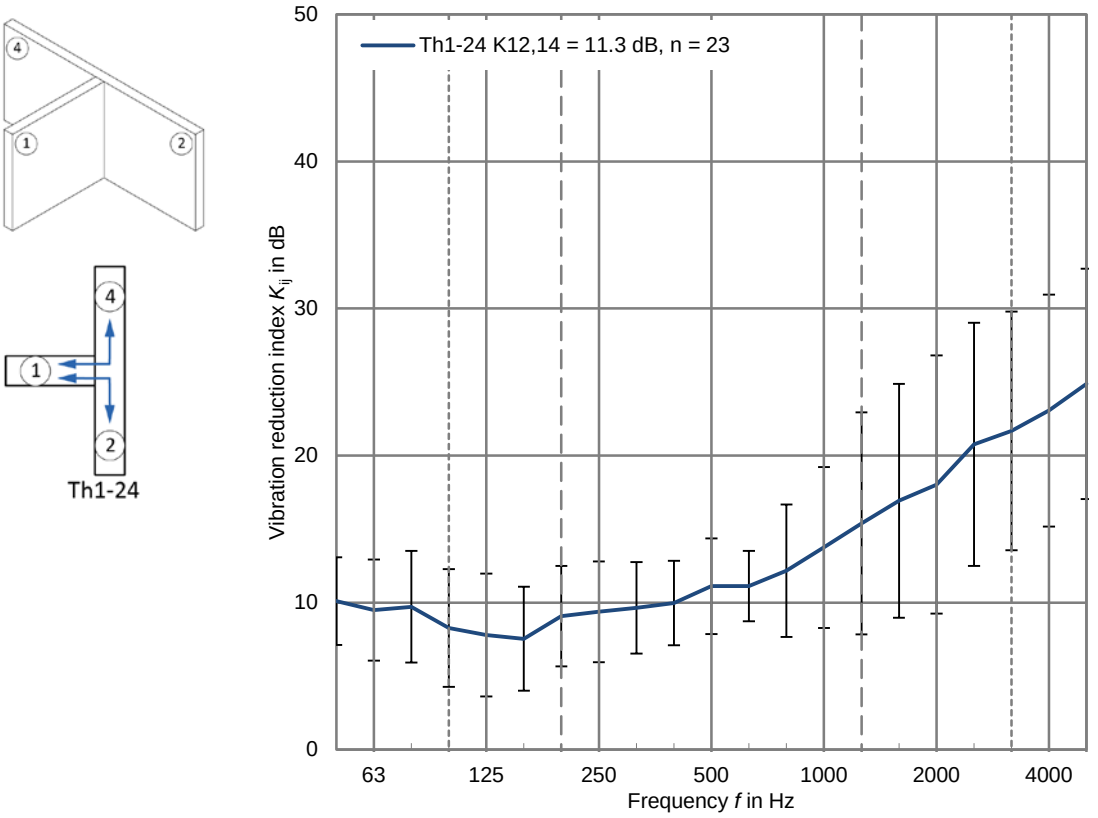


Figure 12 Average of the vibration reduction index for T-junction (Th1-24) wall-wall without resilient layer, paths 1-2 and 1-4, $\overline{K}_{12,14}$ = 11.3 dB, n = 23

Table 19 Vibration reduction index for T-junction (Th1-24) wall-wall without resilient layer, paths 1-2 and 1-4, $\overline{K}_{12,14}$ = 11.3 dB, n = 23

Vibration reduction index K_{ij} in dB																							
	$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz	n
Min	6.3	4.3	2.8	1.4	-1.1	0.6	0.7	2.0	3.2	4.4	6.1	4.5	6.1	4.4	5.9	5.1	6.4	7.2	8.9	10.2	8.9	14.1	
AVG	11.3	10.1	9.5	9.7	8.3	7.8	7.5	9.1	9.4	9.6	10.0	11.1	11.1	12.2	13.8	15.4	16.9	18.0	20.8	21.7	23.1	24.9	23
Max	15.1	14.0	16.8	15.2	14.3	13.7	13.3	14.3	15.2	15.4	16.2	14.9	15.2	20.1	22.5	28.6	33.9	36.5	33.6	35.6	38.1	44.4	
SD	2.8	3.0	3.4	3.8	4.0	4.2	3.5	3.4	3.4	3.1	2.9	3.2	2.4	4.5	5.5	7.5	7.9	8.8	8.3	8.1	7.9	7.8	

Table 20 Vibration reduction indices for T-junction (Th1-24) wall-wall without resilient layer, paths 1-2 and 1-4

			Vibration reduction index K_{ij} in dB																					
ID	Junction type	Path	$K_{ij,200:1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz
Churchill_01	Th1-24	1-4	8.2	8.3	7.0	5.7	11.1	8.8	8.5	10.6	9.7	7.5	6.4	6.8	9.2	7.5	8.2	8.1	8.0	8.1	8.9	10.2	8.9	14.4
Churchill_01	Th1-24	1-2	10.9	14.0	10.6	11.2	14.3	11.3	11.3	12.6	11.5	11.0	11.4	11.1	10.8	10.1	10.2	9.8	10.1	9.6	9.4	13.0	10.5	15.8
ift_12	Th1-24	1-2	14.5	5.0	4.9	9.3	9.9	11.3	9.2	9.7	8.6	10.7	10.0	13.7	14.7	17.7	21.6	24.1	29.2	34.9	32.0	35.6	33.8	36.8
ift_14	Th1-24	1-2	12.8	4.3	10.7	8.7	8.7	11.6	7.4	5.2	11.7	8.4	10.3	12.1	11.1	17.0	18.1	21.5	19.7	16.8	19.4	18.6	19.4	22.3
ift_17	Th1-24	1-2	14.9	9.7	13.8	11.9	8.5	13.1	11.2	11.2	7.7	8.9	11.4	12.9	12.1	18.8	22.5	28.6	33.9	36.5	33.6	33.5	38.1	44.4
ift_25	Th1-24	1-4	13.6	5.9	5.8	5.5	3.9	1.5	5.5	11.5	11.3	11.8	9.6	13.0	11.3	14.2	17.4	22.0	23.4	26.9	29.5	27.0	28.9	31.1
ift_25	Th1-24	1-2	13.6	11.8	9.4	7.3	4.7	5.4	7.9	13.5	12.2	14.9	16.2	14.4	8.3	11.9	14.8	15.9	17.1	19.8	19.9	25.1	22.0	22.6
ift_26	Th1-24	1-4	12.9	11.4	9.3	10.3	11.2	8.9	5.5	9.3	7.4	7.7	13.0	12.4	13.3	15.3	17.2	21.1	18.6	21.1	24.5	25.1	26.8	31.1
ift_26	Th1-24	1-2	11.0	8.8	9.2	10.5	7.3	8.1	10.1	8.9	9.1	8.5	9.7	9.5	9.7	10.7	14.1	18.8	19.0	22.4	25.6	24.2	27.9	25.2
ift_27	Th1-24	1-4	13.6	13.2	12.0	9.8	9.3	7.7	8.0	9.1	7.4	9.9	13.5	12.3	13.1	16.1	18.7	21.8	23.5	21.9	24.6	29.3	30.3	31.7
ift_27	Th1-24	1-2	9.2	7.2	5.5	3.7	1.2	0.9	0.7	2.0	3.4	4.4	6.3	9.6	10.3	11.9	14.8	20.2	21.6	23.0	28.4	28.3	28.7	29.7
ift_28	Th1-24	1-4	14.4	11.4	11.0	11.4	9.3	5.9	6.4	8.9	7.3	9.6	12.6	13.2	15.2	18.9	20.4	23.7	24.9	23.8	28.6	26.8	27.8	26.2
ift_28	Th1-24	1-2	10.1	7.6	4.9	4.3	1.1	0.9	0.7	2.9	3.2	4.9	6.5	11.3	11.6	13.5	16.6	20.4	22.7	23.6	30.1	28.1	30.7	31.4
ift_29	Th1-24	1-4	15.1	8.0	5.2	4.7	3.4	2.6	6.3	9.2	8.0	10.2	13.8	13.2	15.2	20.1	21.8	24.7	26.4	26.8	30.9	32.6	30.6	31.5
ift_29	Th1-24	1-2	10.3	5.5	2.8	1.4	-1.1	0.6	1.7	3.1	5.0	7.1	8.7	9.9	11.1	11.6	17.7	18.6	21.4	25.5	29.2	31.2	31.5	31.1
ift_32	Th1-24	1-4	12.0	12.6	15.4	13.4	12.0	13.7	11.7	12.7	15.2	14.3	11.3	14.6	12.3	10.9	9.2	7.6	9.8	8.7	11.6	12.5	17.0	21.3
ift_32	Th1-24	1-2	6.6	12.1	9.8	13.7	9.7	5.8	5.3	6.4	7.7	6.5	6.4	6.2	8.0	5.4	6.1	6.9	10.2	10.7	13.4	13.9	15.2	18.8
ift_33	Th1-24	1-4	12.4	13.6	16.8	15.2	11.7	13.5	12.4	13.1	15.0	15.4	12.3	14.9	12.1	11.0	9.5	8.0	8.4	8.8	14.2	16.1	20.8	22.7
ift_33	Th1-24	1-2	6.3	12.6	10.1	14.0	11.6	7.6	5.7	8.5	9.1	7.1	6.1	4.5	6.1	4.4	5.9	5.1	6.4	9.2	12.6	11.4	14.4	14.1
ift_34	Th1-24	1-4	12.2	11.4	10.9	13.6	11.5	11.7	13.3	14.3	15.1	14.4	11.3	14.4	12.8	11.1	9.4	7.3	7.4	8.5	13.0	16.3	19.1	21.6
ift_34	Th1-24	1-2	6.7	12.8	11.0	12.7	9.9	8.0	6.9	7.2	8.6	8.0	6.1	4.8	7.3	5.7	6.8	6.1	9.6	10.4	12.0	12.0	17.0	15.6
ift_35	Th1-24	1-4	11.4	12.0	10.9	12.7	11.3	12.6	12.5	12.4	14.8	13.6	10.4	14.7	11.8	10.8	8.3	6.4	8.1	7.2	12.7	14.0	14.1	16.7
ift_35	Th1-24	1-2	6.7	13.1	11.4	12.6	9.7	7.7	5.4	6.6	6.8	7.1	6.2	6.3	8.3	5.4	6.9	7.2	9.6	10.5	13.6	13.7	16.9	16.2

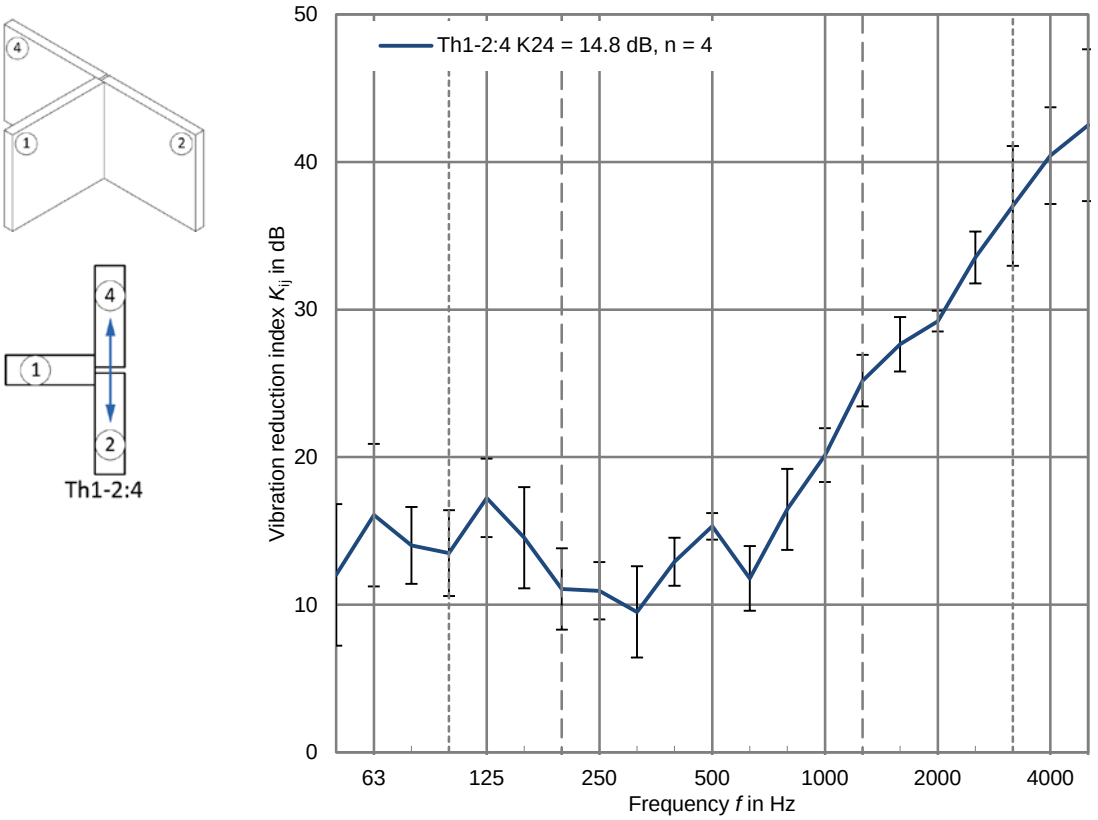


Figure 13 Average of the vibration reduction index for T-junction (Th1-2:4) wall-wall without resilient layer, path 2-4, $\overline{K}_{24}$ = 14.8 dB, n = 4

Table 21 Vibration reduction index for (Th1-2:4) wall-wall without resilient layer, path 2-4, $\overline{K}_{24}$ = 14.8 dB, n = 4

	Vibration reduction index K_{ij} in dB																					
	$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz	n
Min	12.9	4.1	7.8	9.8	9.7	13.6	8.7	8.1	9.3	6.7	10.9	13.9	8.6	13.9	18.8	22.7	24.8	28.3	31.8	30.7	35.4	34.1	
AVG	14.8	12.0	16.1	14.0	13.5	17.2	14.5	11.1	10.9	9.5	12.9	15.3	11.8	16.5	20.1	25.2	27.6	29.2	33.5	37.0	40.4	42.5	4
Max	17.9	16.9	19.7	16.5	17.5	21.1	17.2	15.5	14.1	14.8	15.1	16.3	14.7	20.9	23.3	27.2	29.4	30.3	36.5	41.4	44.5	46.9	
SD	1.9	4.8	4.8	2.6	2.9	2.7	3.4	2.8	1.9	3.1	1.6	0.9	2.2	2.7	1.8	1.7	1.9	0.7	1.8	4.1	3.3	5.1	

Table 22 Vibration reduction indices for T-junction (Th1-24) wall-wall without resilient layer, paths 1-2 and 1-4

ID	Junction type	Path	Vibration reduction index K_{ij} in dB																					
			$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz
ift_18	Th1-2:4	2-4	14.4	14.2	18.0	16.5	17.5	21.1	17.2	11.0	9.3	8.4	11.8	16.3	12.5	16.6	19.4	24.5	29.2	29.1	31.8	39.6	41.5	42.6
ift_19	Th1-2:4	2-4	14.0	16.9	19.7	15.8	14.8	17.3	15.5	9.6	11.1	8.2	13.8	15.7	11.4	14.5	19.1	22.7	24.8	28.3	32.8	36.4	40.4	46.3
ift_20	Th1-2:4	2-4	12.9	13.0	18.8	13.9	12.1	16.9	8.7	8.1	9.3	6.7	10.9	13.9	8.6	13.9	18.8	26.3	27.2	30.3	36.5	41.4	44.5	46.9
ift_30	Th1-2:4	2-4	17.9	4.1	7.8	9.8	9.7	13.6	16.7	15.5	14.1	14.8	15.1	15.4	14.7	20.9	23.3	27.2	29.4	29.2	32.9	30.7	35.4	34.1

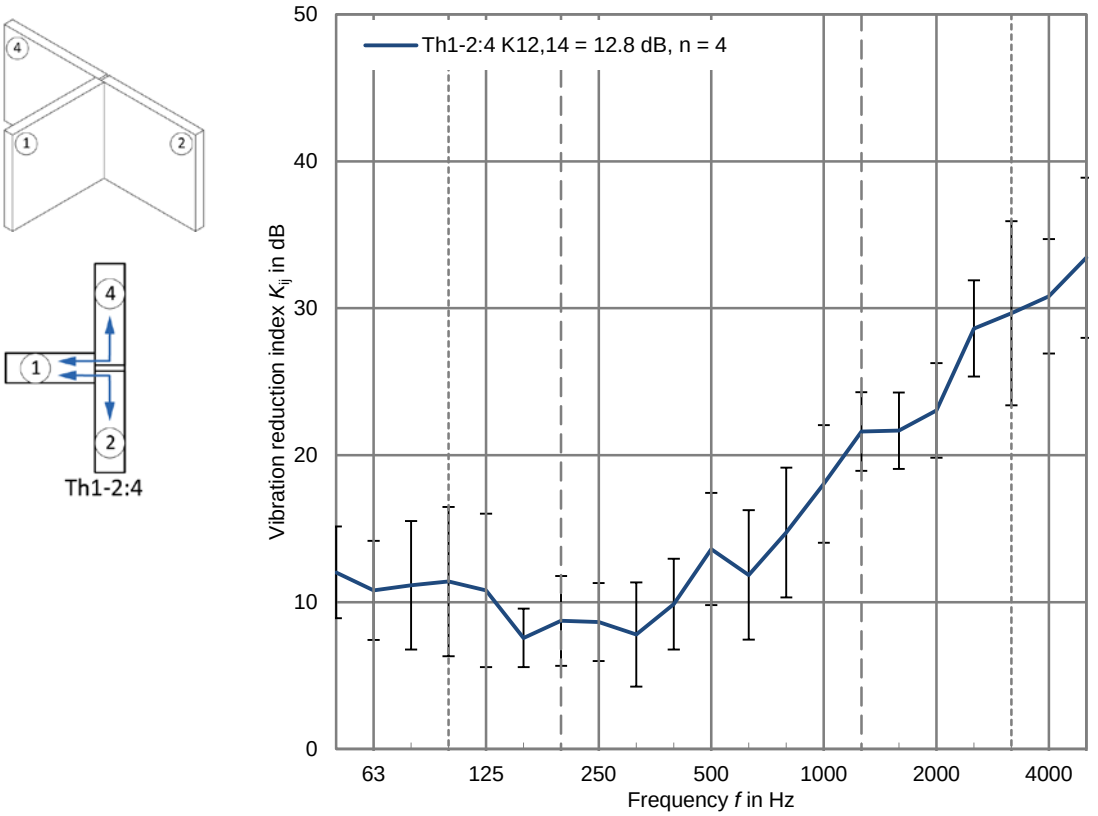


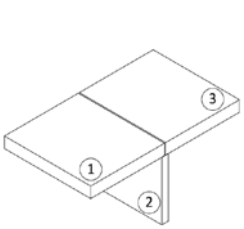
Figure 14 Average of the vibration reduction index for T-junction (Th1-2:4) wall-wall without resilient layer, paths 1-2 and 1-4, $\overline{K}_{12,14}$ = 12.8 dB, n = 4

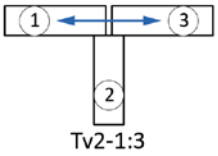
Table 23 Vibration reduction index for T-junction (Th1-2:4) wall-wall without resilient layer, paths 1-2 and 1-4, $\overline{K}_{12,14}$ = 12.8 dB, n = 4

	Vibration reduction index K_{ij} in dB																					
	$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz	n
Min	9.9	9.3	7.7	6.4	6.3	6.1	4.3	5.7	5.2	2.8	5.6	8.8	5.5	9.5	13.6	18.0	18.6	19.1	24.5	21.9	25.9	25.2	
AVG	12.8	12.0	10.8	11.1	11.4	10.8	7.6	8.7	8.7	7.8	9.9	13.6	11.9	14.7	18.0	21.6	21.7	23.0	28.6	29.7	30.8	33.4	4
Max	17.7	17.3	16.2	17.2	18.4	19.3	9.8	13.3	12.4	12.9	14.3	18.5	17.9	21.7	23.6	24.9	25.2	26.5	32.6	37.6	36.1	40.2	
SD	3.2	3.1	3.4	4.4	5.1	5.2	2.0	3.1	2.7	3.5	3.1	3.8	4.4	4.4	4.0	2.7	2.6	3.2	3.3	6.3	3.9	5.5	

Table 24 Vibration reduction indices for T-junction (Th1-2:4) wall-wall without resilient layer, paths 1-2 and 1-4

ID	Junction type	Path	Vibration reduction index K_{ij} in dB																					
			$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz
ift_19	Th1-2:4	1-2	17.7	11.2	11.1	13.4	14.1	10.8	9.8	13.3	12.4	12.9	14.3	18.5	17.9	21.7	23.6	24.9	25.2	25.9	32.6	37.6	32.7	35.8
ift_20	Th1-2:4	1-2	13.6	17.3	16.2	17.2	18.4	19.3	8.2	9.8	9.5	7.5	10.2	15.9	11.9	14.4	20.1	23.3	23.1	26.5	31.0	33.7	36.1	40.2
ift_30	Th1-2:4	1-4	9.9	9.3	7.7	6.4	6.8	6.1	4.3	5.7	5.2	2.8	5.6	8.8	12.2	13.3	14.9	20.3	18.6	20.6	26.5	25.5	28.6	32.6
ift_30	Th1-2:4	1-2	9.9	10.3	8.3	7.6	6.3	7.0	7.9	6.2	7.5	8.0	9.4	11.3	5.5	9.5	13.6	18.0	19.8	19.1	24.5	21.9	25.9	25.2





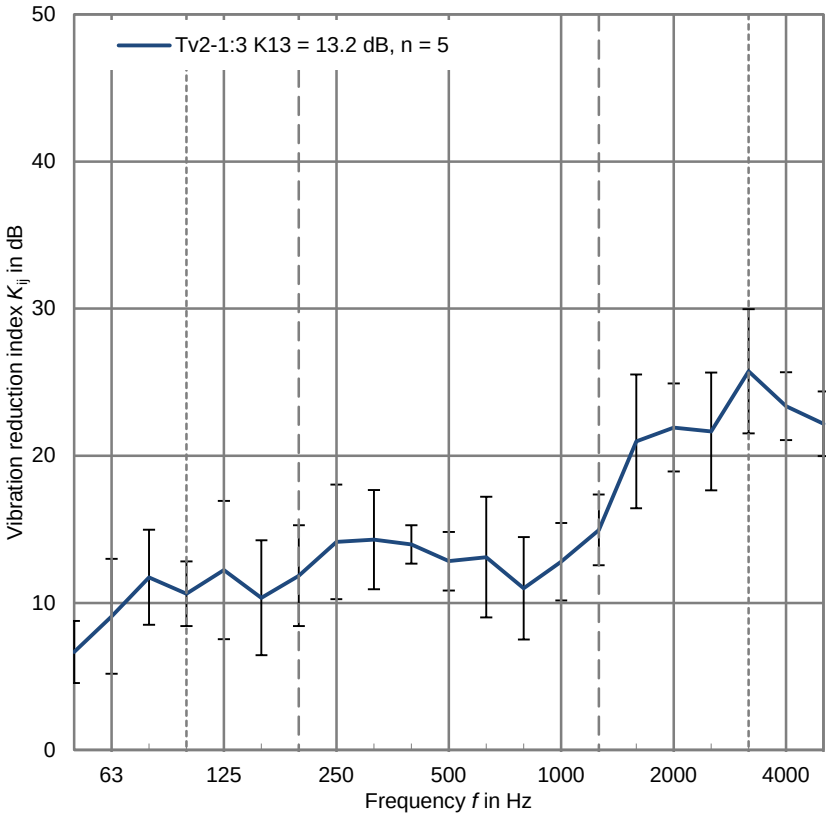


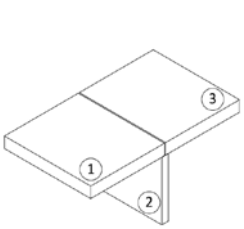
Figure 15 Average of the vibration reduction index for T-junction (Tv2-1:3) wall-floor without resilient layer, path 1-3, $\overline{K}_{13}$ = 13.2 dB, n = 5

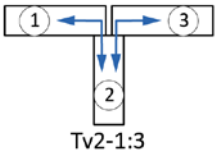
Table 25 Vibration reduction index for T-junction (Tv2-1:3) wall-floor without resilient layer, path 1-3, $\overline{K}_{13}$ = 13.2 dB, n = 5

	Vibration reduction index K_{ij} in dB																						
	$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz	n
Min	10.4	2.6	1.8	5.9	8.0	3.7	4.2	6.9	8.8	10.7	12.7	10.2	8.5	7.1	11.0	12.3	16.4	17.9	15.0	20.2	21.5	18.2	
AVG	13.2	6.7	9.1	11.7	10.6	12.2	10.3	11.8	14.1	14.3	14.0	12.8	13.1	11.0	12.8	15.0	21.0	21.9	21.7	25.7	23.4	22.2	5
Max	17.7	8.7	13.2	15.4	13.7	16.7	14.5	15.7	19.9	20.1	15.6	15.5	19.4	16.5	18.0	19.1	27.6	27.1	25.1	33.2	27.9	24.6	
SD	2.7	2.1	3.9	3.2	2.2	4.7	3.9	3.4	3.9	3.4	1.3	2.0	4.1	3.5	2.6	2.4	4.5	3.0	4.0	4.2	2.3	2.2	

Table 26 Vibration reduction indices for T-junction (Tv2-1:3) wall-floor without resilient layer, path 1-3

ID	Junction type	Path	Vibration reduction index K_{ij} in dB																					
			$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz
ift_06	Tv2-1:3	1-3	17.7	8.7	9.2	15.4	13.7	16.3	14.3	15.7	19.9	20.1	15.6	14.8	19.4	16.5	18.0	19.1	27.6	27.1	24.7	26.2	23.0	23.4
ift_07	Tv2-1:3	1-3	13.6	6.9	9.9	12.9	12.1	12.9	10.8	11.0	14.5	13.8	15.5	15.5	15.0	9.9	11.2	16.0	25.1	22.5	15.0	24.3	22.8	21.9
ift_08	Tv2-1:3	1-3	10.6	7.4	13.2	11.1	8.3	11.7	8.0	9.9	11.2	10.7	12.7	10.2	8.7	8.0	11.5	12.3	16.4	17.9	24.4	24.8	21.5	18.2
ift_09	Tv2-1:3	1-3	13.9	7.8	11.4	13.4	11.1	16.7	14.5	15.7	16.3	15.4	12.7	11.7	14.0	13.4	12.3	13.3	16.7	20.6	25.1	33.2	27.9	24.6
ift_38	Tv2-1:3	1-3	10.4	2.6	1.8	5.9	8.0	3.7	4.2	6.9	8.8	11.4	13.5	11.9	8.5	7.1	11.0	14.1	19.1	21.5	19.1	20.2	21.8	22.8





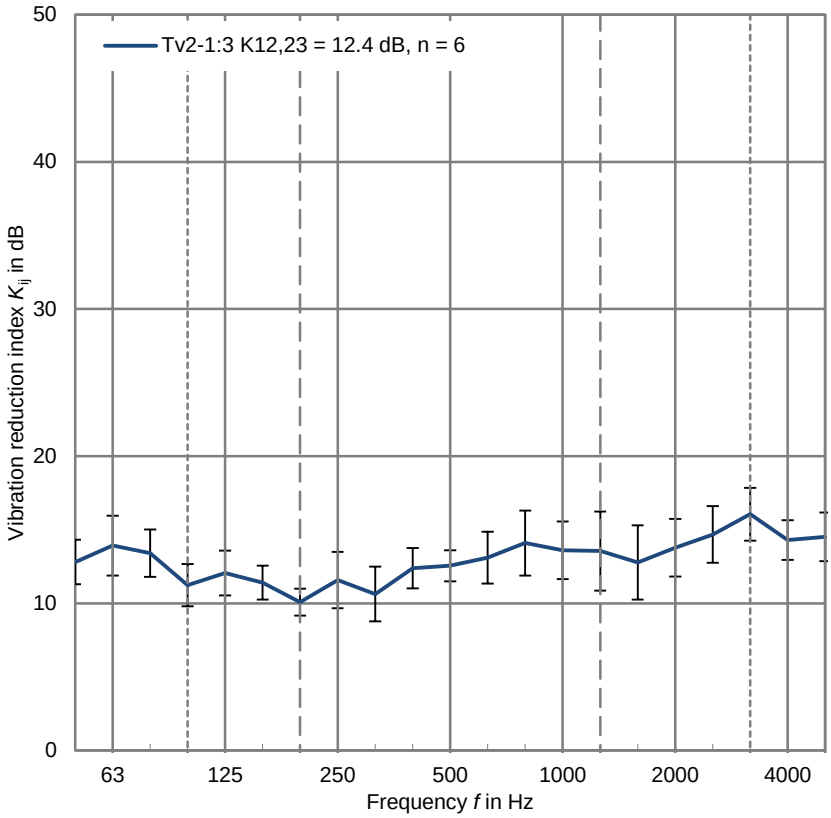


Figure 16 Average of the vibration reduction index for T-junction (Tv2-1:3) wall-floor without resilient layer, paths 1-2 and 2-3, $\overline{K}_{12,23}$ = 12.4 dB, n = 6

Table 27 Vibration reduction index for T-junction (Tv2-1:3) wall-floor without resilient layer, paths 1-2 and 2-3, $\overline{K}_{12,23}$ = 12.4 dB, n = 6

	Vibration reduction index K_{ij} in dB																					
	$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz	n
Min	11.7	11.1	11.4	10.4	9.8	10.0	9.7	8.4	8.6	8.2	11.2	11.0	10.6	10.8	11.0	10.4	9.1	10.9	12.3	14.0	12.0	12.3	
AVG	12.4	12.8	13.9	13.4	11.2	12.1	11.4	10.1	11.6	10.6	12.4	12.6	13.1	14.1	13.6	13.6	12.8	13.8	14.7	16.1	14.3	14.5	6
Max	13.5	15.8	17.1	15.2	14.2	14.4	13.1	11.3	14.0	14.3	15.2	14.2	15.3	17.0	16.6	18.1	16.7	17.4	17.6	18.8	15.9	16.7	
SD	0.6	1.5	2.0	1.6	1.4	1.5	1.2	0.9	1.9	1.9	1.4	1.1	1.8	2.2	2.0	2.7	2.5	2.0	1.9	1.8	1.3	1.6	

Table 28 Vibration reduction indices for T-junction (Tv2-1:3) wall-floor without resilient layer, paths 1-2 and 2-3

ID	Junction type	Path	Vibration reduction index K_{ij} in dB																					
			$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz
ift_07	Tv2-1:3	1-2	12.2	11.9	15.6	14.2	14.2	12.0	12.5	10.2	14.0	11.2	11.7	13.3	15.3	12.4	11.6	10.4	9.1	10.9	13.0	16.2	15.1	12.3
ift_07	Tv2-1:3	2-3	12.7	12.6	12.4	14.8	10.1	13.4	11.6	10.6	13.1	10.4	11.2	12.0	14.6	17.0	13.1	12.4	14.5	14.0	12.3	14.3	12.0	13.8
ift_08	Tv2-1:3	1-2	11.9	13.5	14.7	12.9	11.0	11.8	10.8	8.4	8.6	8.2	12.9	11.0	12.5	14.3	15.3	15.7	10.3	12.7	15.5	17.9	15.5	13.2
ift_08	Tv2-1:3	2-3	11.7	15.8	17.1	15.2	9.8	14.4	13.1	10.4	9.6	10.0	11.2	11.9	11.2	13.5	14.0	13.7	12.5	13.4	13.4	15.2	13.2	16.6
ift_38	Tv2-1:3	1-2	13.5	11.1	11.4	10.4	11.5	10.0	9.7	9.6	11.6	9.6	12.1	13.0	14.3	16.6	16.6	18.1	16.7	17.4	17.6	14.0	15.9	16.7
ift_38	Tv2-1:3	2-3	12.3	11.9	12.3	12.9	10.7	10.7	10.8	11.3	12.6	14.3	15.2	14.2	10.6	10.8	11.0	11.0	13.6	14.2	16.4	18.8	14.0	14.5

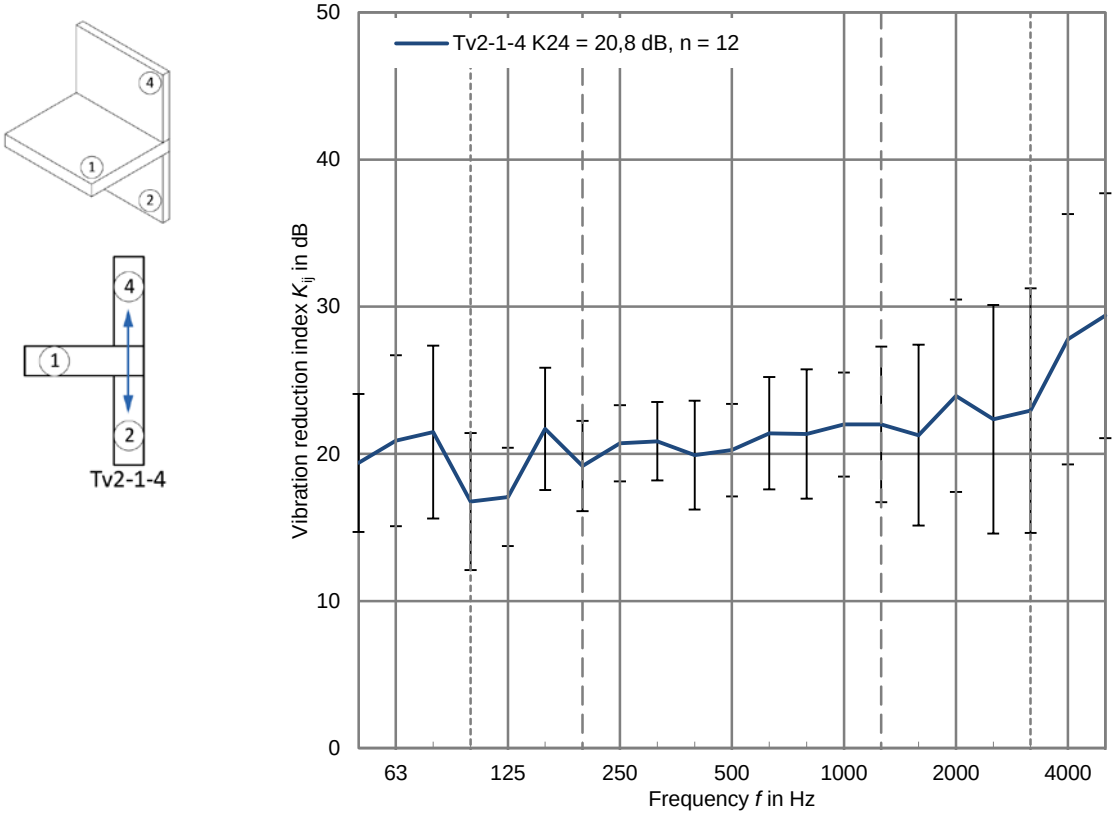


Figure 17 Average of the vibration reduction index for T-junction (Tv2-1-4) wall-floor without resilient layer, path 2-4, $\overline{K}_{24}$ = 20.8 dB, n = 12

Table 29 Vibration reduction index for T-junction (Tv2-1-4) wall-floor without resilient layer, path 2-4, $\overline{K}_{24}$ = 20.8 dB, n = 12

Vibration reduction index K_{ij} in dB																							
	$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz	n
Min	15,5	11,0	13,5	11,4	8,0	12,0	13,0	16,0	16,0	17,0	14,7	16,2	13,3	13,0	15,1	11,5	10,8	9,3	7,1	10,7	11,7	16,4	
AVG	20,8	19,4	20,9	21,5	16,7	17,1	21,7	19,2	20,7	20,9	19,9	20,3	21,4	21,3	22,0	22,0	21,3	23,9	22,3	22,9	27,8	29,4	12
Max	26,0	27,0	33,0	29,8	23,0	23,0	28,6	24,9	24,8	26,5	27,1	25,8	26,6	26,9	26,9	27,3	28,9	30,9	30,0	32,2	40,6	46,1	
SD	3,1	4,7	5,8	5,9	4,7	3,3	4,2	3,1	2,6	2,7	3,7	3,2	3,8	4,4	3,5	5,3	6,2	6,5	7,8	8,3	8,5	8,3	

Table 30 Vibration reduction indices for T-junction (Tv2-1-4) wall-floor without resilient layer, path 2-4

ID	Junction type	Path	Vibration reduction index K_{ij} in dB																					
			$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz
CSTB_01	Tv2-1-4	2-4	21,5	26,2	20,3	27,2	20,7	18,8	22,2	19,9	19,7	19,0	19,3	23,8	22,5	21,9	22,7	25,0	24,8	27,4	27,0	32,2	40,6	46,1
SINTEF_02	Tv2-1-4	2-4	22,0	27,0	33,0	25,0	23,0	17,0	20,0	19,0	24,0	24,0	21,0	20,0	23,0	23,0	-	-	-	-	-	-	-	-
SINTEF_02	Tv2-1-4	2-4	18,7	21,0	24,0	20,0	8,0	12,0	13,0	16,0	16,0	17,0	19,0	21,0	20,0	22,0	-	-	-	-	-	-	-	-
HsRo_12	Tv2-1-4	2-4	17,1	21,1	-	29,3	22,2	23,0	24,3	16,5	19,0	18,5	15,4	19,2	17,6	14,7	18,4	14,8	13,0	-	10,4	12,0	15,6	17,7
HsRo_13	Tv2-1-4	2-4	15,5	20,2	28,3	27,2	21,7	17,5	28,6	16,0	18,2	20,6	14,7	17,5	13,3	13,0	15,1	11,5	10,8	9,3	7,1	10,7	11,7	16,4
HsRo_14	Tv2-1-4	2-4	17,8	-	-	29,8	21,3	22,6	21,7	16,4	18,5	18,3	15,7	19,8	17,9	15,8	20,4	17,6	14,1	-	-	11,5	-	-
ift_10	Tv2-1-4	2-4	20,6	12,6	16,7	19,6	15,4	15,3	21,0	17,6	21,3	19,0	20,4	16,2	22,6	22,4	21,1	24,5	21,7	18,6	20,3	19,8	27,4	29,2
ift_11	Tv2-1-4	2-4	19,7	11,0	13,5	16,9	15,0	15,3	15,0	16,7	20,8	22,9	18,8	16,4	18,8	22,0	19,8	21,3	21,1	24,4	23,6	25,6	26,4	30,6
ift_40	Tv2-1-4	2-4	25,7	18,8	19,6	15,1	13,0	15,2	24,5	24,9	24,8	22,7	26,3	25,8	26,6	26,9	26,1	27,3	27,5	28,5	27,3	29,5	31,7	33,1
ift_41	Tv2-1-4	2-4	22,8	16,0	14,5	11,4	12,4	12,3	20,6	20,9	20,4	20,1	21,5	18,1	25,6	26,5	25,1	27,1	23,8	24,3	27,2	25,6	33,6	34,0
ift_42	Tv2-1-4	2-4	22,0	18,3	17,8	15,5	13,1	19,4	23,7	22,4	21,5	21,6	19,6	19,6	23,0	21,7	24,3	24,0	27,0	28,1	28,3	30,6	31,6	29,2
ift_43	Tv2-1-4	2-4	26,0	20,9	21,4	20,7	15,3	16,5	25,6	23,9	24,5	26,5	27,1	25,7	26,0	26,3	26,9	26,9	28,9	30,9	30,0	31,8	31,5	28,1

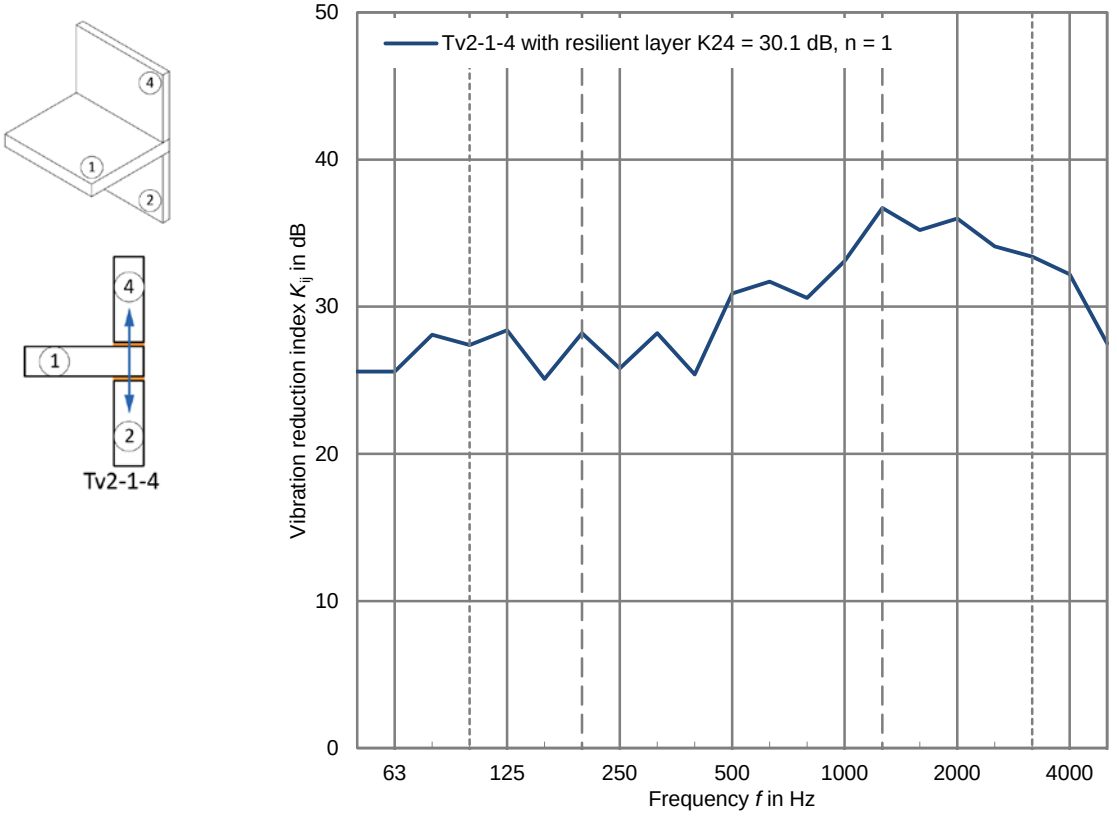


Figure 18 Average of the vibration reduction index for T-junction (Tv2-1-4) wall-floor with resilient layer, path 2-4, $\overline{K}_{24}$ = 30.1 dB, n = 1

Table 31 Vibration reduction indices for T-junction (Tv2-1-4) wall-floor with resilient layer, path 2-4

ID	Junction type	Path	Vibration reduction index K_{ij} in dB																						
			$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz
HsRo_15	Tv2-1-4	2-4	30.1	25.6	25.6	28.1	27.4	28.4	25.1	28.2	25.8	28.2	25.4	30.9	31.7	30.6	33.1	36.7	35.2	36.0	34.1	33.4	32.2	27.5

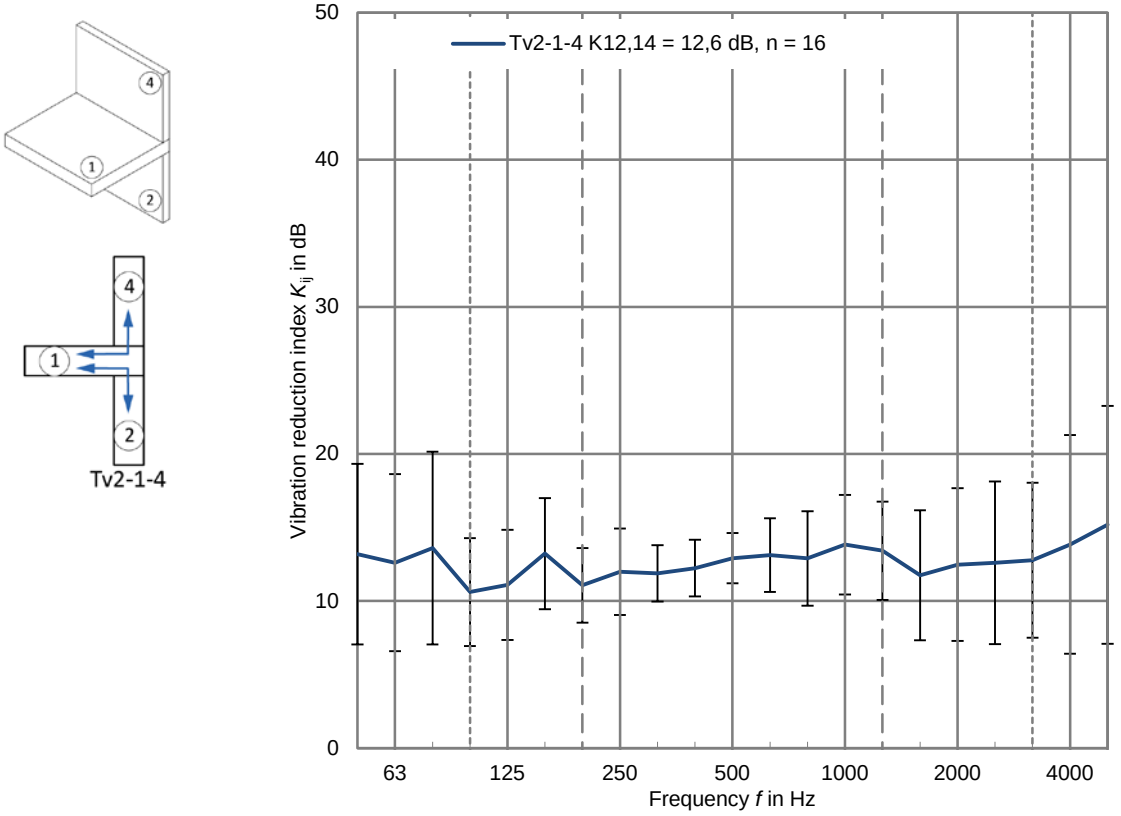


Figure 19 Average of the vibration reduction index for T-junction (Tv2-1-4) wall-floor without resilient layer, paths 1-2 and 1-4, $\overline{K}_{12,14}$ = 12.6 dB, n = 16

Table 32 Vibration reduction index for T-junction (Tv2-1-4) wall-floor without resilient layer, paths 1-2 and 1-4, $\overline{K}_{12,14}$ = 12.6 dB, n = 16

Vibration reduction index K_{ij} in dB																							
	$K_{ij,200-1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz	n
Min	9,6	0,6	2,2	3,2	4,4	2,4	4,0	6,4	7,9	8,6	9,2	9,4	7,8	8,6	8,5	8,6	5,6	4,6	5,1	4,4	3,7	2,5	
AVG	12,6	13,2	12,6	13,6	10,6	11,1	13,2	11,1	12,0	11,9	12,2	12,9	13,1	12,9	13,8	13,4	11,7	12,5	12,6	12,8	13,8	15,2	16
Max	15,6	21,2	20,7	22,5	15,8	16,4	17,8	15,7	17,1	15,3	16,1	15,5	17,2	18,5	19,5	19,4	17,7	19,9	21,2	21,5	27,6	28,4	
SD	1,7	6,1	6,0	6,6	3,7	3,8	3,8	2,5	2,9	1,9	1,9	1,7	2,5	3,2	3,4	3,3	4,4	5,2	5,5	5,3	7,4	8,1	

Table 33 Vibration reduction for T-junction (Tv2-1-4) wall-floor without resilient layer, paths 1-2 and 1-4

ID	Junction type	Path	Vibration reduction index K_{ij} in dB																						
			$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz
CSTB_01	Tv2-1-4	1-4	15,6	19,8	17,6	18,3	15,8	16,4	15,1	13,0	13,1	15,3	15,1	15,5	15,2	18,5	17,4	17,0	17,7	19,9	21,2	21,5	27,6	28,4
CSTB_01	Tv2-1-4	1-2	13,3	21,2	17,8	16,2	14,5	16,0	12,2	10,4	11,5	13,2	14,1	15,3	13,8	13,6	14,4	13,7	12,8	14,9	18,7	20,1	24,9	27,6
HsRo_12	Tv2-1-4	1-2	12,9	19,3	19,9	21,3	11,2	14,1	17,8	10,7	17,1	13,9	13,2	14,1	11,4	10,7	13,8	11,7	5,7	4,6	5,2	6,6	5,4	5,1
HsRo_12	Tv2-1-4	1-4	11,2	15,8	-	22,5	14,7	10,8	16,5	15,1	11,0	9,4	9,2	12,1	10,8	8,8	14,0	10,1	5,6	-	8,4	8,3	4,7	2,5
HsRo_13	Tv2-1-4	1-2	11,6	19,8	20,7	22,0	10,7	14,6	17,2	10,9	15,7	14,1	11,2	13,1	10,9	10,3	8,5	9,7	6,7	7,0	7,2	4,8	5,9	9,3
HsRo_13	Tv2-1-4	1-4	9,7	14,1	16,1	21,1	14,4	10,3	15,7	10,9	9,2	10,8	10,8	11,5	7,8	8,6	8,9	8,6	6,6	4,7	5,1	4,4	5,9	6,8
HsRo_14	Tv2-1-4	1-2	12,5	-	-	-	10,3	13,4	17,8	11,5	16,5	13,3	12,2	13,6	11,6	12,4	10,7	11,0	6,1	5,1	5,3	6,7	3,7	3,9
HsRo_14	Tv2-1-4	1-4	12,1	19,2	-	-	12,9	11,2	16,1	15,7	12,3	11,4	10,8	13,3	11,9	10,0	11,6	12,2	11,4	-	-	10,8	-	-
ift_10	Tv2-1-4	1-4	12,5	3,5	2,2	7,1	6,1	5,8	10,4	6,4	8,0	8,6	10,3	11,9	14,9	16,6	17,9	17,4	17,3	17,7	16,9	15,9	13,8	18,2
ift_10	Tv2-1-4	1-2	12,8	9,6	15,5	12,7	12,8	11,5	12,8	10,6	11,8	10,1	13,1	13,2	13,9	12,5	16,1	13,9	13,5	12,9	18,5	16,9	16,2	16,4
ift_11	Tv2-1-4	1-4	13,0	0,6	2,5	3,2	4,8	2,4	4,0	8,2	9,0	11,9	9,9	13,3	16,1	16,4	14,6	17,4	16,4	19,2	14,7	14,1	15,4	20,1
ift_11	Tv2-1-4	1-2	9,6	10,3	11,1	12,6	12,9	12,8	11,3	8,4	7,9	9,2	11,3	9,4	11,1	10,1	9,3	9,9	10,2	10,5	8,6	11,2	11,2	13,4
ift_41	Tv2-1-4	1-4	14,6	8,1	6,7	4,7	5,2	8,3	8,9	9,7	8,9	11,1	16,1	14,2	16,3	16,2	19,5	19,4	16,9	14,9	16,7	17,5	22,2	24,6
ift_41	Tv2-1-4	1-2	10,7	14,5	13,5	10,9	9,2	8,8	9,5	8,6	10,4	11,1	10,9	9,4	11,6	10,8	12,4	10,7	10,8	12,5	10,6	15,9	18,0	16,2
ift_42	Tv2-1-4	1-4	15,1	7,8	7,2	5,4	4,4	7,1	10,9	11,8	14,2	12,6	13,4	12,1	17,2	18,2	18,9	17,9	17,3	17,4	19,1	17,2	19,7	20,6
ift_42	Tv2-1-4	1-2	14,2	14,3	13,1	12,5	9,9	14,1	15,4	15,0	15,1	14,0	14,1	14,4	15,3	12,6	13,3	14,1	12,8	13,3	12,7	12,5	13,1	14,6

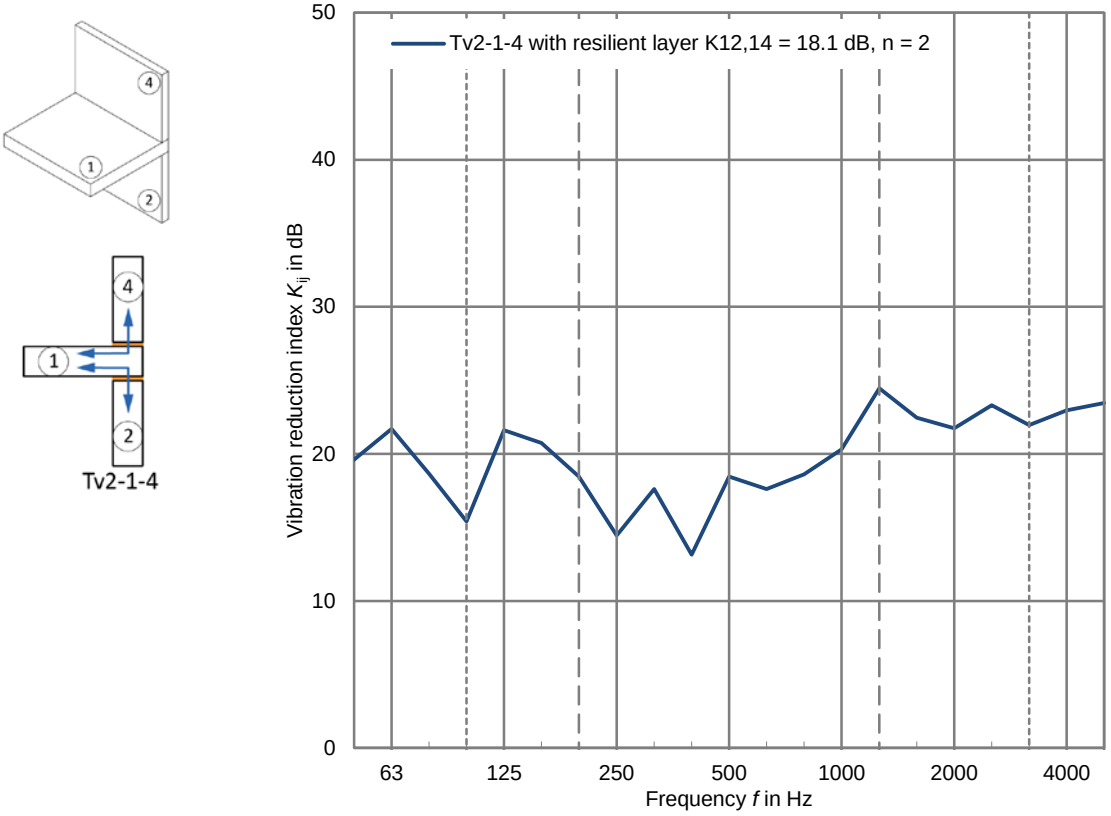


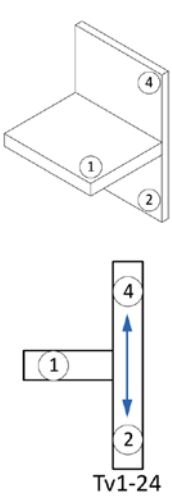
Figure 20 Average of the vibration reduction index for T-junction (Tv2-1-4) wall-floor with resilient layer, paths 1-2 and 1-4, $\overline{K}_{12,14}$ = 18.1 dB, n = 2

Table 34 Vibration reduction index for T-junction (Tv2-1-4) wall-floor with resilient layer, paths 1-2 and 1-4, $\overline{K}_{12,14}$ = 18.1 dB, n = 2

	Vibration reduction index K_{ij} in dB																						
	$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz	n
Min	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
AVG	18.1	19.6	21.7	18.7	15.4	21.6	20.8	18.5	14.5	17.6	13.2	18.5	17.6	18.6	20.3	24.5	22.5	21.8	23.3	22.0	23.0	23.5	2
Max	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Table 35 Vibration reduction indices for T-junction (Tv2-1-4) wall-floor with resilient layer, paths 1-2 and 1-4

ID	Junction type	Path	Vibration reduction index K_{ij} in dB																						
			$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz
HsRo_15	Tv2-1-4	1-2	19.6	21.6	24.6	19.9	19.6	26.1	24.5	21.6	15.7	19.1	12.8	18.7	19.4	23.7	21.0	24.4	23.5	21.6	23.2	23.0	22.9	22.7
HsRo_15	Tv2-1-4	1-4	16.6	17.6	18.8	17.4	11.2	17.1	17.0	15.3	13.2	16.1	13.5	18.2	15.8	13.5	19.6	24.5	21.4	21.9	23.4	20.9	23.0	24.2



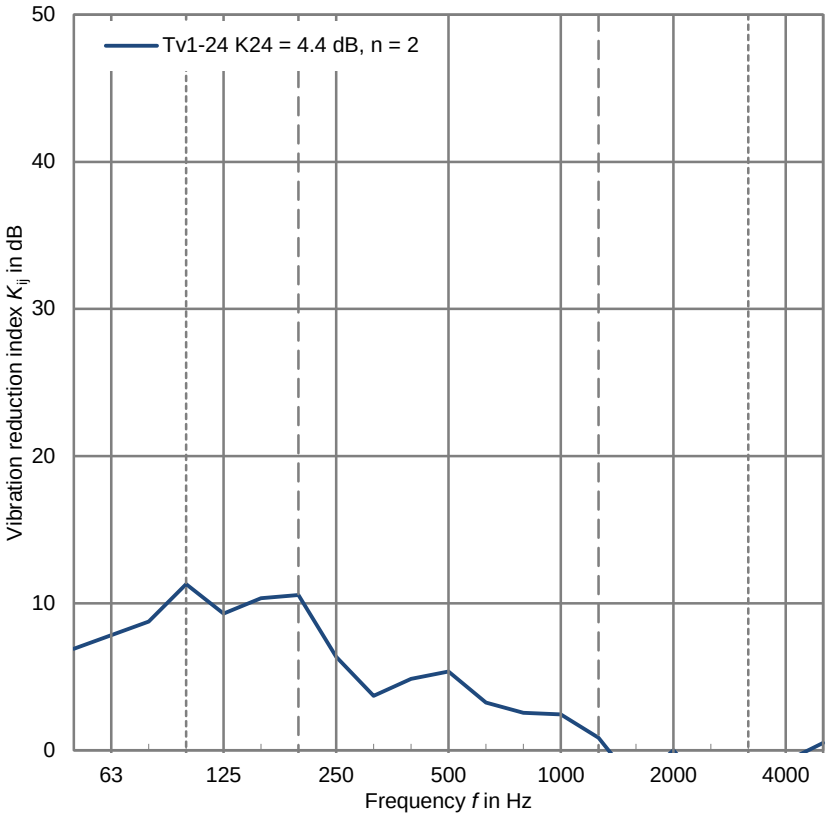


Figure 21 Average of the vibration reduction index for T-junction (Tv1-24) wall-floor without resilient layer, path 2-4, $\overline{K}_{24}$ = 4.4 dB, n = 2

Table 36 Vibration reduction index for T-junction (Tv1-24) wall-floor without resilient layer, path 2-4, $\overline{K}_{24}$ = 4.4 dB, n = 2

	Vibration reduction index K_{ij} in dB																						
	$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz	n
Min	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
AVG	4.4	6.9	#NV	8.8	11.3	9.3	10.4	10.6	6.4	3.7	4.9	5.4	3.3	2.6	2.5	0.9	-2.4	0.0	-3.0	-3.6	-0.8	0.5	2
Max	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Table 37 Vibration reduction indices for T-junction (Tv1-24) wall-floor without resilient layer, path 2-4

			Vibration reduction index K_{ij} in dB																						
ID	Junction type	Path	$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz
HsRo_10	Tv1-24	2-4	5.0	5.7	#NV	8.2	11.4	11.4	11.8	13.0	7.4	4.3	5.3	5.7	3.6	2.2	2.5	1.0	-3.1	-0.5	-3.5	-4.3	-0.5	0.5
HsRo_11	Tv1-24	2-4	3.9	8.1	#NV	9.3	11.2	7.2	8.9	8.1	5.3	3.1	4.4	5.0	2.9	2.9	2.4	0.7	-1.6	0.5	-2.5	-2.8	-1.0	

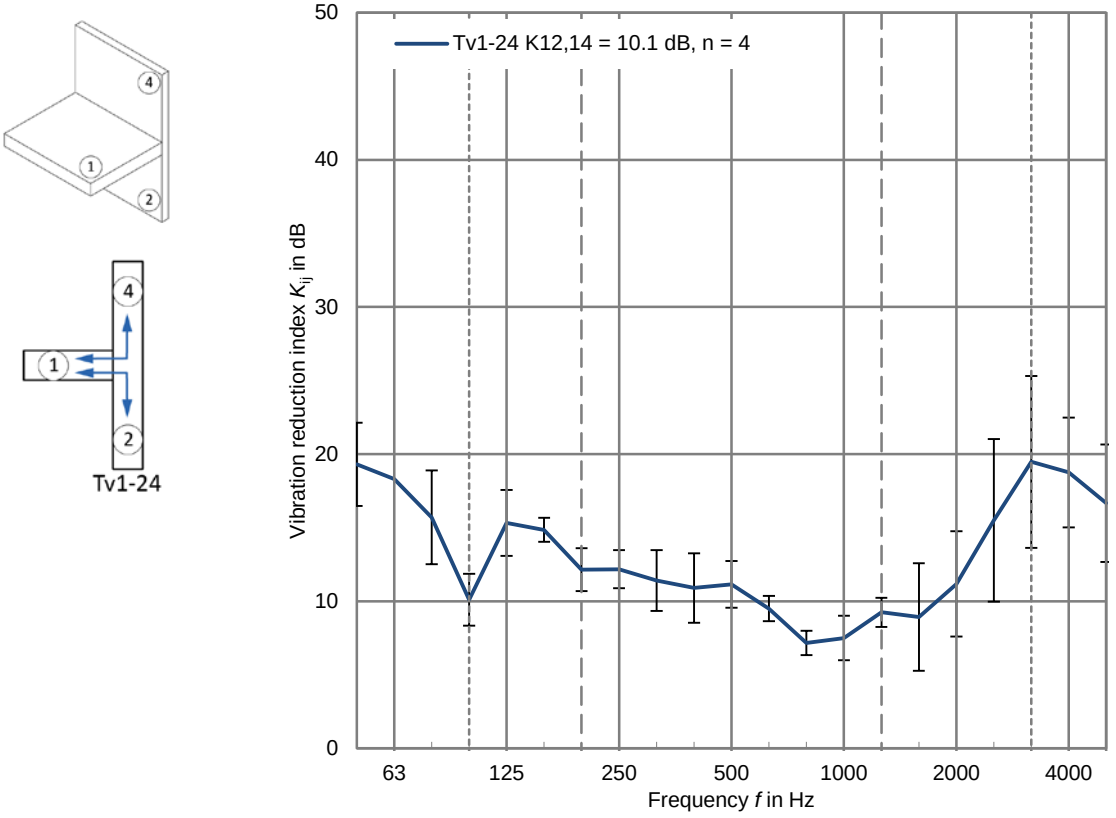


Figure 22 Average of the vibration reduction index for T-junction (Tv2-1-4) wall-floor without resilient layer, paths 1-2 and 1-4, $\overline{K}_{12,14}$ = 10.1 dB, n = 4

Table 38 Vibration reduction index for T-junction (Tv2-1-4) wall-floor without resilient layer, paths 1-2 and 1-4, $\overline{K}_{12,14}$ = 10.1 dB, n = 4

	Vibration reduction index K_{ij} in dB																					
	$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz	n
Min	8.4	14.8	18.3	12.0	7.1	13.4	13.7	10.5	10.2	9.1	8.2	8.9	8.5	6.2	5.9	7.8	4.0	7.4	8.1	12.2	13.8	12.9	
AVG	10.1	19.3	18.3	15.7	10.1	15.3	14.9	12.2	12.2	11.4	10.9	11.2	9.5	7.2	7.5	9.3	8.9	11.2	15.5	19.5	18.8	16.7	4
Max	11.7	22.6	18.3	19.3	11.6	19.1	16.0	14.1	13.8	13.7	13.3	13.0	10.8	8.3	9.8	10.5	13.7	14.9	21.9	25.7	23.4	22.2	
SD	1.4	2.8	#NV	3.2	1.8	2.2	0.8	1.5	1.3	2.1	2.4	1.6	0.9	0.8	1.5	1.0	3.7	3.6	5.5	5.8	3.7	4.0	

Table 39 Vibration reduction indices for T-junction (Tv2-1-4) wall-floor without resilient layer, paths 1-2 and 1-4

ID	Junction type	Path	Vibration reduction index K_{ij} in dB																				
			$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz
HsRo_10	Tv1-24	1-2	9.2	14.8	-	18.4	11.6	19.1	16.0	11.0	12.6	9.1	8.9	10.5	9.0	6.6	6.4	9.0	7.2	7.8	12.4	15.3	16.7	12.9
HsRo_10	Tv1-24	1-4	8.4	19.9	-	19.3	10.8	13.4	14.8	10.5	10.2	9.6	8.2	8.9	8.5	6.2	5.9	7.8	4.0	7.4	8.1	12.2	13.8	14.9
HsRo_11	Tv1-24	1-2	11.7	22.6	-	12.0	7.1	14.0	14.9	13.0	13.8	13.7	13.3	13.0	10.8	7.6	9.8	10.5	13.7	14.9	21.9	25.7	23.4	-
HsRo_11	Tv1-24	1-4	11.2	19.9	18.3	13.1	10.9	14.8	13.7	14.1	12.1	13.2	13.2	12.2	9.7	8.3	7.9	9.7	10.8	14.6	19.6	24.7	21.1	22.2

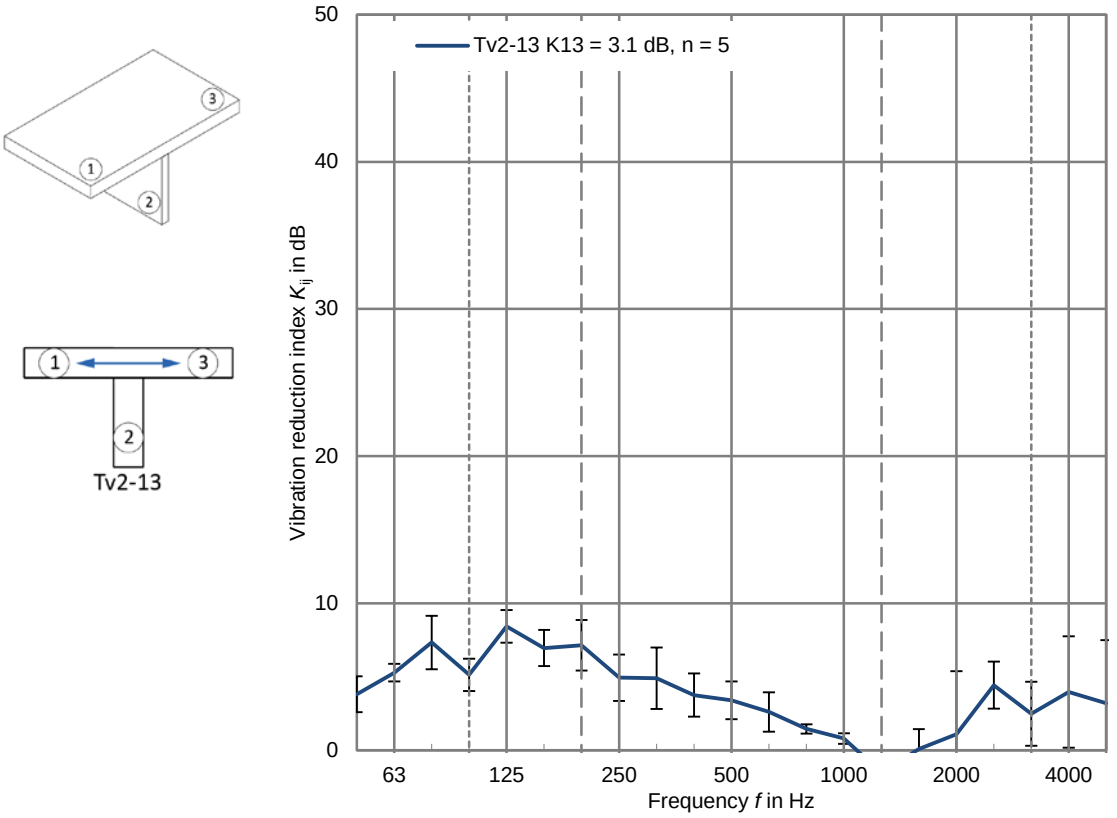


Figure 23 Average of the vibration reduction index for T-junction (Tv2-13) wall-floor without resilient layer, path 1-3, $\overline{K}_{13}$ = 3.1 dB, n = 5

Table 40 Vibration reduction index for T-junction (Tv2-13) wall-floor without resilient layer, path 1-3, $\overline{K}_{13}$ = 3.1 dB, n = 5

	Vibration reduction index K_{ij} in dB																					
	$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz	n
Min	1.9	2.0	4.3	4.8	4.0	6.6	4.7	4.8	2.2	1.9	1.3	1.7	0.7	1.0	0.4	-2.7	-1.6	-1.7	2.8	-1.0	0.0	-0.7	
AVG	3.1	3.8	5.3	7.3	5.1	8.4	7.0	7.1	4.9	4.9	3.8	3.4	2.6	1.5	0.8	-1.5	0.1	1.1	4.4	2.5	4.0	3.2	5
Max	3.8	5.4	5.9	10.3	6.9	9.9	8.2	9.0	6.2	7.1	5.0	5.0	4.6	1.8	1.4	-1.0	1.8	9.6	7.1	5.5	10.3	11.6	
SD	0.8	1.2	0.6	1.8	1.1	1.1	1.2	1.7	1.6	2.1	1.5	1.3	1.3	0.3	0.4	0.6	1.3	4.3	1.6	2.2	3.8	4.3	

Table 41 Vibration reduction indices for T-junction (Tv2-13) wall-floor without resilient layer, path 1-3

ID	Junction type	Path	Vibration reduction index K_{ij} in dB																					
			$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz
ift_01	Tv2-13	1-3	3.4	4.0	5.5	8.1	6.9	9.2	7.9	8.0	6.2	6.6	4.8	5.0	0.7	1.0	1.0	-2.7	-1.6	-1.4	2.9	5.5	6.2	2.0
ift_02	Tv2-13	1-3	3.8	4.7	5.9	6.5	5.9	8.6	8.2	9.0	6.1	6.0	5.0	4.5	2.1	1.6	1.4	-1.1	-0.1	-0.1	2.8	1.9	1.4	1.5
ift_03	Tv2-13	1-3	3.8	2.0	4.3	4.8	4.3	6.6	7.2	8.5	6.1	7.1	4.9	3.6	2.2	1.7	0.7	-1.0	-1.0	-1.7	4.1	2.2	2.0	1.7
ift_04	Tv2-13	1-3	1.9	3.0	4.9	7.1	4.0	7.9	4.7	4.8	2.2	1.9	2.8	1.7	3.4	1.8	0.5	-1.6	1.4	-0.8	5.2	-1.0	0.0	-0.7
ift_05	Tv2-13	1-3	2.3	5.4	5.9	10.3	4.5	9.9	6.7	5.4	4.2	2.9	1.3	2.2	4.6	1.2	0.4	-1.2	1.8	9.6	7.1	3.9	10.3	11.6

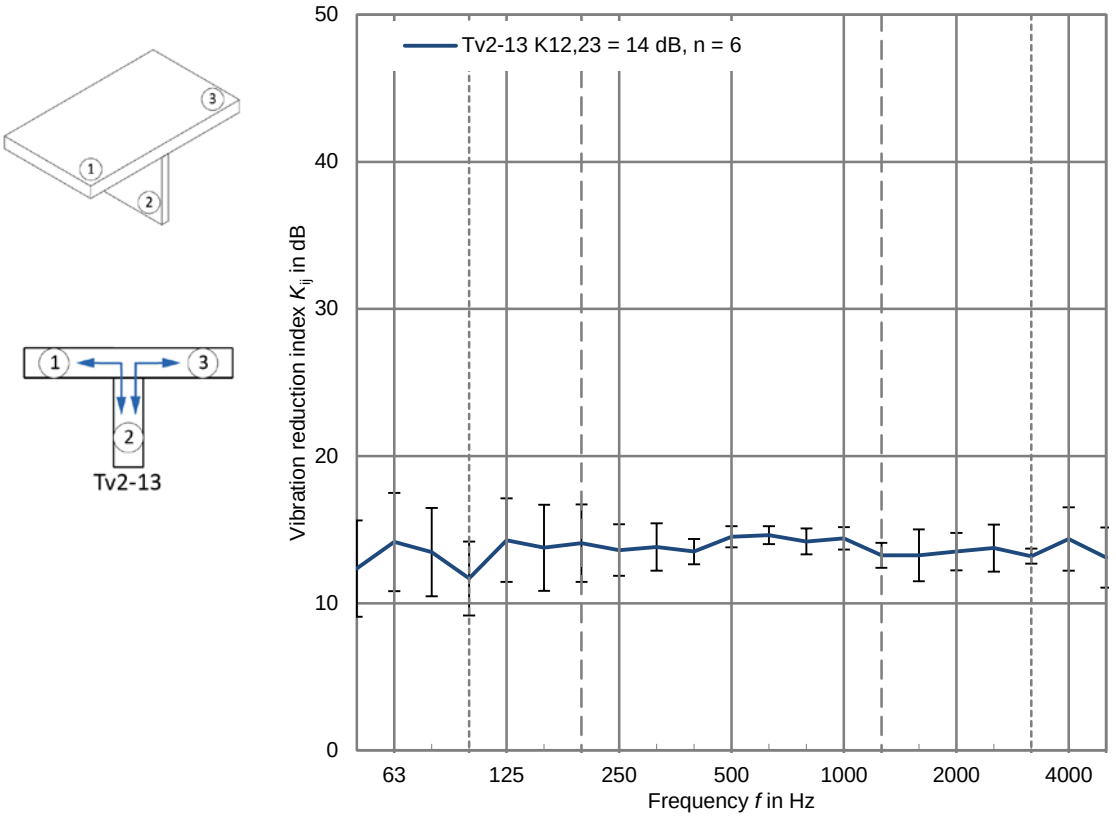


Figure 24 Average of the vibration reduction index for T-junction (Tv2-13) wall-floor without resilient layer, paths 1-2 and 2-3, $\overline{K}_{13,23}$ = 14 dB, n = 6

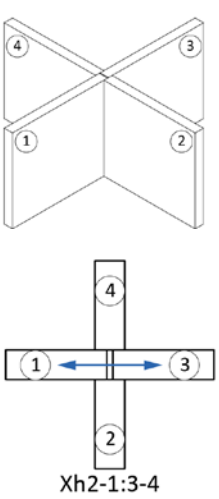
Table 42 Vibration reduction index for T-junction (Tv2-13) wall-floor without resilient layer, paths 1-2 and 2-3, $\overline{K}_{13,23}$ = 14 dB, n = 6

	Vibration reduction index K_{ij} in dB																						
	$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz	n
Min	12.9	7.7	8.6	8.9	8.2	10.3	9.9	10.3	11.4	11.2	12.4	13.8	14.0	12.7	13.2	12.2	10.5	11.3	12.0	12.6	11.8	10.9	
AVG	14.0	12.4	14.2	13.5	11.7	14.3	13.8	14.1	13.6	13.8	13.5	14.5	14.6	14.2	14.4	13.3	13.3	13.5	13.8	13.2	14.4	13.1	6
Max	15.5	16.6	17.4	17.0	15.6	17.4	17.2	17.2	16.3	16.0	15.2	15.4	15.6	15.6	15.7	14.4	15.1	15.1	16.8	14.2	18.2	16.6	
SD	0.9	3.3	3.3	3.0	2.5	2.8	2.9	2.6	1.8	1.6	0.9	0.7	0.6	0.9	0.8	0.8	1.8	1.3	1.6	0.5	2.2	2.0	

Table 43 Vibration reduction indices for for T-junction (Tv2-13) wall-floor without resilient layer, paths 1-2 and 2-3

ID	Junction type	Path	Vibration reduction index K_{ij} in dB																						
			$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz
ift_01	Tv2-13	1-2	14.7	12.8	16.9	15.0	14.2	16.5	17.2	17.2	16.3	15.2	13.5	15.4	14.0	13.7	14.1	12.6	11.1	13.0	14.5	13.1	15.2	11.5
ift_01	Tv2-13	2-3	15.5	16.6	17.4	17.0	15.6	17.4	17.1	17.0	15.2	16.0	15.2	14.8	15.4	15.6	15.7	14.3	15.1	14.6	16.8	14.2	18.2	16.6
ift_02	Tv2-13	1-2	13.6	13.1	14.9	14.6	11.3	14.4	14.1	14.3	12.9	14.3	13.5	13.8	14.1	12.7	14.1	12.5	10.5	11.3	12.0	13.3	13.0	10.9
ift_02	Tv2-13	2-3	14.2	15.5	16.5	15.5	10.9	16.4	14.2	14.7	14.1	13.5	13.1	15.4	14.6	14.7	13.2	14.4	13.9	13.0	12.9	13.3	12.8	13.2
ift_04	Tv2-13	1-2	13.3	7.7	10.7	9.8	10.0	10.6	9.9	10.3	11.4	12.6	13.3	13.9	15.6	14.0	14.8	13.5	14.7	14.0	12.5	12.7	15.3	14.8
ift_04	Tv2-13	2-3	12.9	8.5	8.6	8.9	8.2	10.3	10.1	11.1	11.8	11.2	12.4	13.8	14.1	14.5	14.6	12.2	14.3	15.1	13.7	12.6	11.8	11.6

6.3 Vibration reduction indices cross-junctions



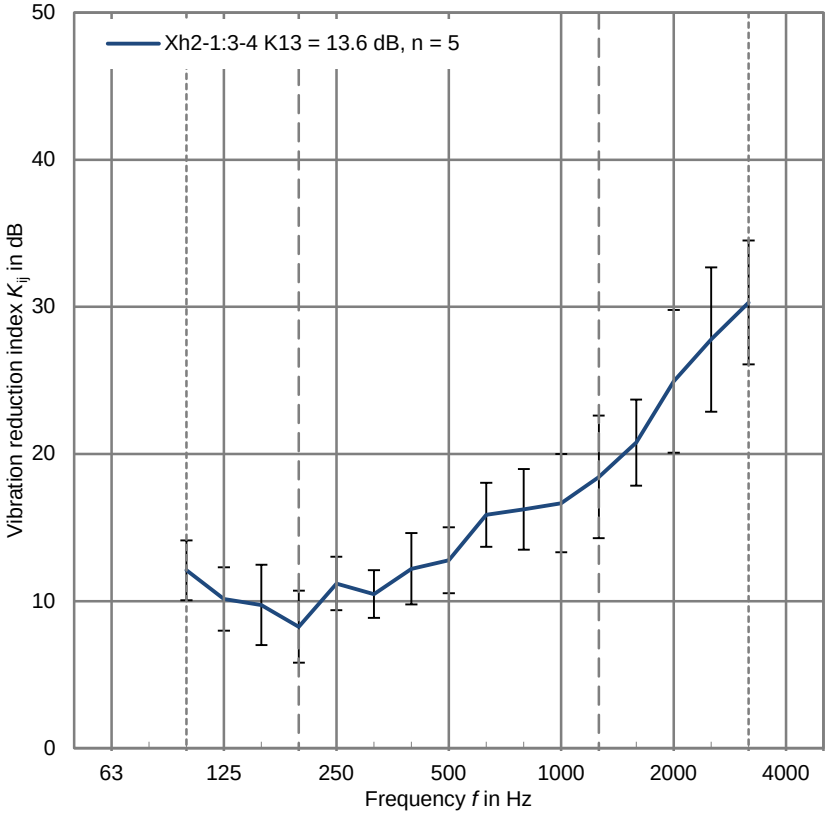


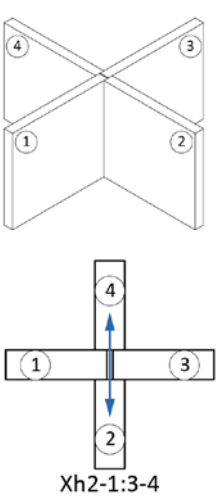
Figure 25 Average of the vibration reduction index for X-junction (Xh2-1:3-4), wall-wall without resilient layer, path 1-3, $\overline{K}_{13}$ = 13.6 dB, n = 5

Table 44 Vibration reduction index for X-junction (Xh2-1:3-4), wall-wall without resilient layer, path 1-3, $\overline{K}_{13}$ = 13.6 dB, n = 5

	Vibration reduction index K_{ij} in dB																						
	$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz	n
Min	12.0				9.5	7.9	5.5	5.6	7.8	8.0	8.2	9.6	13.6	12.6	12.6	13.2	16.8	18.6	20.7	22.9			
AVG	13.6				12.1	10.1	9.7	8.3	11.2	10.5	12.2	12.8	15.9	16.2	16.7	18.4	20.8	24.9	27.8	30.3			5
Max	15.9				15.0	13.7	13.6	12.0	12.7	12.5	15.1	16.5	19.4	19.2	21.7	23.8	24.4	32.7	34.7	35.3			
SD	1.5				2.0	2.1	2.7	2.4	1.8	1.6	2.4	2.2	2.2	2.7	3.3	4.2	2.9	4.9	4.9	4.2			

Table 45 Vibration reduction indices for X-junction (Xh2-1:3-4), wall-wall without resilient layer, path 1-3

ID	Junction type	Path	Vibration reduction index K_{ij} in dB																				
			$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz
UniBo_11	Xh2-1:3-4	1-3	12.5	-	-	-	12.9	11.2	11.6	9.8	12.7	12.5	11.6	11.9	13.8	12.6	13.4	13.9	16.8	18.6	20.7	22.9	-	-
UniBo_12	Xh2-1:3-4	1-3	12.6	-	-	-	13.0	9.8	5.5	5.6	7.8	8.0	11.8	9.6	13.6	17.6	18.3	20.8	19.8	27.4	30.3	29.1	-	-
UniBo_13	Xh2-1:3-4	1-3	14.8	-	-	-	9.5	8.1	9.0	8.2	12.7	11.5	14.3	13.3	17.1	18.5	17.3	20.5	23.9	24.4	29.2	32.8	-	-
UniBo_14	Xh2-1:3-4	1-3	15.9	-	-	-	10.1	7.9	9.0	5.7	11.0	11.1	15.1	16.5	19.4	19.2	21.7	23.8	24.4	32.7	34.7	35.3	-	-
UniBo_32	Xh2-1:3-4	1-3	12.0	-	-	-	15.0	13.7	13.6	12.0	11.8	9.3	8.2	12.6	15.4	13.3	12.6	13.2	19.0	21.6	24.0	31.4	-	-



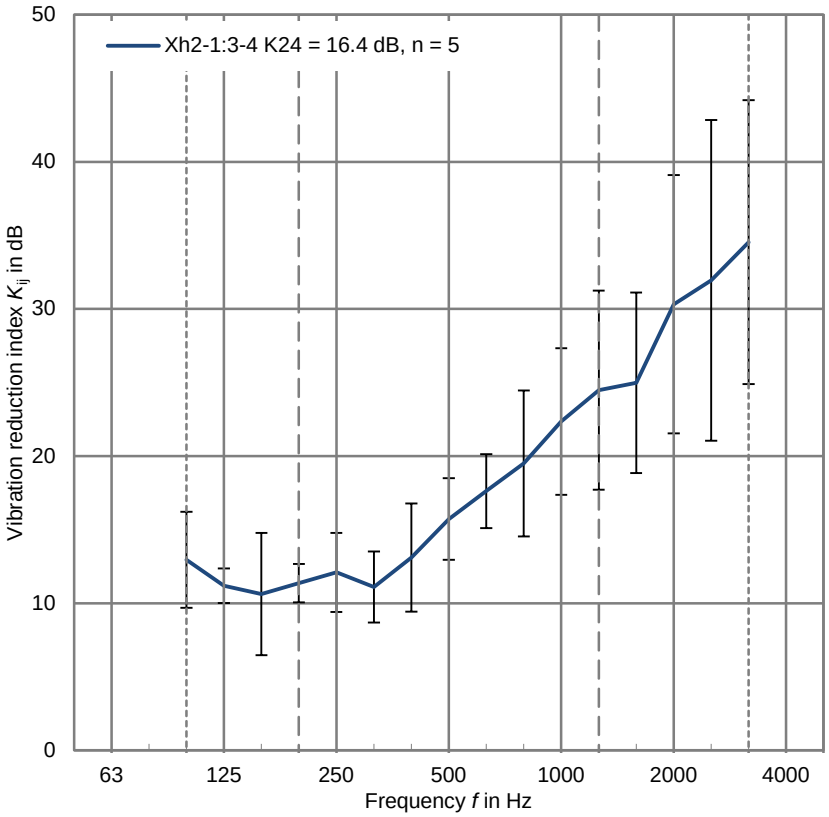


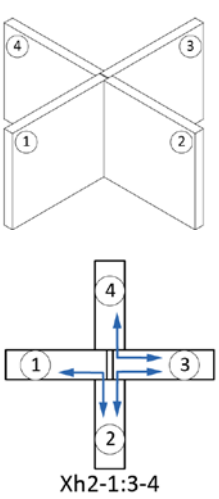
Figure 26 Average of the vibration reduction index for X-junction (Xh2-1:3-4), wall-wall without resilient layer, path 2-4, $\overline{K}_{24}$ = 16.4 dB, n = 5

Table 46 Vibration reduction index for X-junction (Xh2-1:3-4), wall-wall without resilient layer, path 2-4, $\overline{K}_{24}$ = 16.4 dB, n = 5

	Vibration reduction index K_{ij} in dB																					
	$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz	n
Min	10.6				9.8	9.6	2.5	9.7	8.7	8.7	6.6	11.1	13.1	11.7	13.4	12.6	13.8	14.4	12.4	16.9			
AVG	16.4				13.0	11.2	10.6	11.4	12.1	11.1	13.1	15.7	17.6	19.5	22.4	24.5	25.0	30.3	31.9	34.5			5
Max	19.6				18.9	12.3	13.6	12.9	15.5	14.6	17.0	18.5	19.8	26.4	26.7	31.8	31.9	38.6	42.7	42.6			
SD	3.1				3.3	1.2	4.2	1.3	2.7	2.4	3.7	2.8	2.5	5.0	5.0	6.8	6.1	8.8	10.9	9.7			

Table 47 Vibration reduction indices for X-junction (Xh2-1:3-4), wall-wall without resilient layer, path 2-4

ID	Junction type	Path	Vibration reduction index K_{ij} in dB																				
			$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz
UniBo_11	Xh2-1:3-4	2-4	15.8	-	-	-	12.5	12.1	12.7	12.3	14.6	13.3	11.9	14.0	16.8	16.8	20.5	21.7	23.9	27.5	28.3	31.6	-	-
UniBo_12	Xh2-1:3-4	2-4	17.5	-	-	-	9.8	9.6	13.6	12.0	9.5	8.7	15.9	17.5	18.7	20.8	26.7	28.2	27.9	35.7	36.4	42.6	-	-
UniBo_13	Xh2-1:3-4	2-4	19.6	-	-	-	13.4	12.3	11.0	12.9	15.5	14.6	17.0	17.5	19.7	26.4	25.1	28.1	27.4	35.4	39.9	39.6	-	-
UniBo_14	Xh2-1:3-4	2-4	18.3	-	-	-	10.2	9.9	2.5	9.9	12.2	10.1	14.1	18.5	19.8	21.8	26.1	31.8	31.9	38.6	42.7	42.0	-	-
UniBo_32	Xh2-1:3-4	2-4	10.6	-	-	-	18.9	12.0	13.3	9.7	8.7	8.8	6.6	11.1	13.1	11.7	13.4	12.6	13.8	14.4	12.4	16.9	-	-



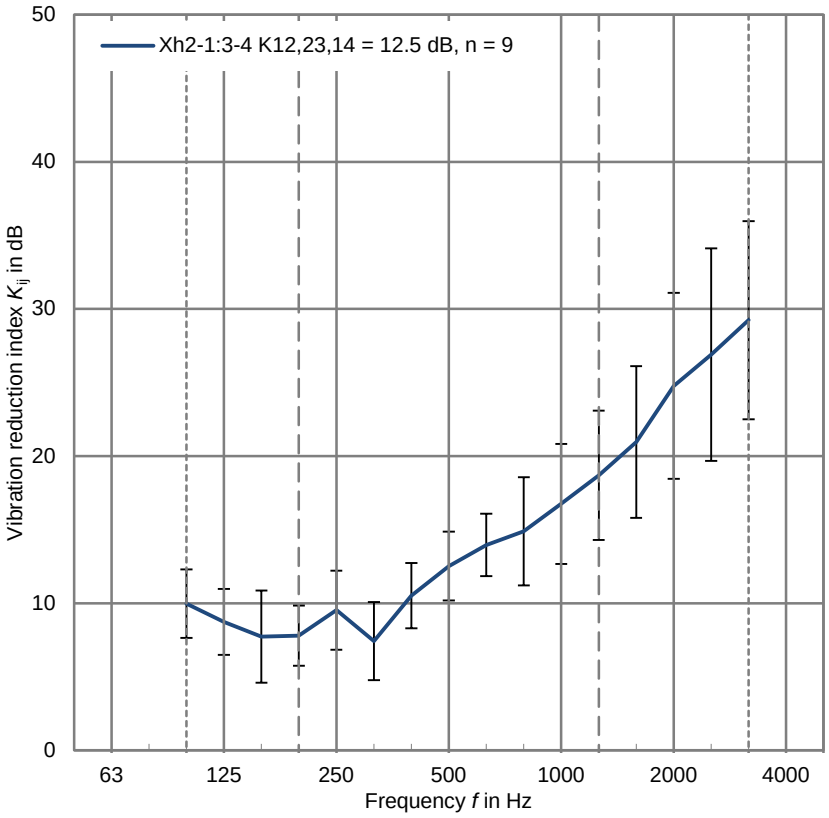


Figure 27 Average of the vibration reduction index for X-junction (Xh2-1:3-4), wall-wall without resilient layer, paths 1-2, 2-3 and 1-4, $\overline{K}_{12,23,14}$ = 12.5 dB, n = 9

Table 48 Vibration reduction index for X-junction (Xh2-1:3-4), wall-wall without resilient layer, paths 1-2, 2-3 and 1-4, $\overline{K}_{12,23,14}$ = 12.5 dB, n = 9

	Vibration reduction index K_{ij} in dB																						
	$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz	n
Min	9.7				5.9	5.1	1.7	4.3	5.1	3.3	8.1	9.4	11.2	9.5	11.1	12.3	15.0	16.8	17.5	21.2			
AVG	12.5				10.0	8.7	7.7	7.8	9.5	7.4	10.5	12.5	14.0	14.9	16.8	18.7	21.0	24.8	26.9	29.2			9
Max	16.6				13.1	12.4	13.7	10.8	14.1	12.2	14.6	17.1	16.9	20.9	22.0	25.1	28.7	33.5	37.2	39.3			
SD	2.5				2.3	2.2	3.1	2.1	2.7	2.7	2.2	2.3	2.1	3.7	4.1	4.4	5.1	6.3	7.2	6.7			

Table 49 Vibration reduction indices for X-junction (Xh2-1:3-4), wall-wall without resilient layer, paths 1-2, 2-3 and 1-4

ID	Junction type	Path	Vibration reduction index K_{ij} in dB																					
			$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz
UniBo_11	Xh2-1:3-4	1-2	15.2				13.1	12.4	13.7	10.8	13.2	12.2	12.8	14.4	15.9	17.0	19.7	21.2	25.0	27.9	29.7	32.6		
UniBo_11	Xh2-1:3-4	2-3	9.8				9.9	10.4	8.7	8.0	9.8	7.7	8.4	9.4	11.2	10.1	11.5	12.3	15.0	16.8	18.0	21.2		
UniBo_12	Xh2-1:3-4	1-2	14.3				11.0	8.6	8.9	9.7	10.1	7.1	12.3	13.4	15.1	17.8	19.8	23.3	24.9	30.8	33.7	37.3		
UniBo_12	Xh2-1:3-4	2-3	10.4				7.8	8.7	7.1	6.5	6.7	3.3	8.7	10.0	13.1	12.5	16.1	17.0	17.2	21.2	20.2	24.3		
UniBo_13	Xh2-1:3-4	1-2	16.6				11.4	8.5	6.9	10.1	14.1	10.9	14.6	17.1	16.9	20.9	22.0	22.8	28.7	33.4	37.2	39.3		
UniBo_13	Xh2-1:3-4	2-3	10.7				5.9	6.3	7.3	6.3	8.4	6.1	8.5	11.6	12.2	13.6	12.8	16.5	17.6	19.6	23.6	25.1		
UniBo_14	Xh2-1:3-4	1-2	14.7				10.5	7.2	5.1	6.0	9.9	8.1	11.5	14.3	16.8	18.4	22.0	25.1	27.5	33.5	36.1	36.4		
UniBo_14	Xh2-1:3-4	2-3	10.7				7.4	5.1	1.7	4.3	5.1	4.4	9.8	11.8	12.9	14.2	15.8	17.5	16.9	22.2	26.1	25.4		
UniBo_32	Xh2-1:3-4	1-4	9.7				12.7	11.4	10.2	8.5	8.5	7.0	8.1	10.7	11.5	9.5	11.1	12.5	15.8	17.5	17.5	21.6		

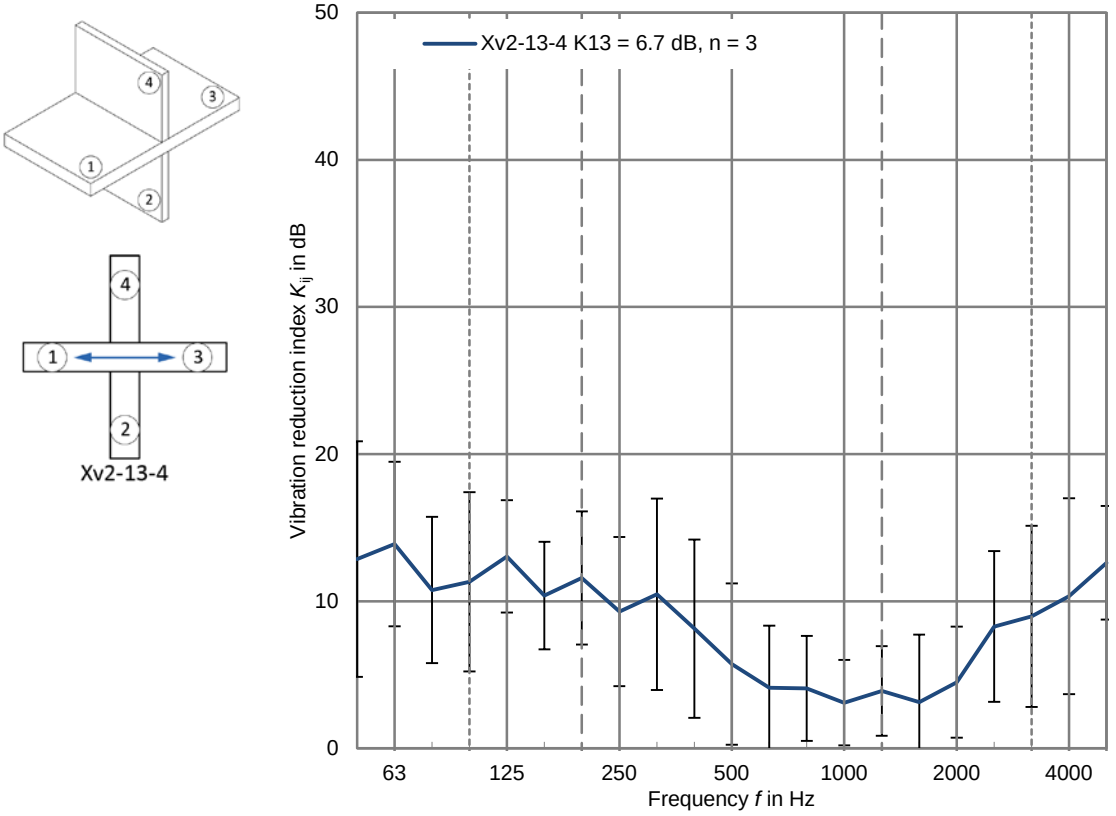


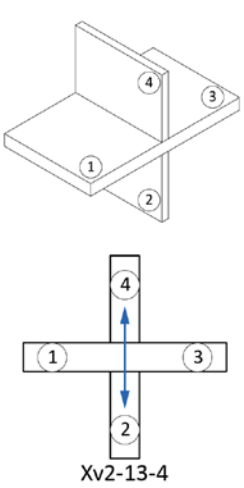
Figure 28 Average of the vibration reduction index for X-junction (Xv2-13-4), wall-floor without resilient layer, path 1-3, $\overline{K}_{13}$ = 6.7 dB, n = 3

Table 50 Vibration reduction index for X-junction (Xv2-13-4), wall-floor without resilient layer, path 1-3, $\overline{K}_{13}$ = 6.7 dB, n = 3

	Vibration reduction index K_{ij} in dB																						
	$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz	n
Min	0.5	5.7	9.1	4.4	3.5	9.8	6.0	5.6	2.1	2.2	-0.4	-2.0	-1.8	-0.7	-0.7	0.0	-2.7	0.0	1.8	0.3	1.0	7.2	
AVG	6.7	12.9	13.9	10.8	11.3	13.0	10.4	11.6	9.3	10.5	8.1	5.7	4.1	4.1	3.1	3.9	3.1	4.5	8.3	9.0	10.3	12.6	3
Max	11.0	24.0	21.7	16.5	18.4	18.4	14.9	16.6	13.1	18.1	13.2	10.2	7.5	7.9	6.3	7.4	8.5	9.3	14.3	13.5	16.0	15.7	
SD	4.5	8.0	5.6	5.0	6.1	3.8	3.6	4.5	5.1	6.5	6.1	5.5	4.2	3.6	2.9	3.0	4.6	3.8	5.1	6.2	6.7	3.9	

Table 51 Vibration reduction indices for X-junction (Xv2-13-4), wall-floor without resilient layer, path 1-3

ID	Junction type	Path	Vibration reduction index K_{ij} in dB																					
			$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz
ift_47	Xv2-13-4	1-3	0.5	5.7	9.1	11.4	12.0	9.8	6.0	5.6	2.1	2.2	-0.4	-2.0	-1.8	-0.7	-0.7	0.0	-2.7	0.0	1.8	0.3	1.0	7.2
CSTB_02	Xv2-13-4	1-3	11.0	24.0	21.7	16.5	18.4	18.4	14.9	16.6	12.7	18.1	13.2	8.9	7.5	7.9	6.3	7.4	8.5	9.3	14.3	13.5	16.0	15.0
CSTB_03	Xv2-13-4	1-3	8.7	8.9	10.8	4.4	3.5	11.0	10.3	12.5	13.1	11.0	11.5	10.2	6.7	5.0	3.8	4.4	3.5	4.2	8.8	13.2	14.0	15.7



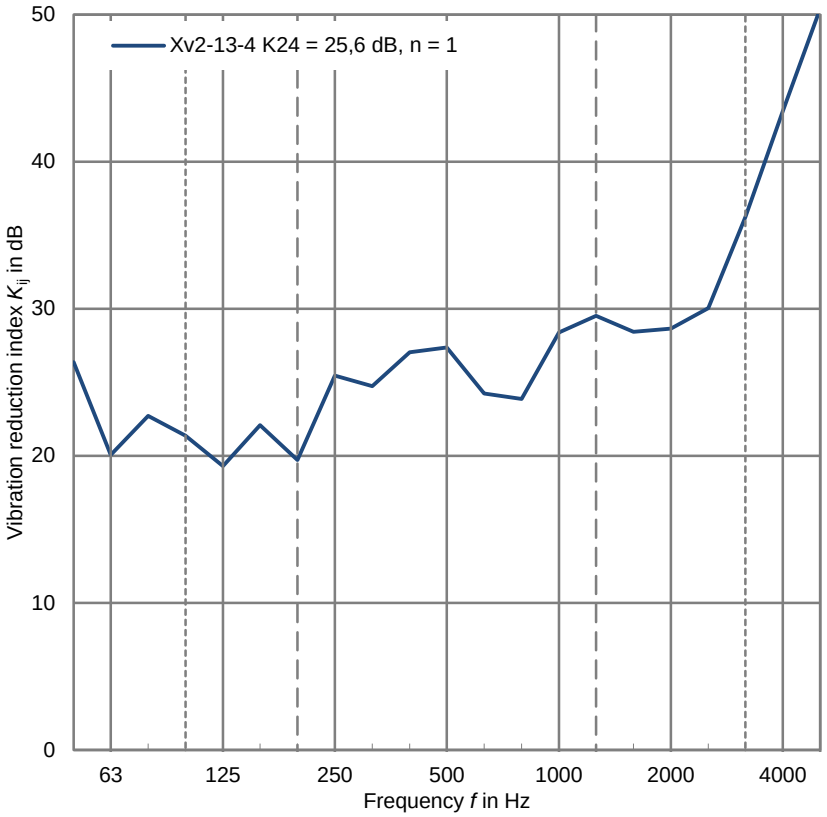


Figure 29 The vibration reduction index for X-junction (Xv2-13-4), wall-floor without resilient layer, path 2-4, $\bar{K}_{24}$ = 25.6 dB, n = 1

Table 52 Vibration reduction indices for X-junction (Xv2-13-4), wall-floor without resilient layer, path 2-4

ID	Junction type	Path	Vibration reduction index K_{ij} in dB																							
			$K_{ij,200-1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz
CSTB_02	Xv2-13-4	2-4	25,6	26,4	20,1	22,7	21,4	19,3	22,1	19,7	25,4	24,7	27,0	27,4	24,2	23,9	28,4	29,5	28,4	28,7	30,0	36,2	43,4	50,4

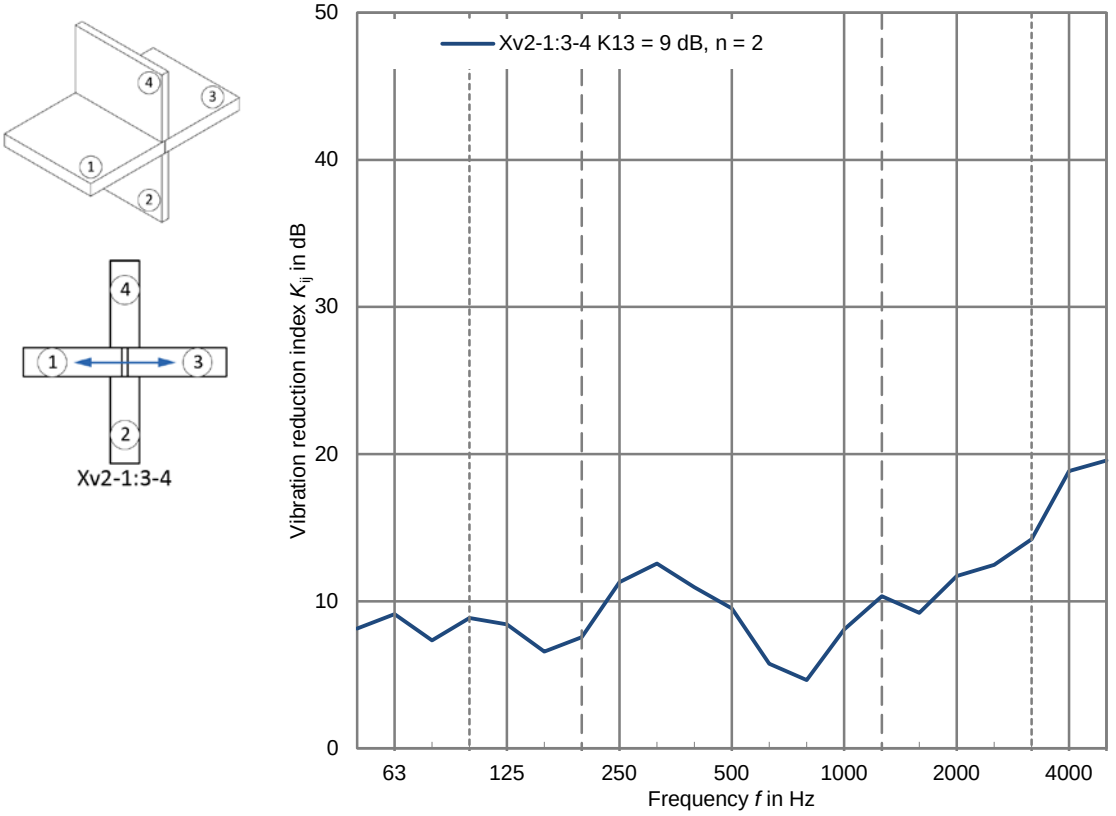


Figure 30 Average of the vibration reduction index for X-junction (Xv2-1:3-4), wall-floor without resilient layer, path 1-3, $\overline{K}_{13}$ = 9 dB, n = 2

Table 53 Vibration reduction index for X-junction (Xv2-1:3-4), wall-floor without resilient layer, path 1-3, $\overline{K}_{13}$ = 9 dB, n = 2

	Vibration reduction index K_{ij} in dB																						
	$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz	n
Min	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
AVG	9.0	8.1	9.1	7.3	8.9	8.4	6.6	7.6	11.3	12.6	10.9	9.5	5.8	4.6	8.1	10.3	9.2	11.7	12.5	14.2	18.9	19.6	2
Max	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Table 54 Vibration reduction indices for X-junction (Xv2-1:3-4), wall-floor without resilient layer, path 1-3

ID	Junction type	Path	Vibration reduction index K_{ij} in dB																						
			$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz
ift_44	Xv2-1:3-4	1-3	9.1	8.3	9.2	8.0	8.9	8.3	7.1	6.6	11.4	13.0	10.9	9.6	5.5	5.3	8.7	11.2	8.4	12.3	13.3	14.1	18.4	20.6
ift_45	Xv2-1:3-4	1-3	8.8	8.0	9.0	6.6	8.9	8.5	6.0	8.5	11.2	12.2	11.0	9.5	6.0	4.0	7.5	9.5	10.0	11.1	11.7	14.3	19.3	18.6

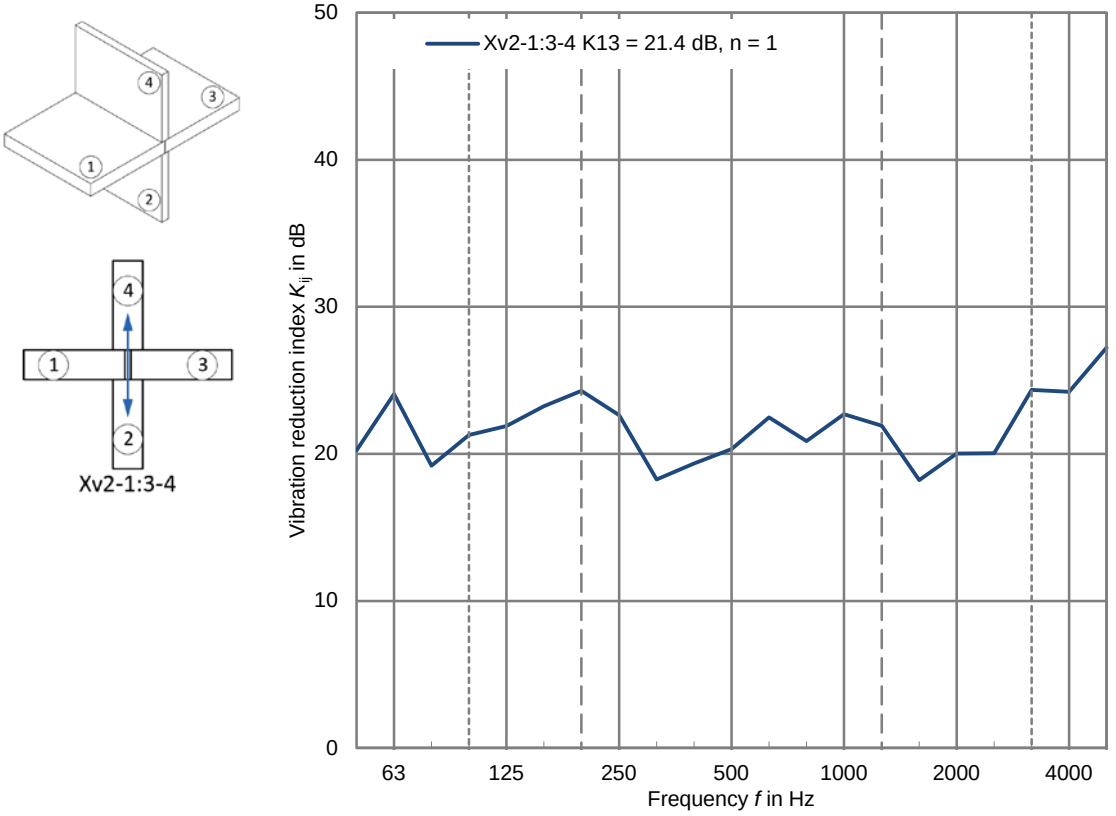


Figure 31 Average of the vibration reduction index for X-junction (Xv2-1:3-4), wall-floor without resilient layer, path 2-4, $\overline{K}_{24}$ = 21,4 dB, n = 1

Table 55 Vibration reduction index for X-junction (Xv2-1:3-4), wall-floor without resilient layer, path 2-4, $\overline{K}_{24}$ = 21.4 dB, n = 1

Vibration reduction index K_{ij} in dB																							
	$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz	n
Min	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
AVG	21.4	20.2	24.1	19.2	21.3	21.9	23.2	24.3	22.6	18.3	19.3	20.3	22.5	20.9	22.7	21.9	18.2	20.0	20.0	24.4	24.2	27.2	1
Max	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

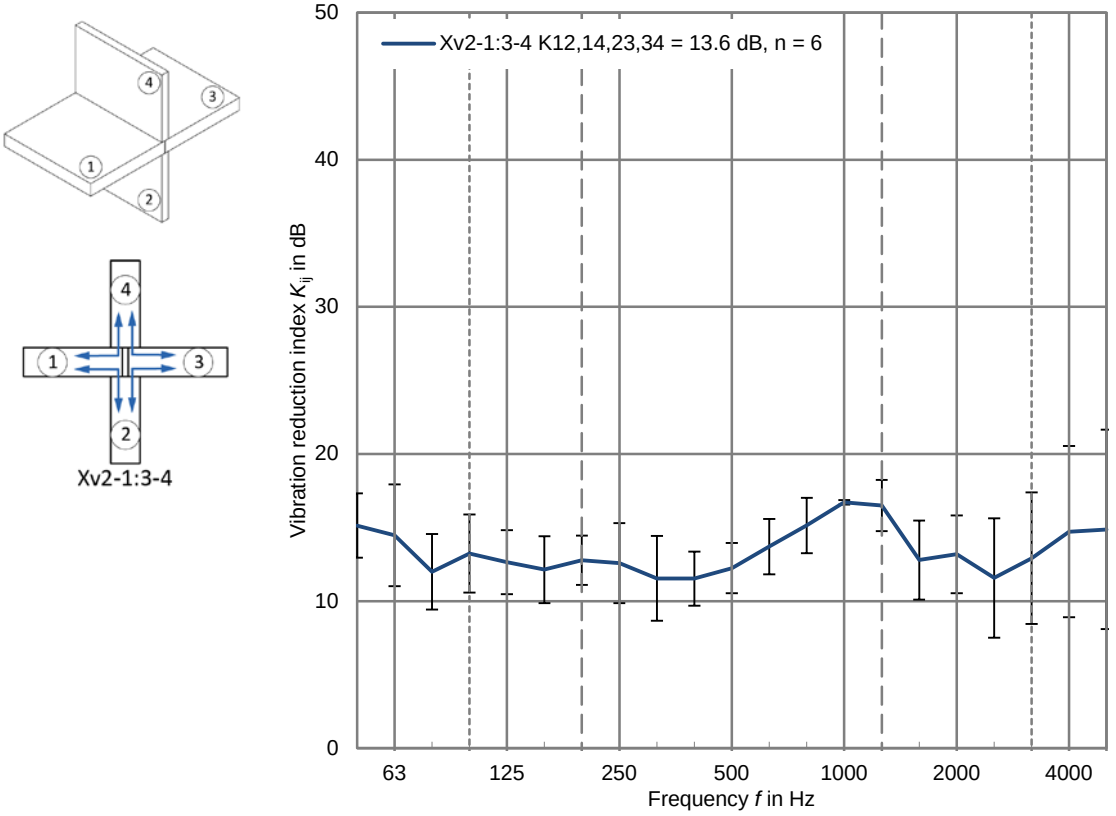


Figure 32 Average of the vibration reduction index for X-junction (Xv2-1:3-4), wall-floor without resilient layer, paths 1-2, 1-4, 2-3 and 3-4, $\overline{K}_{12,14,23,34}$ = 13.6 dB, n = 6

Table 56 Vibration reduction index for X-junction (Xv2-1:3-4), wall-floor without resilient layer, paths 1-2, 1-4, 2-3 and 3-4, $\overline{K}_{12,14,23,34}$ = 13.6 dB, n = 6

	Vibration reduction index K_{ij} in dB																						
	$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz	n
Min	11.8	11.0	7.1	7.3	7.7	8.5	9.4	11.3	9.4	8.2	9.2	10.3	11.5	12.1	16.4	13.2	10.2	9.5	6.9	8.5	8.1	7.6	
AVG	13.6	15.1	14.5	12.0	13.2	12.6	12.1	12.8	12.6	11.5	11.5	12.2	13.7	15.1	16.7	16.5	12.8	13.2	11.6	12.9	14.7	14.9	6
Max	16.2	18.4	17.4	15.1	15.7	15.1	15.6	15.7	17.2	15.3	14.4	14.3	16.1	17.7	16.9	19.0	18.0	17.3	17.6	20.6	24.4	26.3	
SD	1.7	2.2	3.5	2.6	2.7	2.2	2.3	1.7	2.7	2.9	1.8	1.7	1.9	1.9	0.1	1.7	2.7	2.6	4.1	4.5	5.8	6.8	

Table 57 Vibration reduction indices for X-junction (Xv2-1:3-4), wall-floor without resilient layer, paths 1-2, 1-4, 2-3 and 3-4

ID	Junction type	Path	Vibration reduction index K_{ij} in dB																					
			$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz
ift_44	Xv2-1:3-4	3-4	15.3	14.8	14.5	12.3	14.4	15.1	14.8	14.4	15.1	15.3	13.2	14.3	15.2	16.7	16.6	16.7	14.0	14.6	14.9	16.0	17.3	17.6
ift_44	Xv2-1:3-4	1-4	16.2	18.4	16.8	14.0	15.7	14.4	15.6	15.7	17.2	15.2	14.4	13.7	16.1	17.7	16.9	19.0	18.0	17.3	17.6	20.6	24.4	26.3
ift_45	Xv2-1:3-4	2-3	12.0	15.7	14.9	13.1	13.2	12.6	9.4	11.9	11.0	8.2	9.2	10.3	11.5	12.1	16.8	16.7	10.8	10.6	7.2	8.7	8.1	7.6
ift_45	Xv2-1:3-4	1-2	11.8	15.6	17.4	10.2	13.2	11.6	10.9	11.9	9.4	8.4	9.9	10.8	12.1	14.1	16.4	13.2	10.2	9.5	6.9	8.5	8.6	8.3
ift_46	Xv2-1:3-4	3-4	14.0	11.0	7.1	7.3	7.7	8.5	10.8	11.4	12.3	11.5	11.9	13.8	15.4	16.2	16.7	17.2	13.1	14.8	13.6	14.3	18.2	19.2
ift_46	Xv2-1:3-4	2-3	12.5	15.3	16.2	15.1	15.2	13.6	11.4	11.3	10.6	10.7	10.5	10.5	11.9	14.1	16.8	16.1	10.7	12.3	9.2	9.5	11.7	10.3

7 Comparison of the vibration reduction indices

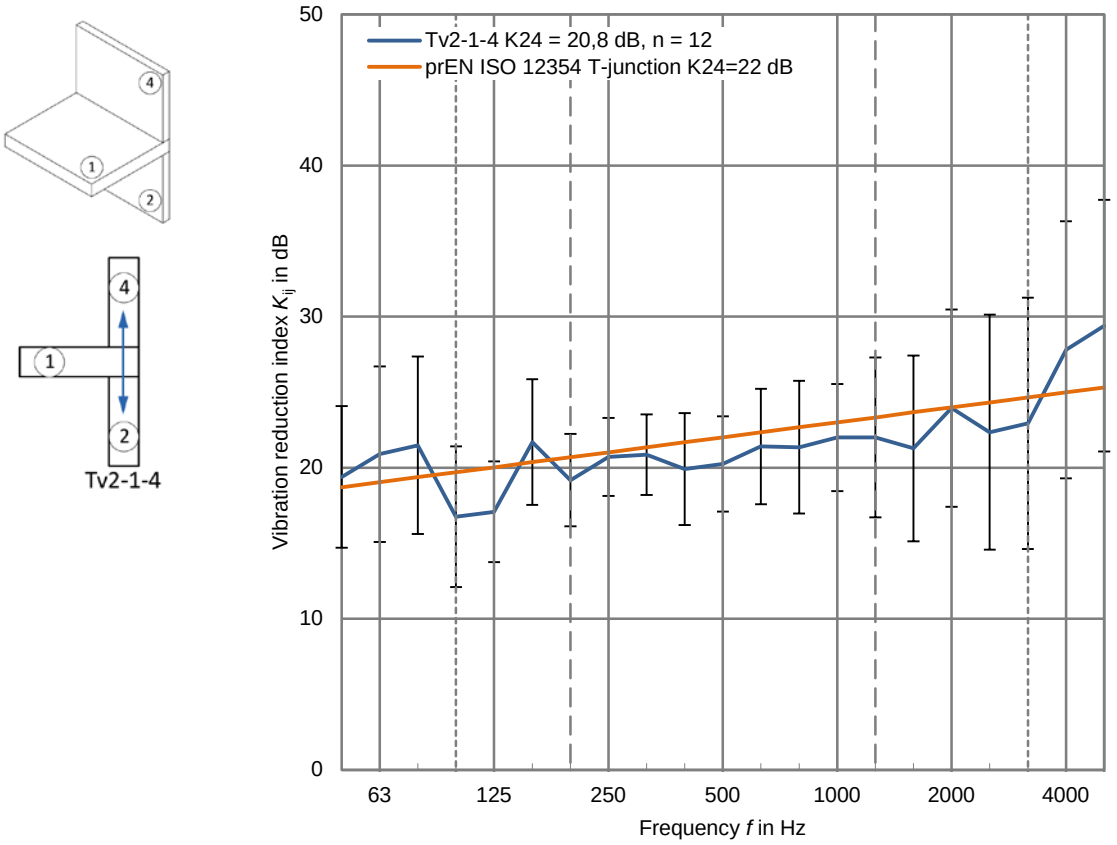


Figure 33 Comparison between the average of the measured vibration reduction indices for T-junction (Tv2-1-4) wall-floor without resilient layer path 2-4 $\overline{K}_{24}$ = 20.8 dB and calculated according to prEN ISO 12354 for a T-junction $\overline{K}_{24}$ = 22 dB

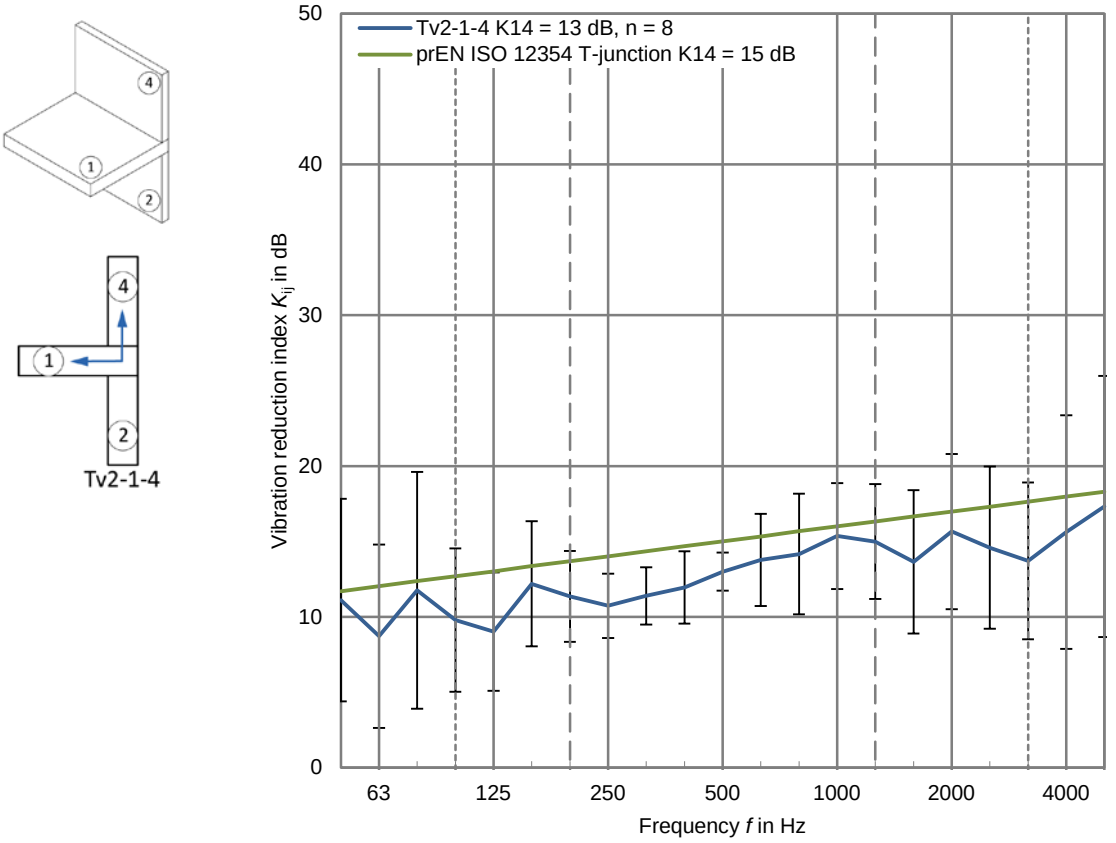


Figure 34 Comparison between the average of the measured vibration reduction indices for T-junction (Tv2-1-4) wall-floor without resilient layer, paths 1-4, $\overline{K}_{14}$ = 13 dB and calculated according to prEN ISO 12354 for a T-junction $\overline{K}_{14}$ = 14 dB

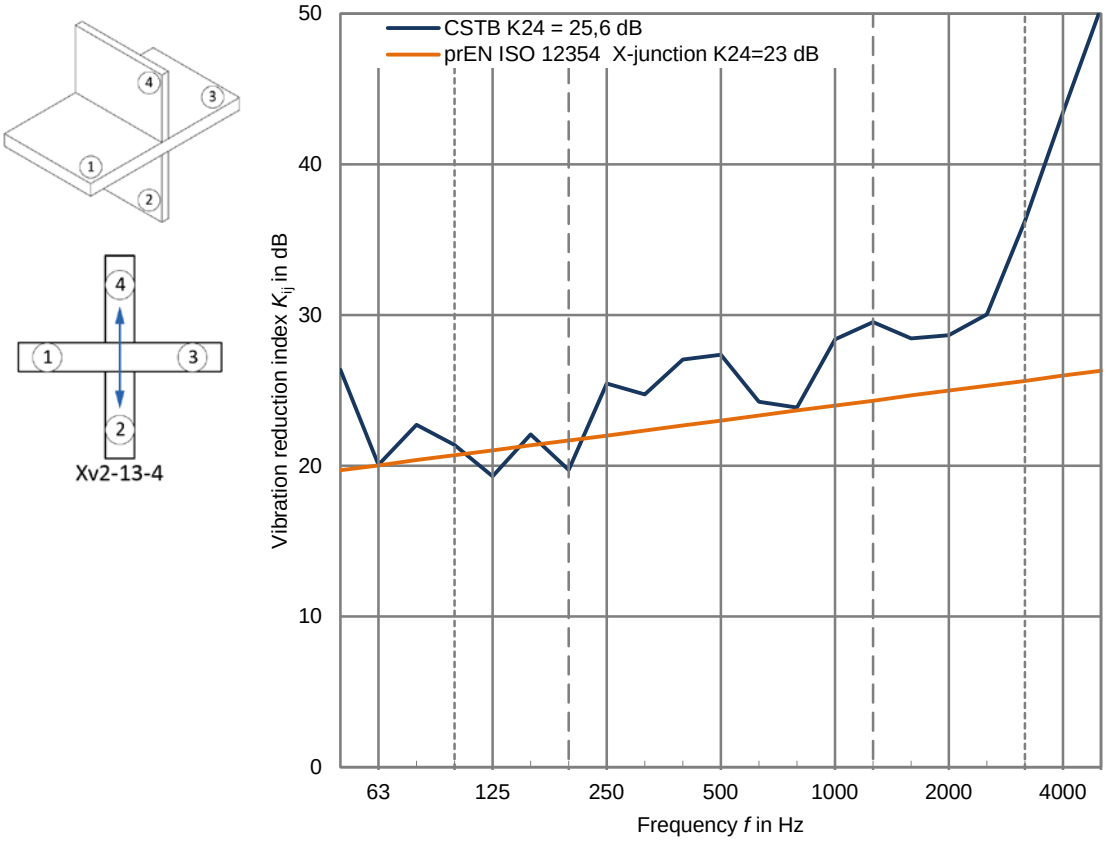


Figure 35 Comparison between the measured vibration reduction index by *CSTB* for X-junction (Xv2-13-4), wall-floor without resilient layer, path 2-4, $\overline{K}_{24}$ = 25.6 dB and calculated according to prEN ISO 12354 for a X-junction $\overline{K}_{24}$ = 26.3 dB

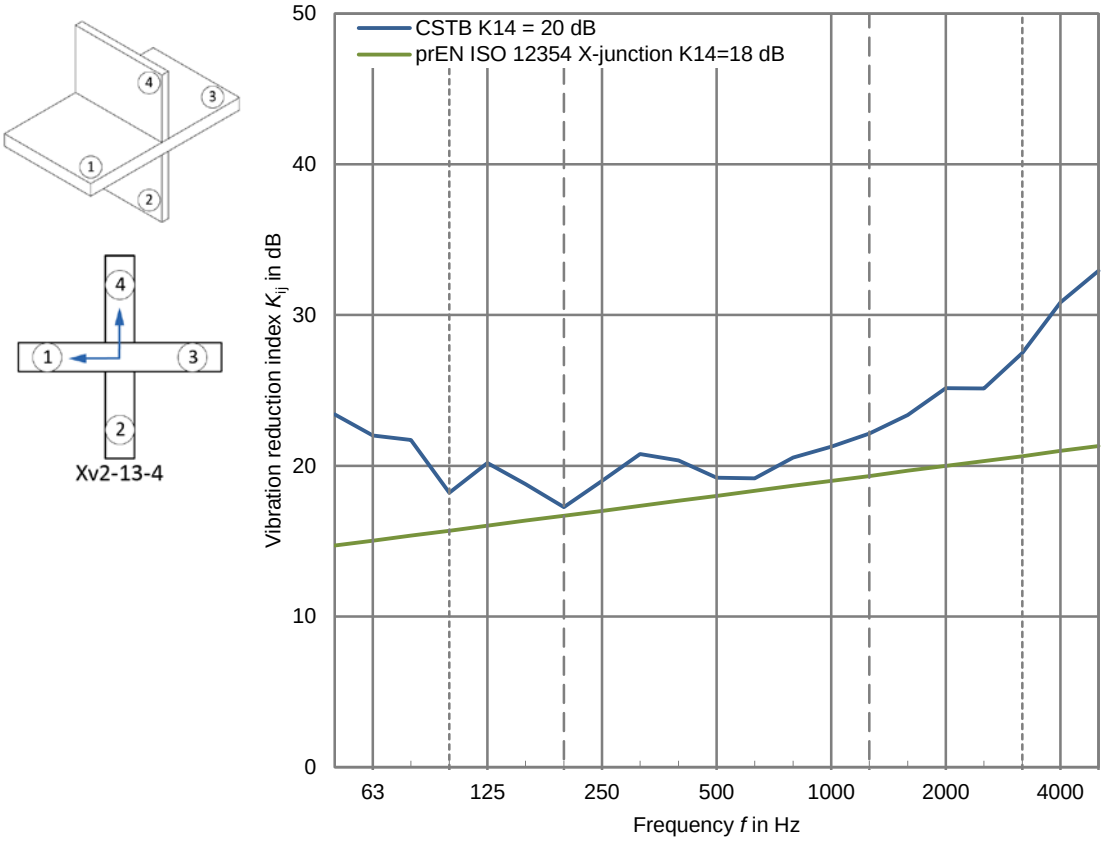


Figure 36 Comparison between the measured vibration reduction index by *CSTB* for X-junction (Xv2-13-4), wall-floor without resilient layer, path 1-4, $\overline{K}_{14}$ = 20 dB and calculated according to prEN ISO 12354 for a X-junction $\overline{K}_{14}$ = 18 dB

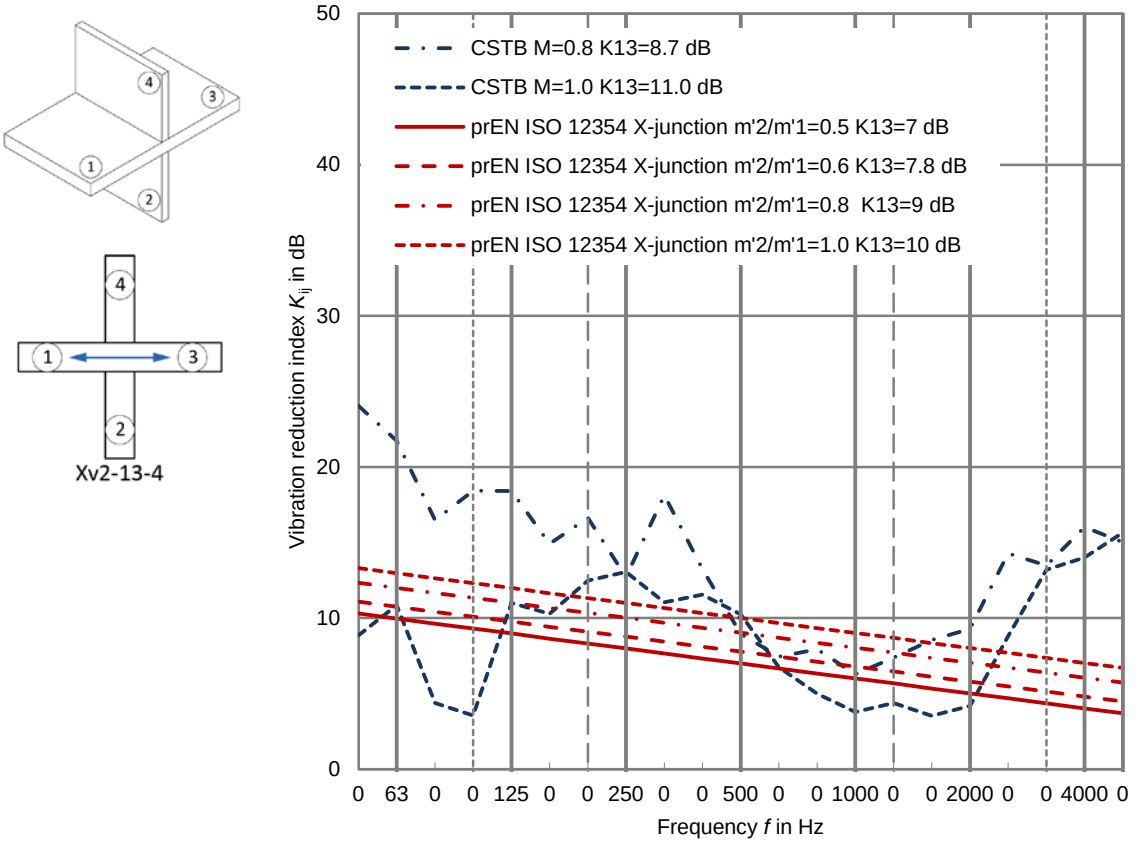
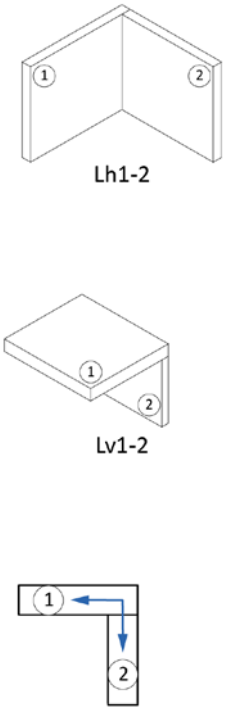


Figure 37 Comparison between measured vibration reduction indices for a X-junction (Xv2-13-4), path 1-3, by *CSTB* and calculated according to prEN ISO 12354 for a X-junction, path 1-3, regarding the mass ration of the elements



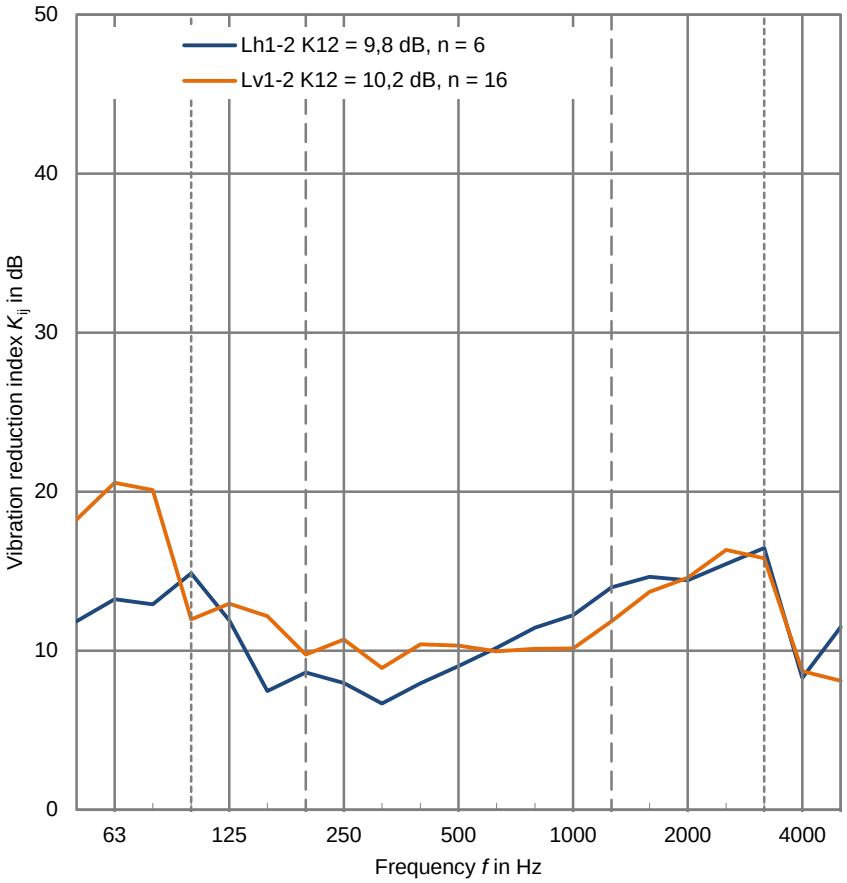


Figure 38 Comparison between the average of the measured vibration reduction indices for L-junctions wall-wall (Lh1-2) and wall-floor (Lv1-2) without resilient layer, path 1-2, Lh1-2 $\overline{K}_{12}$ = 9.8 dB and Lv1-2 $\overline{K}_{12}$ = 10.2 dB

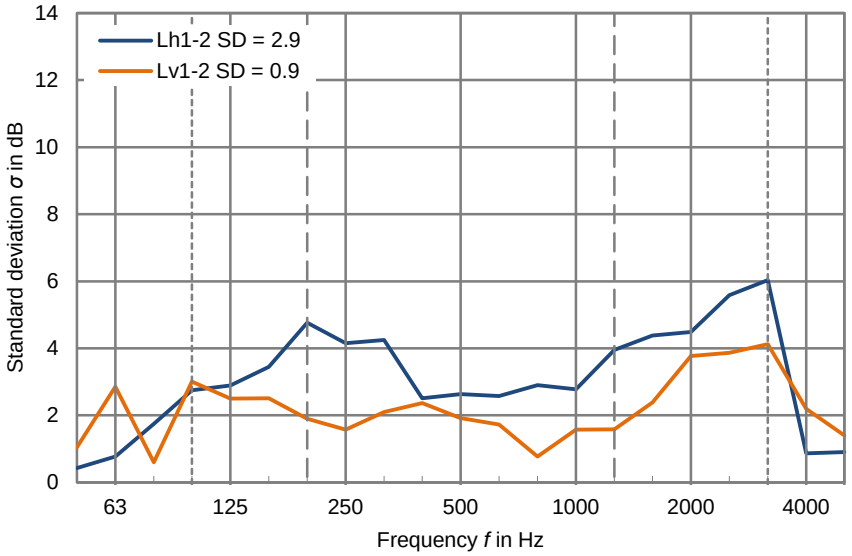


Figure 39 Standard deviation for L-junctions wall-wall (Lh1-2) and wall-floor Lv1-2) without resilient layer, path 1-2

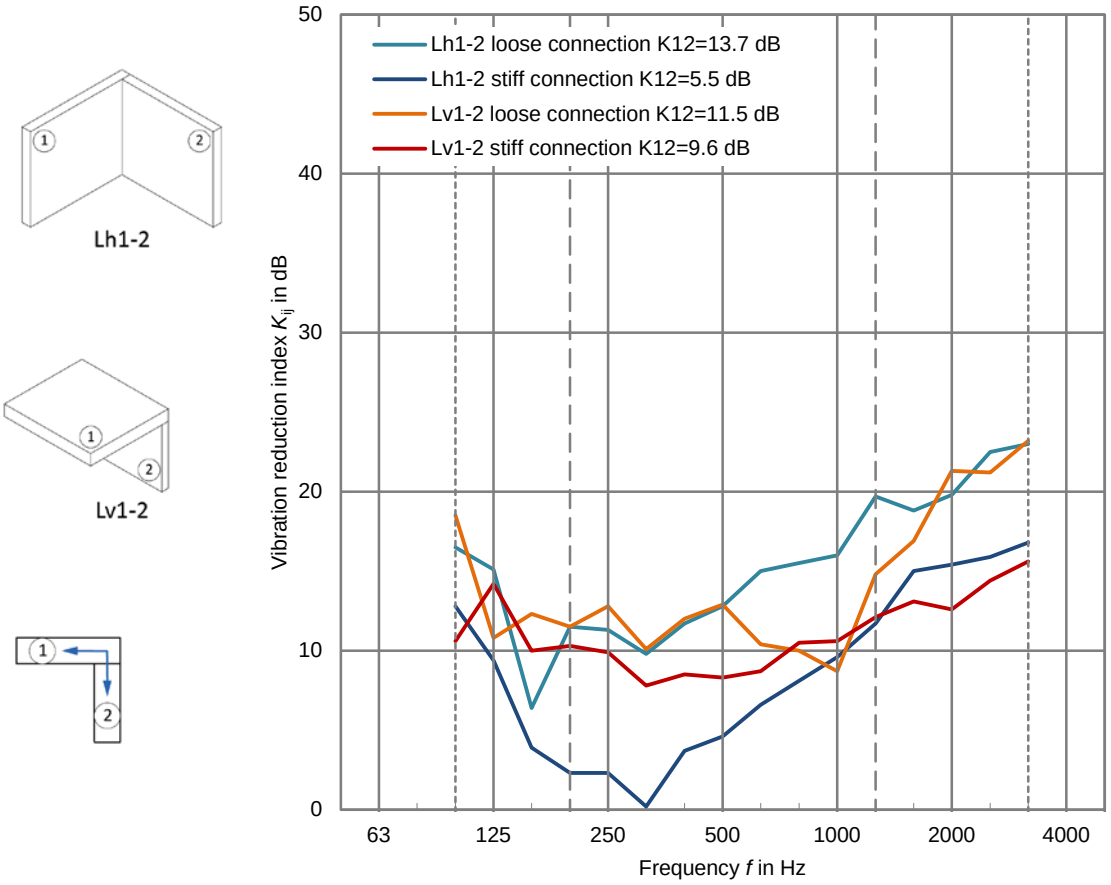
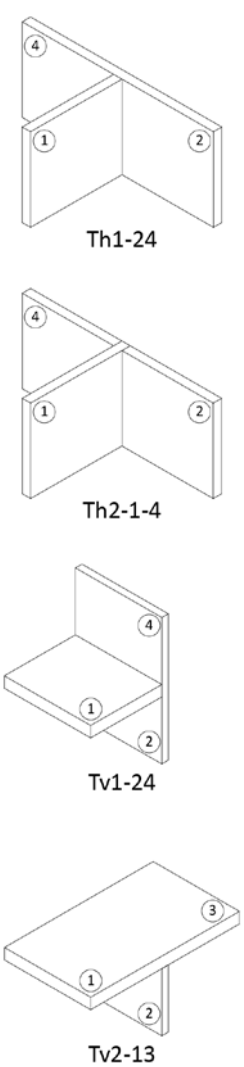


Figure 40 Comparison between the average of the measured vibration reduction indices for the L-junctions wall-wall (Lh1-2) and wall-floor (Lv1-2). Both with a loose and a stiff connection, path 1-2. Lh1-2 loose connection $\overline{K}_{12}$ = 13.7 dB and Lh1-2 stiff connection $\overline{K}_{12}$ = 5.5 dB.



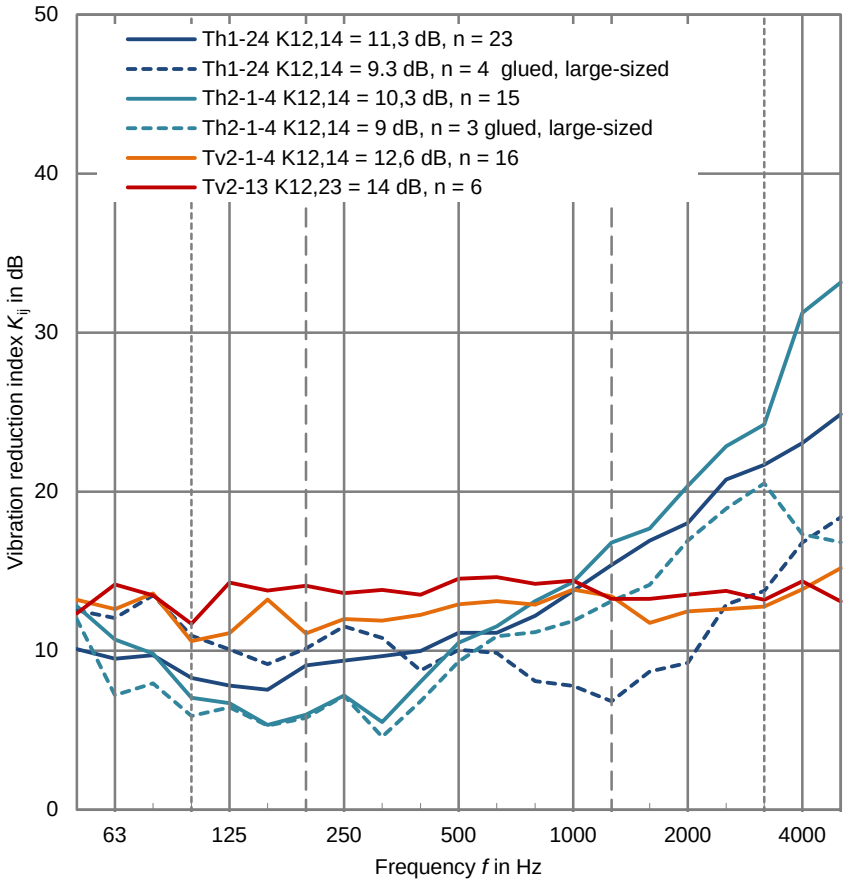


Figure 41 Comparison between the average of the measured vibration reduction indices for the T-junctions wall-wall (Th1-24 and Th2-1-4) and wall-floor (Tv2-1-4 and Tv2-13) for all kind of CLT elements and for wall-wall-junctions also just for glued and large-sized elements (dotted lines), paths 1-2, 1-4 and 2-3.

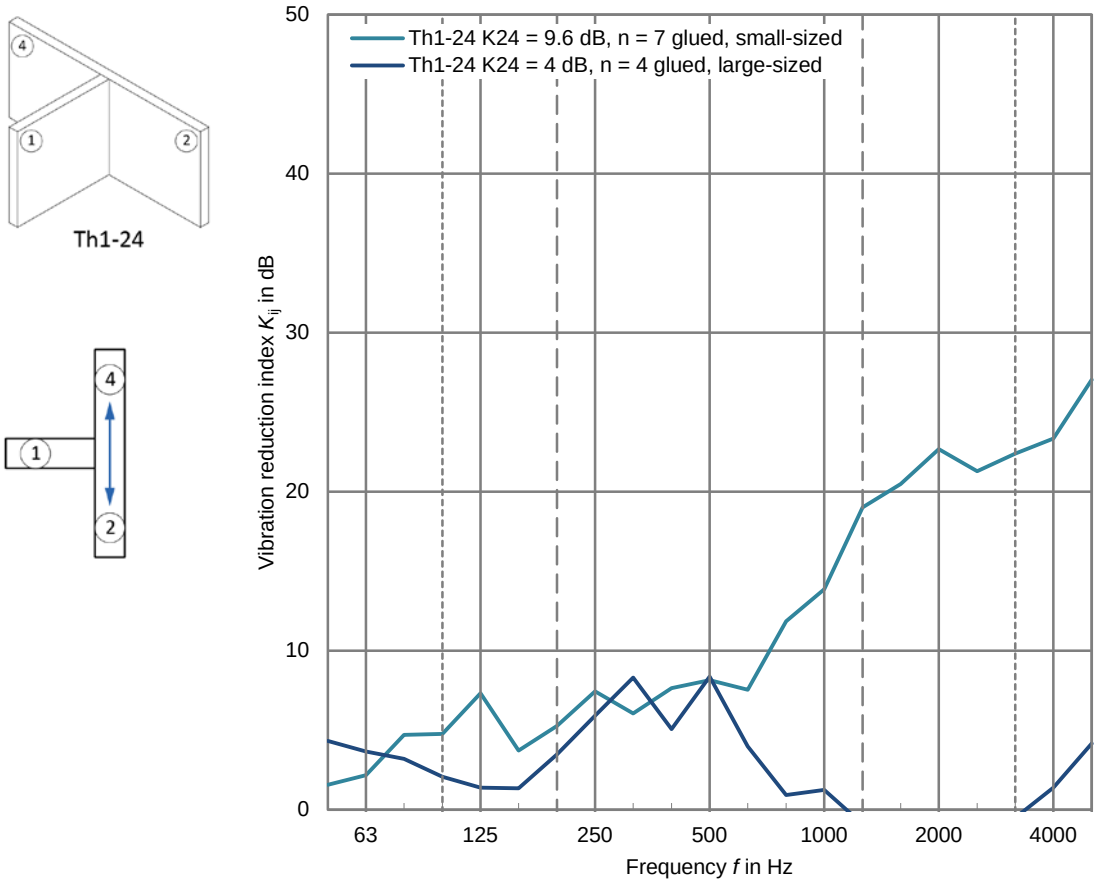


Figure 42 Comparison between the average of the measured vibration reduction indices for T-junctions (Th1-24), wall-wall, path 2-4. Flanking element separated in small-sized elements $\overline{K}_{24}$ = 9.6 dB and flanking element as one large-sized elements $\overline{K}_{24}$ = 4 dB

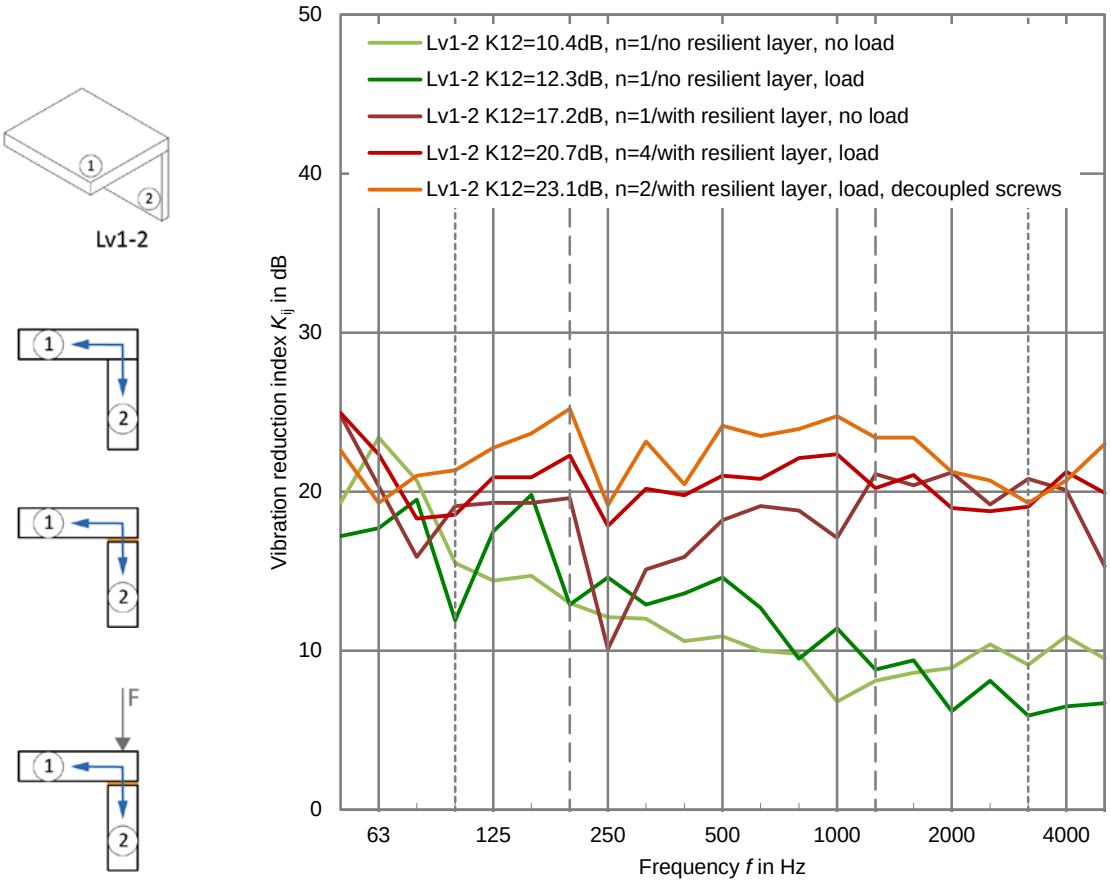


Figure 43 Comparison between the average of the measured vibration reduction indices for L-junctions (Lv1-3), wall-floor with resilient layer with or without additional load, path 1-2.

8 All results for the vibration reduction index

Table 58 L-junctions wall-floor (Lv1-2) and wall-wall (Lh1-2)

Description			Junction							Vibration reduction index K_{ij} in dB																					
ID	Lab/ In situ	VaBDat	Elements	Fixing	Resilient layer	Additional load	l_{ij} in m	m'_2/m'_1	Path	$K_{ij,1200-1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz
HsRo_01	lab	Lv1-2_bCLT162-bCLT81	wall-floor	screws 8x320mm, e=40cm	No	No	3.00	0.50	1-2	10.4	19.3	23.4	20.7	15.5	14.4	14.7	13.0	12.1	12.0	10.6	10.9	10.0	9.8	6.8	8.1	8.6	8.9	10.4	9.1	10.9	9.5
HsRo_02	lab	Lv1-2_bCLT162-bCLT81	wall-floor	screws 8x320mm, e=40cm	No	Yes	3.00	0.50	1-2	12.3	17.2	17.7	19.5	11.9	17.5	19.8	12.9	14.6	12.9	13.6	14.6	12.7	9.5	11.4	8.8	9.4	6.2	8.1	5.9	6.5	6.7
HsRo_03	lab	Lv1-2_bCLT162-bCLT81	wall-floor	screws 8x320mm, e=40cm	Yes	No	3.00	0.50	1-2	17.2	24.8	-	15.9	19.1	19.3	19.3	19.6	10.1	15.1	15.9	18.2	19.1	18.8	17.1	21.1	20.4	21.2	19.2	20.8	20.1	15.3
HsRo_04	lab	Lv1-2_bCLT162-bCLT81	wall-floor	screws 8x320mm, e=40cm	Yes	Yes	3.00	0.50	1-2	21.7	24.9	23.0	16.3	19.7	21.0	24.1	23.4	17.8	20.2	22.5	22.1	21.6	22.8	23.2	21.1	21.5	19.2	18.7	19.8	22.7	22.2
HsRo_05	lab	Lv1-2_bCLT162-bCLT81	wall-floor	decoupled screws 8x320mm, e=40cm	Yes	Yes	3.00	0.50	1-2	22.1	24.0	19.1	20.1	20.6	24.2	23.8	24.6	16.7	21.2	21.2	23.9	22.9	23.8	24.0	20.9	21.9	20.0	18.4	18.9	20.4	21.9
HsRo_06	lab	Lv1-2_bCLT162-bCLT81	wall-floor	screws 8x320mm, e=40cm	Yes	Yes	3.00	0.50	1-2	22.7	24.6	19.7	19.6	18.8	20.3	19.3	24.8	21.1	25.0	19.0	22.3	23.0	23.2	22.9	23.1	23.5	22.4	22.3	23.3	24.1	23.2
HsRo_07	lab	Lv1-2_bCLT162-bCLT81	wall-floor	decoupled screws 8x320mm, e=40cm	Yes	Yes	3.00	0.50	1-2	24.0	21.2	19.5	21.9	22.1	21.3	23.5	25.8	21.6	25.1	19.7	24.4	24.1	24.1	25.5	25.9	24.9	22.5	23.0	19.7	21.0	24.1
HsRo_08	lab	Lv1-2_bCLT162-bCLT81	wall-floor	screws 8x320mm, e=40cm	Yes	Yes	3.00	0.50	1-2	20.0	25.1	24.7	17.4	19.4	20.8	20.8	20.6	17.4	18.8	19.5	19.9	19.8	21.8	22.4	19.9	19.6	18.3	17.3	18.0	21.8	21.0
HsRo_09	lab	Lv1-2_bCLT162-bCLT81	wall-floor	screws 8x320mm, e=40cm	Yes	Yes	3.00	0.50	1-2	18.6	25.2	22.0	19.9	16.3	21.5	19.4	20.3	15.1	16.7	18.1	19.7	18.8	20.6	20.9	16.8	19.6	16.0	16.8	15.1	16.4	13.3
UniBo_15	lab	Lv1-2_bCLT160-bCLT100	wall-floor	angle brackets, e=100cm	No	No	3.50	0.63	1-2	10.0	-	-	-	9.7	8.0	11.8	7.5	10.0	7.6	11.4	11.1	10.4	10.0	9.8	12.3	15.9	16.5	17.4	13.3	-	-
UniBo_16	lab	Lv1-2_bCLT160-bCLT100	wall-floor	angle brackets, e=120cm	No	No	3.50	0.63	1-2	8.9	-	-	-	8.4	10.0	12.1	6.5	11.3	6.0	10.3	10.1	8.6	7.7	8.3	11.3	15.2	15.9	16.4	14.2	-	-
UniBo_17	lab	Lv1-2_bCLT160-bCLT100	wall-floor	angle brackets, e=140cm	No	No	3.50	0.63	1-2	9.3	-	-	-	8.6	11.6	11.5	6.8	9.9	6.8	9.7	10.0	9.0	10.5	9.8	11.4	14.1	17.0	18.5	15.5	-	-
UniBo_18	lab	Lv1-2_bCLT160-bCLT100	wall-floor	hold-down	No	No	3.50	0.63	1-2	10.0	-	-	-	9.0	11.5	13.7	9.3	9.3	8.5	9.7	8.7	10.6	11.0	11.3	11.9	12.8	14.3	15.0	16.5	-	-
UniBo_19	lab	Lv1-2_bCLT160-bCLT100	wall-floor	hold-down, partial fixing	No	No	3.50	0.63	1-2	11.3	-	-	-	9.1	15.8	9.4	9.3	9.2	7.1	14.7	11.5	13.5	10.7	13.4	11.7	14.4	14.4	16.8	18.2	-	-
UniBo_19	lab	Lv1-2_bCLT160-bCLT100	wall-floor	hold-down	No	No	3.50	0.63	1-2	10.6	-	-	-	15.6	11.7	12.4	8.7	10.2	8.0	13.2	12.5	9.2	10.8	10.3	12.5	13.8	14.6	15.1	16.7	-	-
UniBo_20	lab	Lv1-2_bCLT160-bCLT100	wall-floor	2x hold-downs	No	No	3.50	0.63	1-2	9.6	-	-	-	12.3	11.6	10.1	8.4	7.9	7.2	10.0	8.8	9.4	11.1	11.9	11.8	13.7	13.5	16.7	15.4	-	-
UniBo_21	lab	Lv1-2_bCLT160-bCLT100	wall-floor	screws 8x240mm, e=30cm, hold-down	No	No	3.50	0.63	1-2	9.2	-	-	-	8.4	15.5	9.8	9.2	9.6	9.3	6.2	7.3	7.2	10.4	11.5	12.1	14.6	14.2	18.9	17.3	-	-
UniBo_22	lab	Lv1-2_bCLT160-bCLT100	wall-floor	screws 8x240mm, e=30cm; angle brackets, e=80cm; hold-down	No	No	3.50	0.63	1-2	9.6	-	-	-	10.6	14.2	10.0	10.3	9.9	7.8	8.5	8.3	8.7	10.5	10.6	12.1	13.1	12.6	14.4	15.6	-	-
UniBo_23	lab	Lv1-2_bCLT160-bCLT100	wall-floor	screws 8x240mm, e=30cm; angle brackets, e=80cm; hold-down	Yes	No	3.50	0.63	1-2	11.8	-	-	-	10.9	8.9	7.1	10.6	7.4	9.6	10.2	12.5	11.8	14.1	14.8	15.3	17.1	17.4	21.5	21.2	-	-
UniBo_24	lab	Lv1-2_bCLT160-bCLT100	wall-floor	screws 8x4mm, e=30 cm; angle brackets, e=80cm; hold-down	Yes	No	3.50	0.63	1-2	12.6	-	-	-	11.6	9.4	11.6	12.0	7.2	11.0	10.3	13.7	11.9	15.1	15.6	16.7	17.9	22.2	25.6	22.1	-	-
UniBo_25	lab	Lv1-2_bCLT160-bCLT100	wall-floor	screws 8x240mm, e=30cm; angle brackets, e=80cm; hold-down	Yes	No	3.50	0.63	1-2	11.5	-	-	-	8.7	14.4	8.7	10.0	10.7	9.5	6.1	9.8	9.4	14.1	16.1	18.1	18.1	17.8	21.3	19.1	-	-
UniBo_26	lab	Lv1-2_bCLT160-bCLT100	wall-floor	scews 8x240mm, e=30 cm; angle brackets, e=80cm; hold-down	Yes	Yes	3.50	0.63	1-2	11.7	-	-	-	9.5	13.6	8.7	11.8	9.0	10.1	7.2	8.7	10.4	14.2	17.0	16.5	18.4	20.0	23.1	19.7	-	-
UniBo_27	lab	Lv1-2_bCLT160-bCLT100	wall-floor	scews 8x240mm, e=30 cm; angle brackets, e=80cm; hold-down	Yes	No	3.50	0.63	1-2	11.4	-	-	-	9.7	15.3	9.0	11.2	9.2	9.3	6.6	10.6	9.7	14.0	16.3	15.8	16.7	17.8	22.1	21.8	-	-
UniBo_28	lab	Lv1-2_bCLT160-bCLT100	wall-floor	scews 7x260mm, e=60cm; hold-down	No	No	3.50	0.63	1-2	10.5	-	-	-	15.2	10.6	10.1	11.2	10.5	9.3	8.7	9.2	10.6	10.3	10.3	14.1	16.7	20.2	22.8	21.9	-	-
UniBo_29	lab	Lv1-2_bCLT160-bCLT100	wall-floor	scews 7x260mm, e=60cm; angle brackets, e=80cm; hold-down	No	No	3.50	0.63	1-2	9.4	-	-	-	13.8	14.6	10.6	11.5	10.4	7.0	5.9	7.7	9.7	9.7	10.0	12.6	15.2	18.0	21.2	18.2	-	-
UniBo_30	lab	Lv1-2_bCLT160-bCLT100	wall-floor	scews 7x260mm, e=60cm; angle brackets, e=80cm; hold-down	Yes	No	3.50	0.63	1-2	11.2	-	-	-	10.6	15.0	8.8	9.6	9.2	8.4	7.7	10.0	11.3	14.3	14.2	16.3	20.0	18.6	20.8	18.7	-	-
UniBo_33	lab	Lv1-2_bCLT160-bCLT100	wall-floor	Rotho Blaas X-PLATE BASE O	No	No	3.50	0.63	1-2	11.0	-	-	-	13.1	13.8	14.2	10.6	11.6	12.8	12.2	10.6	12.2	9.7	8.1	11.2	9.9	10.2	11.2	13.5	-	-
UniBo_34	lab	Lv1-2_bCLT160-bCLT100	wall-floor	Rotho Blaas X-PLATE BASE O	Yes	No	3.50	0.63	1-2	14.4	-	-	-	12.0	14.6	11.8	13.2	12.8	15.2	15.9	14.9	15.7	15.9	13.9	12.6	16.2	18.5	17.8	17.5	-	-
UniBo_34	lab	Lv1-2_bCLT160-bCLT100	wall-floor	Rotho Blaas X-PLATE BASE O	Yes	No	3.50	0.63	1-2	13.0	-	-	-	16.3	13.7	14.4	13.8	13.4	12.7	11.4	10.0	13.3	14.3	13.3	14.3	15.9	13.9	16.2	21.9	-	-
UniBo_35	lab	Lv1-2_bCLT160-bCLT100	wall-floor	scews 8x240mm, e=30cm	No	No	3.50	0.63	1-2	10.2	-	-	-	11.7	15.6	12.1	9.4	11.9	10.1	9.5	11.0	7.0	10.1	9.9	12.8	14.8	15.4	17.3	18.6	-	-
UniBo_36	lab	Lv1-2_bCLT160-bCLT100	wall-floor	scews 9 x 400 mm, e=60cm	No	No	3.50	0.63	1-2	11.5	-	-	-	18.5	10.8	12.3	11.5	12.8	10.1	12.0	12.9	10.4	10.0	8.7	14.8	16.9	21.3	21.2	23.2	-	-
UniBo_37	lab	Lv1-2_bCLT160-bCLT100	wall-floor	scews 8x240mm, e=30cm	Yes	No	3.50	0.63	1-2	13.2	-	-	-	12.6	10.8	13.6	11.1	9.2	13.3	11.3	16.5	10.2	14.6	14.9	17.4	19.6	25.0	28.5	25.1	-	-
UniBo_38	lab	Lv1-2_bCLT160-bCLT100	wall-floor	scews 9 x 400 mm, e=60cm	Yes	No	3.50	0.63	1-2	13.3	-	-	-	15.3	11.2	10.6	9.5	11.7	11.5	13.8	15.1	12.0	14.5	13.0	18.6	21.6	22.0	20.8	23.7	-	-
Churchill_02	lab	Lh1-2_bCLT80-bCLT80	wall-wall	glue; screws 8x160mm, e=40cm	No	No	3.00	1.00	1-2	7.8	12.3	12.5	11.2	12.6	10.8	9.1	9.5	7.4	6.8	7.7	7.6	8.3	7.5	7.8	7.2	6.9	7.7	7.2	7.8	7.4	10.6
Churchill_03	lab	Lh1-2_bCLT80-bCLT80	wall-wall	glue; screws 8x160mm, e=40cm	No	No	3.00	1.00	1-2	11.3	11.4	14.0	14.7	16.9	9.7	12.9	11.8	12.0	10.6	9.5	9.7	10.8	11.0	12.8	13.0	11.0	9.1	8.9	9.0	9.1	12.4
UniBo_01	lab	Lh1-2_bCLT100-bCLT100	wall-wall	scews 8x240mm, e=20cm	No	No	2.30	1.00	1-2	5.5	-	-	-	12.8	9.4	3.9	2.3	2.3	0.2	3.7	4.6	6.6	8.1	9.6	11.7	15.0	15.4	15.9	16.8	-	-
UniBo_02	lab	Lh1-2_bCLT100-bCLT100	wall-wall	scews 8x240mm, e=40cm	No	No	2.30	1.00	1-2	8.1	-	-	-	11.4	9.8	2.9	2.1	2.7	1.8	6.3	8.3	10.1	12.6	12.9	16.1	18.3	16.9	19.6	22.2	-	-
UniBo_03	lab	Lh1-2_bCLT100-bCLT100	wall-wall	scews 7x260mm, e=60cm	No	No	2.30	1.00	1-2	13.7	-	-	-	16.5	15.1	6.4	11.5	11.3	9.8	11.7	12.8	15.0	15.5	16.0	19.7	18.8	19.8	22.5	23.0	-	-
UniBo_04	lab	Lh1-2_bCLT100-bCLT100	wall-wall	scews 9x400mm, e=30cm	No	No	2.30	1.00	1-2	12.4	-	-	-	19.0	16.7	9.6	14.5	12.0	10.8	8.7	11.2	10.2	13.9	14.3	16.1	17.9	17.7	18.5	19.9	-	-

Table 59 T-junctions wall-wall (Th2-1-4 and Th1-2:4)

Description			Junction							Vibration reduction index K_{ij} in dB																				
ID	Lab/ In situ	VaBDat	Elements	Fixing	Resilient layer	Additional load	l_{ij} in m	m'_2/m'_1	Path	$K_{ij,200-1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz
UniBo_05	lab	Th2-1-4_bCLT100-bCLT100-bCLT100	wall-wall	screws 8x240mm, e=40cm	No	No	2.30	1.00	1-4	8.9	-	-	-	6.9	7.6	5.9	5.5	5.9	5.9	7.3	8.0	11.0	10.8	12.8	12.6	14.6	16.0	18.2	19.2	-	-
UniBo_05	lab	Th2-1-4_bCLT100-bCLT100-bCLT100	wall-wall	screws 8x240mm, e=40cm	No	No	2.30	1.00	2-4	16.9	-	-	-	8.6	9.2	7.2	7.7	10.3	9.8	12.6	16.0	20.9	21.2	25.6	28.1	29.6	33.4	34.9	37.8	-	-
UniBo_06	lab	Th2-1-4_bCLT100-bCLT100-bCLT100	wall-wall	screws 7x260mm, e=40cm	No	No	2.30	1.00	1-4	9.7	-	-	-	1.3	4.7	4.2	5.1	5.8	1.3	9.5	9.5	12.0	12.9	14.8	16.5	16.5	20.8	24.0	25.6	-	-
UniBo_06	lab	Th2-1-4_bCLT100-bCLT100-bCLT100	wall-wall	screws 7x260mm, e=40cm	No	No	2.30	1.00	2-4	15.2	-	-	-	3.7	4.3	7.5	5.2	5.6	4.3	14.9	15.4	17.6	19.5	26.4	27.8	27.8	34.2	38.8	43.8	-	-
UniBo_07	lab	Th2-1-4_bCLT100-bCLT100-bCLT100	wall-wall	screws 8x240mm, e=40cm; metal brackets, e=60cm	No	No	2.30	1.00	1-4	12.9	-	-	-	8.1	12.6	6.2	8.7	11.0	8.4	10.0	13.2	18.9	16.7	16.2	13.4	16.2	24.5	23.5	28.3	-	-
UniBo_07	lab	Th2-1-4_bCLT100-bCLT100-bCLT100	wall-wall	screws 8x240mm, e=40cm; metal brackets, e=60cm	No	No	2.30	1.00	2-4	14.1	-	-	-	4.4	-0.2	2.9	7.9	14.6	13.4	9.4	13.7	16.5	14.7	16.7	20.0	23.4	27.1	28.4	29.6	-	-
UniBo_07	lab	Th2-1-4_bCLT100-bCLT100-bCLT100	wall-wall	screws 8x240mm, e=40cm; metal brackets, e=60cm	No	No	2.30	1.00	1-2	5.0	-	-	-	3.2	-1.7	-2.0	0.4	3.8	2.7	0.9	6.7	7.4	6.4	6.1	10.5	10.7	10.8	11.3	13.3	-	-
UniBo_08	lab	Th2-1-4_bCLT100-bCLT100-bCLT100	wall-wall	screws 7x260mm, e=60cm; metal brackets,e=60 cm	No	No	2.30	1.00	1-4	11.1	-	-	-	6.3	9.3	9.6	9.9	9.8	5.7	8.7	11.5	12.6	12.1	14.5	15.1	15.2	20.1	24.1	22.6	-	-
UniBo_08	lab	Th2-1-4_bCLT100-bCLT100-bCLT100	wall-wall	screws 7x260mm, e=60cm; metal brackets,e=60 cm	No	No	2.30	1.00	2-4	15.9	-	-	-	7.4	9.8	12.1	11.9	13.4	9.9	14.5	15.4	16.1	18.5	22.2	21.0	21.8	26.2	28.7	29.2	-	-
UniBo_08	lab	Th2-1-4_bCLT100-bCLT100-bCLT100	wall-wall	screws 7x260mm, e=60cm; metal brackets,e=60 cm	No	No	2.30	1.00	1-2	8.1	-	-	-	7.9	12.0	7.3	6.6	8.2	4.3	6.3	7.8	8.4	9.4	11.2	11.0	11.2	14.9	16.0	15.5	-	-
UniBo_09	lab	Th2-1-4_bCLT100-bCLT100-bCLT100	wall-wall	screws 8x240mm, e=40cm; metal brackets, e=60cm	No	No	2.30	1.00	1-4	11.1	-	-	-	4.4	4.3	3.5	5.8	7.4	3.7	7.6	12.4	12.0	15.9	16.7	18.4	19.1	20.5	24.3	26.2	-	-
UniBo_09	lab	Th2-1-4_bCLT100-bCLT100-bCLT100	wall-wall	screws 8x240mm, e=40cm; metal brackets, e=60cm	No	No	2.30	1.00	2-4	17.4	-	-	-	10.3	8.2	2.6	3.3	9.8	7.3	15.0	18.6	18.3	27.9	25.9	30.6	30.7	37.4	39.7	41.2	-	-
UniBo_10	lab	Th2-1-4_bCLT100-bCLT100-bCLT100	wall-wall	screws 7x260mm, e=40cm	No	No	2.30	1.00	1-4	10.6	-	-	-	4.6	2.6	2.0	4.3	4.8	4.1	10.2	11.0	13.2	15.3	15.3	17.4	17.2	21.7	24.7	25.8	-	-
UniBo_10	lab	Th2-1-4_bCLT100-bCLT100-bCLT100	wall-wall	screws 7x260mm, e=40cm	No	No	2.30	1.00	2-4	16.4	-	-	-	7.3	5.1	3.3	6.7	6.9	7.2	14.5	18.0	17.9	20.2	25.6	30.8	31.4	37.4	39.3	41.1	-	-
UniBo_31	lab	Th2-1-4_bCLT100-bCLT100-bCLT100	wall-wall	Rotho BlaasX-PLATE BASE T, X-PLATE TOP T	No	No	2.30	1.00	1-4	7.3	-	-	-	10.2	7.0	8.1	6.4	6.4	5.1	6.7	7.6	7.3	7.9	8.2	9.7	12.7	12.9	12.6	15.5	-	-
UniBo_31	lab	Th2-1-4_bCLT100-bCLT100-bCLT100	wall-wall	Rotho BlaasX-PLATE BASE T, X-PLATE TOP T	No	No	2.30	1.00	2-4	13.5	-	-	-	15.7	16.0	13.6	6.5	6.4	8.8	9.5	15.2	18.4	17.7	20.2	18.9	24.7	24.7	23.4	28.5	-	-
ift_21	lab	Th2-1-4_bCLT80+-bCLT80-bCLT80	wall-wall	screws	No	No	2.70	1.00	2-4	19.1	22.6	24.8	22.3	23.1	24.3	12.6	13.5	17.2	13.4	14.6	12.9	15.2	23.2	28.7	33.3	38.3	38.9	43.1	43.7	43.6	44.8
ift_22	lab	Th2-1-4_bCLT80-bCLT80-bCLT80	wall-wall	screws	No	No	2.70	1.00	1-2	14.5	17.3	17.2	13.6	15.1	12.6	6.1	6.6	6.6	5.4	9.7	13.3	13.7	20.1	24.3	31.1	29.1	31.4	35.3	34.4	41.2	42.8
ift_22	lab	Th2-1-4_bCLT80-bCLT80-bCLT80	wall-wall	screws	No	No	2.70	1.00	2-4	14.9	18.8	19.2	15.8	21.0	14.6	6.4	8.2	4.8	5.4	8.4	13.6	17.2	20.9	24.2	31.6	31.2	35.9	37.9	37.6	43.4	47.5
ift_23	lab	Th2-1-4_bCLT80-bCLT140+-bCLT80	wall-wall	screws	No	No	2.70	0.57	2-4	22.6	20.8	21.1	14.5	18.0	18.8	14.6	15.2	19.7	18.0	18.5	17.3	19.5	26.8	31.8	36.3	36.1	38.1	42.2	46.1	49.4	48.9
ift_24	lab	Th2-1-4_bCLT80-bCLT140-bCLT80	wall-wall	screws	No	No	2.70	0.57	1-2	17.2	14.4	16.0	14.6	12.3	6.0	4.4	7.6	7.4	10.2	12.0	16.5	15.8	25.3	25.8	34.4	37.1	35.8	40.9	43.1	46.8	49.6
ift_24	lab	Th2-1-4_bCLT80-bCLT140-bCLT80	wall-wall	screws	No	No	2.70	0.57	2-4	19.1	23.3	21.7	23.8	16.7	12.2	11.1	9.1	7.5	7.3	11.8	18.3	22.1	27.7	30.8	37.5	37.0	38.4	43.2	46.0	49.8	49.7
ift_31	lab	Th2-1-4_bCLT135-bCLT135-bCLT135	wall-wall	screws	No	No	2.70	1.00	1-4	12.6	10.8	8.5	7.5	7.6	4.9	4.4	6.4	7.8	8.6	12.3	14.3	12.6	14.9	15.9	20.5	20.9	26.2	27.7	28.1	31.4	35.7
ift_31	lab	Th2-1-4_bCLT135-bCLT135-bCLT135	wall-wall	screws	No	No	2.70	1.00	1-2	11.9	10.3	8.0	7.3	5.9	6.3	7.0	5.3	7.0	8.0	11.6	11.0	10.7	13.6	18.3	21.8	22.4	25.8	30.6	32.0	33.4	37.3
ift_31	lab	Th2-1-4_bCLT135-bCLT135-bCLT135	wall-wall	screws	No	No	2.70	1.00	2-4	19.6	11.5	11.4	12.9	12.3	14.3	15.1	12.0	13.6	13.1	15.9	19.0	20.9	25.7	27.6	28.2	34.2	38.3	39.4	38.8	39.2	40.6
ift_37	lab	Th2-1-4_bCLT80-bCLT80-bCLT80	wall-wall	screws, metal bracktes	No	No	2.70	1.00	1-4	6.8	9.8	7.6	9.1	7.4	6.4	5.2	3.9	7.0	3.0	3.2	7.5	8.7	10.3	8.6	8.9	9.4	10.3	14.7	17.6	18.6	19.8
ift_37	lab	Th2-1-4_bCLT80-bCLT80-bCLT80	wall-wall	screws, metal bracktes	No	No	2.70	1.00	1-2	7.1	14.1	6.8	6.8	4.3	5.9	8.1	6.9	8.6	6.1	4.7	7.2	8.3	5.1	6.1	10.8	12.8	13.6	14.9	16.2	16.0	13.9
ift_37	lab	Th2-1-4_bCLT80-bCLT80-bCLT80	wall-wall	screws, metal bracktes	No	No	2.70	1.00	2-4	13.5	12.8	11.3	10.7	8.7	11.2	10.9	10.5	12.0	10.4	9.1	14.2	15.7	14.6	16.4	18.3	20.7	23.1	25.6	26.5	29.3	29.1
ift_18	lab	Th1-2:4_bCLT140+-bCLT80:bCLT80	wall-wall	screws	No	No	2.70	0.57	2-4	14.4	14.2	18.0	16.5	17.5	21.1	17.2	11.0	9.3	8.4	11.8	16.3	12.5	16.6	19.4	24.5	29.2	29.1	31.8	39.6	41.5	42.6
ift_19	lab	Th1-2:4_bCLT140-bCLT80:bCLT80	wall-wall	screws	No	No	2.70	0.57	1-2	17.7	11.2	11.1	13.4	14.1	10.8	9.8	13.3	12.4	12.9	14.3	18.5	17.9	21.7	23.6	24.9	25.2	25.9	32.6	37.6	32.7	35.8
ift_19	lab	Th1-2:4_bCLT140-bCLT80:bCLT80	wall-wall	screws	No	No	2.70	0.57	2-4	14.0	16.9	19.7	15.8	14.8	17.3	15.5	9.6	11.1	8.2	13.8	15.7	11.4	14.5	19.1	22.7	24.8	28.3	32.8	36.4	40.4	46.3
ift_20	lab	Th1-2:4_bCLT80-bCLT80:bCLT80	wall-wall	screws	No	No	2.70	1.00	1-2	13.6	17.3	16.2	17.2	18.4	19.3	8.2	9.8	9.5	7.5	10.2	15.9	11.9	14.4	20.1	23.3	23.1	26.5	31.0	33.7	36.1	40.2
ift_20	lab	Th1-2:4_bCLT80-bCLT80:bCLT80	wall-wall	screws	No	No	2.70	1.00	2-4	12.9	13.0	18.8	13.9	12.1	16.9	8.7	8.1	9.3	6.7	10.9	13.9	8.6	13.9	18.8	26.3	27.2	30.3	36.5	41.4	44.5	46.9
ift_30	lab	Th1-2:4_bCLT135-bCLT135:bCLT135	wall-wall	screws	No	No	2.70	1.00	1-4	9.9	9.3	7.7	6.4	6.8	6.1	4.3	5.7	5.2	2.8	5.6	8.8	12.2	13.3	14.9	20.3	18.6	20.6	26.5	25.5	28.6	32.6
ift_30	lab	Th1-2:4_bCLT135-bCLT135:bCLT135	wall-wall	screws	No	No	2.70	1.00	1-2	9.9	10.3	8.3	7.6	6.3	7.0	7.9	6.2	7.5	8.0	9.4	11.3	5.5	9.5	13.6	18.0	19.8	19.1	24.5	21.9	25.9	25.2
ift_30	lab	Th1-2:4_bCLT135-bCLT135:bCLT135	wall-wall	screws	No	No	2.70	1.00	2-4	17.9	4.1	7.8	9.8	9.7	13.6	16.7	15.5	14.1	14.8	15.1	15.4	14.7	20.9	23.3	27.2	29.4	29.2	32.9	30.7	35.4	34.1

Table 60 T-Junctions wall-wall (Th1-24)

Description			Junction							Vibration reduction index K_{ij} in dB																						
ID	Lab/ In situ	VaBDat	Elements	Fixing	Resilient layer	Additional load	l_{ij} in m	m'_2/m'_1	Path	$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz
Churchill_01	lab	Th1-24_bCLT80-bCLT80	wall-wall	glued with PUR; screws 8x160mm e=400mm	No	No	3.00	1.00	2-4	8.9	10.6	8.4	11.9	12.8	11.0	9.4	9.2	8.2	7.4	9.6	10.3	9.2	9.1	9.0	7.9	7.2	6.7	4.8	5.6	3.7	7.7
Churchill_01	lab	Th1-24_bCLT80-bCLT80	wall-wall	glued with PUR; screws 8x160mm e=400mm	No	No	3.00	1.00	1-4	8.2	8.3	7.0	5.7	11.1	8.8	8.5	10.6	9.7	7.5	6.4	6.8	9.2	7.5	8.2	8.1	8.0	8.1	8.9	10.2	8.9	14.4
Churchill_01	lab	Th1-24_bCLT80-bCLT80	wall-wall	glued with PUR; screws 8x160mm e=400mm	No	No	3.00	1.00	1-2	10.9	14.0	10.6	11.2	14.3	11.3	11.3	12.6	11.5	11.0	11.4	11.1	10.8	10.1	10.2	9.8	10.1	9.6	9.4	13.0	10.5	15.8
ift_12	lab	Th1-24_bCLT140-bCLT80	wall-wall	screws	No	No	2.70	0.57	1-2	14.5	5.0	4.9	9.3	9.9	11.3	9.2	9.7	8.6	10.7	10.0	13.7	14.7	17.7	21.6	24.1	29.2	34.9	32.0	35.6	33.8	36.8
ift_12	lab	Th1-24_bCLT140-bCLT80	wall-wall	screws	No	No	2.70	0.57	2-4	8.8	2.5	1.9	5.5	4.8	8.8	2.5	6.7	6.4	4.9	5.9	9.5	7.7	11.6	10.8	15.7	17.8	23.4	18.8	22.1	21.4	24.0
ift_13	lab	Th1-24_bCLT140+-bCLT80	wall-wall	screws	No	No	2.70	0.57	2-4	10.0	2.2	3.4	5.2	7.9	10.9	2.4	5.7	6.9	4.7	8.6	11.3	7.8	14.6	12.8	17.5	18.4	22.2	24.2	24.3	24.0	31.9
ift_14	lab	Th1-24_bCLT80-bCLT80	wall-wall	screws	No	No	2.70	1.00	1-2	12.8	4.3	10.7	8.7	8.7	11.6	7.4	5.2	11.7	8.4	10.3	12.1	11.1	17.0	18.1	21.5	19.7	16.8	19.4	18.6	19.4	22.3
ift_14	lab	Th1-24_bCLT80-bCLT80	wall-wall	screws	No	No	2.70	1.00	2-4	9.3	0.5	3.1	5.3	6.7	7.7	5.3	3.7	4.1	4.6	7.5	9.7	9.7	12.9	15.5	16.3	16.3	18.4	21.4	19.2	22.0	22.8
ift_15	lab	Th1-24_bCLT80+-bCLT80	wall-wall	screws	No	No	2.70	0.57	2-4	10.1	1.2	0.1	2.9	4.2	8.7	5.9	3.8	9.2	6.5	9.0	6.3	7.8	12.1	15.7	20.9	22.4	27.7	26.5	27.9	27.0	31.9
ift_16	lab	Th1-24_bCLT80+-bCLT80	wall-wall	screws	No	No	2.70	0.57	2-4	13.0	1.2	1.3	3.4	4.3	8.4	3.6	5.3	11.5	10.4	11.7	8.4	7.7	17.2	19.0	25.9	29.0	27.1	25.8	23.7	25.6	30.1
ift_17	lab	Th1-24_bCLT80-bCLT140	wall-wall	screws	No	No	2.70	0.57	1-2	14.9	9.7	13.8	11.9	8.5	13.1	11.2	11.2	7.7	8.9	11.4	12.9	12.1	18.8	22.5	28.6	33.9	36.5	33.6	33.5	38.1	44.4
ift_17	lab	Th1-24_bCLT80-bCLT140	wall-wall	screws	No	No	2.70	0.57	2-4	9.6	-1.1	-1.2	2.2	1.8	6.3	2.6	6.5	7.1	4.2	4.6	7.0	8.1	11.2	15.9	22.2	28.6	24.9	23.0	28.3	32.3	39.3
ift_25	lab	Th1-24_bCLT140-bCLT80	wall-wall	screws	No	No	2.70	0.57	1-4	13.6	5.9	5.8	5.5	3.9	1.5	5.5	11.5	11.3	11.8	9.6	13.0	11.3	14.2	17.4	22.0	23.4	26.9	29.5	27.0	28.9	31.1
ift_25	lab	Th1-24_bCLT140-bCLT80	wall-wall	screws	No	No	2.70	0.57	1-2	13.6	11.8	9.4	7.3	4.7	5.4	7.9	13.5	12.2	14.9	16.2	14.4	8.3	11.9	14.8	15.9	17.1	19.8	19.9	25.1	22.0	22.6
ift_25	lab	Th1-24_bCLT140-bCLT80	wall-wall	screws	No	No	2.70	0.57	2-4	6.6	4.6	6.6	8.4	3.6	0.6	3.8	5.1	6.8	7.0	6.3	4.8	3.9	3.2	7.3	14.6	10.7	14.9	9.4	11.3	11.0	9.4
ift_26	lab	Th1-24_bCLT135-bCLT135	wall-wall	screws	No	No	2.70	1.00	1-4	12.9	11.4	9.3	10.3	11.2	8.9	5.5	9.3	7.4	7.7	13.0	12.4	13.3	15.3	17.2	21.1	18.6	21.1	24.5	25.1	26.8	31.1
ift_26	lab	Th1-24_bCLT135-bCLT135	wall-wall	screws	No	No	2.70	1.00	1-2	11.0	8.8	9.2	10.5	7.3	8.1	10.1	8.9	9.1	8.5	9.7	9.5	9.7	10.7	14.1	18.8	19.0	22.4	25.6	24.2	27.9	25.2
ift_26	lab	Th1-24_bCLT135-bCLT135	wall-wall	screws	No	No	2.70	1.00	2-4	8.7	3.5	3.8	5.5	7.9	8.9	14.0	10.1	7.3	4.7	3.9	6.0	9.0	11.0	12.9	13.4	11.6	13.1	11.9	11.2	16.1	16.1
ift_27	lab	Th1-24_bCLT135-bCLT135	wall-wall	continuous metal bracket	No	No	2.70	1.00	1-4	13.6	13.2	12.0	9.8	9.3	7.7	8.0	9.1	7.4	9.9	13.5	12.3	13.1	16.1	18.7	21.8	23.5	21.9	24.6	29.3	30.3	31.7
ift_27	lab	Th1-24_bCLT135-bCLT135	wall-wall	continuous metal bracket	No	No	2.70	1.00	1-2	9.2	7.2	5.5	3.7	1.2	0.9	0.7	2.0	3.4	4.4	6.3	9.6	10.3	11.9	14.8	20.2	21.6	23.0	28.4	28.3	28.7	29.7
ift_27	lab	Th1-24_bCLT135-bCLT135	wall-wall	continuous metal bracket	No	No	2.70	1.00	2-4	7.1	3.2	4.3	8.8	10.4	6.8	5.0	4.6	3.1	2.6	5.4	3.3	11.0	10.1	11.9	11.7	12.4	8.6	11.7	18.3	20.4	16.3
ift_28	lab	Th1-24_bCLT135-bCLT135	wall-wall	continuous metal bracket	No	No	2.70	1.00	1-4	14.4	11.4	11.0	11.4	9.3	5.9	6.4	8.9	7.3	9.6	12.6	13.2	15.2	18.9	20.4	23.7	24.9	23.8	28.6	26.8	27.8	26.2
ift_28	lab	Th1-24_bCLT135-bCLT135	wall-wall	continuous metal bracket	No	No	2.70	1.00	1-2	10.1	7.6	4.9	4.3	1.1	0.9	0.7	2.9	3.2	4.9	6.5	11.3	11.6	13.5	16.6	20.4	22.7	23.6	30.1	28.1	30.7	31.4
ift_28	lab	Th1-24_bCLT135-bCLT135	wall-wall	continuous metal bracket	No	No	2.70	1.00	2-4	7.9	2.5	3.4	9.1	10.4	6.0	4.7	4.7	2.5	1.9	5.1	5.6	12.3	12.3	13.3	13.8	14.6	12.6	15.2	19.9	20.8	17.9
ift_29	lab	Th1-24_bCLT135-bCLT135	wall-wall	metal brackets, gap	No	No	2.70	1.00	1-4	15.1	8.0	5.2	4.7	3.4	2.6	6.3	9.2	8.0	10.2	13.8	13.2	15.2	20.1	21.8	24.7	26.4	26.8	30.9	32.6	30.6	31.5
ift_29	lab	Th1-24_bCLT135-bCLT135	wall-wall	metal brackets, gap	No	No	2.70	1.00	1-2	10.3	5.5	2.8	1.4	-1.1	0.6	1.7	3.1	5.0	7.1	8.7	9.9	11.1	11.6	17.7	18.6	21.4	25.5	29.2	31.2	31.5	31.1
ift_29	lab	Th1-24_bCLT135-bCLT135	wall-wall	metal brackets, gap	No	No	2.70	1.00	2-4	6.0	3.4	4.5	7.7	2.1	1.4	0.9	2.0	0.9	0.2	4.3	4.6	11.2	10.5	12.3	8.2	10.9	10.4	13.0	14.4	20.0	14.8
ift_32	lab	Th1-24_bCLT80-bCLT80	wall-wall	screws	No	No	2.70	1.00	1-4	12.0	12.6	15.4	13.4	12.0	13.7	11.7	12.7	15.2	14.3	11.3	14.6	12.3	10.9	9.2	7.6	9.8	8.7	11.6	12.5	17.0	21.3
ift_32	lab	Th1-24_bCLT80-bCLT80	wall-wall	screws	No	No	2.70	1.00	1-2	6.6	12.1	9.8	13.7	9.7	5.8	5.3	6.4	7.7	6.5	6.4	6.2	8.0	5.4	6.1	6.9	10.2	10.7	13.4	13.9	15.2	18.8
ift_32	lab	Th1-24_bCLT80-bCLT80	wall-wall	screws	No	No	2.70	1.00	2-4	4.3	4.0	3.0	2.4	0.7	0.4	1.3	3.7	5.8	8.3	5.7	9.7	4.1	1.2	1.2	-0.9	0.0	-0.2	-1.0	-1.2	0.5	6.1
ift_33	lab	Th1-24_bCLT80-bCLT80	wall-wall	screws	No	No	2.70	1.00	1-4	12.4	13.6	16.8	15.2	11.7	13.5	12.4	13.1	15.0	15.4	12.3	14.9	12.1	11.0	9.5	8.0	8.4	8.8	14.2	16.1	20.8	22.7
ift_33	lab	Th1-24_bCLT80-bCLT80	wall-wall	screws	No	No	2.70	1.00	1-2	6.3	12.6	10.1	14.0	11.6	7.6	5.7	8.5	9.1	7.1	6.1	4.5	6.1	4.4	5.9	5.1	6.4	9.2	12.6	11.4	14.4	14.1
ift_33	lab	Th1-24_bCLT80-bCLT80	wall-wall	screws	No	No	2.70	1.00	2-4	3.7	4.9	4.1	2.3	1.7	1.6	2.4	4.2	6.5	8.4	5.4	8.1	2.3	0.0	0.7	-2.0	-2.4	-3.1	-2.1	-1.7	2.4	4.5
ift_34	lab	Th1-24_bCLT80-bCLT80	wall-wall	screws	No	No	2.70	1.00	1-4	12.2	11.4	10.9	13.6	11.5	11.7	13.3	14.3	15.1	14.4	11.3	14.4	12.8	11.1	9.4	7.3	7.4	8.5	13.0	16.3	19.1	21.6
ift_34	lab	Th1-24_bCLT80-bCLT80	wall-wall	screws	No	No	2.70	1.00	1-2	6.7	12.8	11.0	12.7	9.9	8.0	6.9	7.2	8.6	8.0	6.1	4.8	7.3	5.7	6.8	6.1	9.6	10.4	12.0	12.0	17.0	15.6
ift_34	lab	Th1-24_bCLT80-bCLT80	wall-wall	screws	No	No	2.70	1.00	2-4	4.5	3.4	2.8	3.1	1.6	1.8	1.8	3.9	7.4	8.2	5.3	9.3	4.1	1.6	1.4	-1.1	-1.2	-1.3	-1.3	0.4	3.4	5.5
ift_35	lab	Th1-24_bCLT80-bCLT80	wall-wall	screws	No	No	2.70	1.00	1-4	11.4	12.0	10.9	12.7	11.3	12.6	12.5	12.4	14.8	13.6	10.4	14.7	11.8	10.8	8.3	6.4	8.1	7.2	12.7	14.0	14.1	16.7
ift_35	lab	Th1-24_bCLT80-bCLT80	wall-wall	screws	No	No	2.70	1.00	1-2	6.7	13.1	11.4	12.6	9.7	7.7	5.4	6.6	6.8	7.1	6.2	6.3	8.3	5.4	6.9	7.2	9.6	10.5	13.6	13.7	16.9	16.2
ift_35	lab	Th1-24_bCLT80-bCLT80	wall-wall	screws	No	No	2.70	1.00	2-4	3.7	4.9	4.7	5.0	4.2	1.7	-0.2	2.2	3.9	8.3	3.8	6.4	5.5	1.0	1.6	0.3	1.0	-0.2	-0.7	0.5	-0.7	0.4
NRC_02	lab	Th1-24_bCLT78-bCLT78	wall-wall	90mm metal brackets, e=30cm	No	n/a	2.40	1.00	2-4	3.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRC_02	lab	Th1-24_bCLT78-bCLT78	wall-wall	90mm metal brackets, e=30cm	No	n/a	2.40	1.00	1-2	5.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRC_02	lab	Th1-24_bCLT78-bCLT78	wall-wall	90mm metal brackets,e=30cm	No	n/a	2.40	1.00	1-4	5.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 61 T-junctions wall-floor (Tv2-1-4)

Description			Junction							Vibration reduction index K_{ij} in dB																					
ID	Lab/ In situ	VaB Dat	Elements	Fixing	Resilient layer	Additional load	l_{ij} in m	m'_2/m'_1	Path	$K_{1,200-1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz
CSTB_01	in situ	Tv2-1-4_bCLT115-bCLT115-bCLT115	wall-floor	metal brackets	No	Yes	n/a	1.00	2-4	21.5	26.2	20.3	27.2	20.7	18.8	22.2	19.9	19.7	19.0	19.3	23.8	22.5	21.9	22.7	25.0	24.8	27.4	27.0	32.2	40.6	46.1
CSTB_01	in situ	Tv2-1-4_bCLT115-bCLT115-bCLT115	wall-floor	metal brackets	No	Yes	n/a	1.00	1-4	15.6	19.8	17.6	18.3	15.8	16.4	15.1	13.0	13.1	15.3	15.1	15.5	15.2	18.5	17.4	17.0	17.7	19.9	21.2	21.5	27.6	28.4
CSTB_01	in situ	Tv2-1-4_bCLT115-bCLT115-bCLT115	wall-floor	metal brackets	No	Yes	n/a	1.00	1-2	13.3	21.2	17.8	16.2	14.5	16.0	12.2	10.4	11.5	13.2	14.1	15.3	13.8	13.6	14.4	13.7	12.8	14.9	18.7	20.1	24.9	27.6
SINTEF_01	lab	Tv2-1-4_bCLT100-bCLT120+-bCLT100	wall-floor	screws	No	No	7.00	0.83	2-4	32.0	-	29.0	29.0	31.0	25.0	23.0	-	32.0	29.0	-	31.0	32.0	36.0	-	-	-	-	-	-	-	-
SINTEF_02	lab	Tv2-1-4_bCLT100-bCLT120+-bCLT100	wall-floor	screws	No	No	7.00	0.83	2-4	22.0	27.0	33.0	25.0	23.0	17.0	20.0	19.0	24.0	24.0	21.0	20.0	23.0	23.0	-	-	-	-	-	-	-	-
SINTEF_02	lab	Tv2-1-4_bCLT100-bCLT120+-bCLT100	wall-floor	screws	No	No	3.60	0.83	2-4	18.7	21.0	24.0	20.0	8.0	12.0	13.0	16.0	16.0	17.0	19.0	21.0	20.0	22.0	-	-	-	-	-	-	-	-
SINTEF_02	lab	Tv2-1-4_bCLT100-bCLT120+-bCLT100	wall-floor	screws	No	No	7.00	0.83	1-4	22.4	31.0	36.0	29.0	29.0	20.0	20.0	21.0	22.0	23.0	19.0	22.0	25.0	25.0	-	-	-	-	-	-	-	-
SINTEF_02	lab	Tv2-1-4_bCLT100-bCLT120+-bCLT100	wall-floor	screws	No	No	7.00	0.83	1a-2	54.4	31.0	41.0	41.0	48.0	47.0	48.0	49.0	52.0	53.0	58.0	56.0	57.0	56.0	-	-	-	-	-	-	-	-
SINTEF_02	lab	Tv2-1-4_bCLT100-bCLT120+-bCLT100	wall-floor	screws	No	No	7.00	0.83	1a-1b	39.4	5.0	16.0	18.0	31.0	31.0	29.0	31.0	32.0	35.0	41.0	43.0	45.0	49.0	-	-	-	-	-	-	-	-
SINTEF_03	lab	Tv2-1-4_bCLT100+-bCLT120+-bCLT100	wall-floor	screws	No	No	7.00	0.83	2-4	17.3	29.0	25.0	21.0	18.0	13.0	15.0	18.0	19.0	21.0	17.0	13.0	15.0	18.0	-	-	-	-	-	-	-	-
SINTEF_03	lab	Tv2-1-4_bCLT100+-bCLT120+-bCLT100	wall-floor	screws	No	No	3.60	0.83	2-4	15.3	19.0	25.0	21.0	9.0	13.0	16.0	15.0	15.0	15.0	13.0	14.0	16.0	19.0	-	-	-	-	-	-	-	-
SINTEF_03	lab	Tv2-1-4_bCLT100+-bCLT120+-bCLT101	wall-floor	screws	No	No	7.00	0.83	1a-2a	45.4	29.0	29.0	28.0	40.0	39.0	39.0	35.0	37.0	40.0	48.0	49.0	54.0	55.0	-	-	-	-	-	-	-	-
HsRo_12	lab	Tv2-1-4-bCLT81-bCLT162-bCLT81	wall-floor	screws 8x320mm, e=40cm; metal brackets 90x90 (screwed 4x40mm)	No	Yes	3.00	0.50	1-2	12.9	19.3	19.9	21.3	11.2	14.1	17.8	10.7	17.1	13.9	13.2	14.1	11.4	10.7	13.8	11.7	5.7	4.6	5.2	6.6	5.4	5.1
HsRo_12	lab	Tv2-1-4-bCLT81-bCLT162-bCLT81	wall-floor	screws 8x320mm, e=40cm; metal brackets 90x90 (screwed 4x40mm)	No	Yes	3.00	0.50	1-4	11.2	15.8	-	22.5	14.7	10.8	16.5	15.1	11.0	9.4	9.2	12.1	10.8	8.8	14.0	10.1	5.6	-	8.4	8.3	4.7	2.5
HsRo_12	lab	Tv2-1-4-bCLT81-bCLT162-bCLT81	wall-floor	screws 8x320mm, e=40cm; metal brackets 90x90 (screwed 4x40mm)	No	Yes	3.00	0.50	2-4	17.1	21.1	-	29.3	22.2	23.0	24.3	16.5	19.0	18.5	15.4	19.2	17.6	14.7	18.4	14.8	13.0	-	10.4	12.0	15.6	17.7
HsRo_13	lab	Tv2-1-4-bCLT81-bCLT162-bCLT81	wall-floor	screws 8x320mm, e=40cm; metal brackets 90x90 (screwed 4x40mm)	No	Yes	3.00	0.50	1-2	11.6	19.8	20.7	22.0	10.7	14.6	17.2	10.9	15.7	14.1	11.2	13.1	10.9	10.3	8.5	9.7	6.7	7.0	7.2	4.8	5.9	9.3
HsRo_13	lab	Tv2-1-4-bCLT81-bCLT162-bCLT81	wall-floor	screws 8x320mm, e=40cm; metal brackets 90x90 (screwed 4x40mm)	No	Yes	3.00	0.50	1-4	9.7	14.1	16.1	21.1	14.4	10.3	15.7	10.9	9.2	10.8	10.8	11.5	7.8	8.6	8.9	8.6	6.6	4.7	5.1	4.4	5.9	6.8
HsRo_13	lab	Tv2-1-4-bCLT81-bCLT162-bCLT81	wall-floor	screws 8x320mm, e=40cm; metal brackets 90x90 (screwed 4x40mm)	No	Yes	3.00	0.50	2-4	15.5	20.2	28.3	27.2	21.7	17.5	28.6	16.0	18.2	20.6	14.7	17.5	13.3	13.0	15.1	11.5	10.8	9.3	7.1	10.7	11.7	16.4
HsRo_14	lab	Tv2-1-4-bCLT81-bCLT162-bCLT81	wall-floor	decoupled screws 8x320mm, e=40cm; decoupled metal brackets 90x90	No	Yes	3.00	0.50	1-2	12.5	-	-	-	10.3	13.4	17.8	11.5	16.5	13.3	12.2	13.6	11.6	12.4	10.7	11.0	6.1	5.1	5.3	6.7	3.7	3.9
HsRo_14	lab	Tv2-1-4-bCLT81-bCLT162-bCLT81	wall-floor	decoupled screws 8x320mm, e=40cm; decoupled metal brackets 90x90	No	Yes	3.00	0.50	1-4	12.1	19.2	-	-	12.9	11.2	16.1	15.7	12.3	11.4	10.8	13.3	11.9	10.0	11.6	12.2	11.4	-	-	10.8	-	-
HsRo_14	lab	Tv2-1-4-bCLT81-bCLT162-bCLT81	wall-floor	decoupled screws 8x320mm, e=40cm; decoupled metal brackets 90x90	No	Yes	3.00	0.50	2-4	17.8	-	-	29.8	21.3	22.6	21.7	16.4	18.5	18.3	15.7	19.8	17.9	15.8	20.4	17.6	14.1	-	-	11.5	-	-
HsRo_15	lab	Tv2-1-4-bCLT81-bCLT162-bCLT81	wall-floor	decoupled screws 8x320mm, e=40cm; decoupled metal brackets 90x90	Yes	Yes	3.00	0.50	1-2	19.6	21.6	24.6	19.9	19.6	26.1	24.5	21.6	15.7	19.1	12.8	18.7	19.4	23.7	21.0	24.4	23.5	21.6	23.2	23.0	22.9	22.7
HsRo_15	lab	Tv2-1-4-bCLT81-bCLT162-bCLT81	wall-floor	decoupled screws 8x320mm, e=40cm; decoupled metal brackets 90x90	Yes	Yes	3.00	0.50	1-4	16.6	17.6	18.8	17.4	11.2	17.1	17.0	15.3	13.2	16.1	13.5	18.2	15.8	13.5	19.6	24.5	21.4	21.9	23.4	20.9	23.0	24.2
HsRo_15	lab	Tv2-1-4-bCLT81-bCLT162-bCLT81	wall-floor	decoupled screws 8x320mm, e=40cm; decoupled metal brackets 90x90	Yes	Yes	3.00	0.50	2-4	30.1	25.6	25.6	28.1	27.4	28.4	25.1	28.2	25.8	28.2	25.4	30.9	31.7	30.6	33.1	36.7	35.2	36.0	34.1	33.4	32.2	27.5
ift_10	lab	Tv2-1-4_bCLT80-bCLT160-bCLT80	wall-floor	screws, metal brackets	No	No	5.00	0.53	1-4	12.5	3.5	2.2	7.1	6.1	5.8	10.4	6.4	8.0	8.6	10.3	11.9	14.9	16.6	17.9	17.4	17.3	17.7	16.9	15.9	13.8	18.2
ift_10	lab	Tv2-1-4_bCLT80-bCLT160-bCLT80	wall-floor	screws, metal brackets	No	No	5.00	0.53	1-2	12.8	9.6	15.5	12.7	12.8	11.5	12.8	10.6	11.8	10.1	13.1	13.2	13.9	12.5	16.1	13.9	13.5	12.9	18.5	16.9	16.2	16.4
ift_10	lab	Tv2-1-4_bCLT80-bCLT160-bCLT80	wall-floor	screws, metal brackets	No	No	5.00	0.53	2-4	20.6	12.6	16.7	19.6	15.4	15.3	21.0	17.6	21.3	19.0	20.4	16.2	22.6	22.4	21.1	24.5	21.7	18.6	20.3	19.8	27.4	29.2
ift_11	lab	Tv2-1-4_bCLT140-bCLT160-bCLT140	wall-floor	screws, metal brackets	No	No	5.00	0.93	1-4	13.0	0.6	2.5	3.2	4.8	2.4	4.0	8.2	9.0	11.9	9.9	13.3	16.1	16.4	14.6	17.4	16.4	19.2	14.7	14.1	15.4	20.1
ift_11	lab	Tv2-1-4_bCLT140-bCLT160-bCLT140	wall-floor	screws, metal brackets	No	No	5.00	0.93	1-2	9.6	10.3	11.1	12.6	12.9	12.8	11.3	8.4	7.9	9.2	11.3	9.4	11.1	10.1	9.3	9.9	10.2	10.5	8.6	11.2	11.2	13.4
ift_11	lab	Tv2-1-4_bCLT140-bCLT160-bCLT140	wall-floor	screws, metal brackets	No	No	5.00	0.93	2-4	19.7	11.0	13.5	16.9	15.0	15.3	15.0	16.7	20.8	22.9	18.8	16.4	18.8	22.0	19.8	21.3	21.1	24.4	23.6	25.6	26.4	30.6
ift_40	lab	Tv2-1-4_bCLT80-bCLT160+-bCLT80	wall-floor	screws, metal brackets	No	No	5.00	0.53	2-4	25.7	18.8	19.6	15.1	13.0	15.2	24.5	24.9	24.8	22.7	26.3	25.8	26.6	26.9	26.1	27.3	27.5	28.5	27.3	29.5	31.7	33.1
ift_41	lab	Tv2-1-4_bCLT80-bCLT160-bCLT80	wall-floor	screws, metal brackets	No	No	5.00	0.53	1-4	14.6	8.1	6.7	4.7	5.2	8.3	8.9	9.7	8.9	11.1	16.1	14.2	16.3	16.2	19.5	19.4	16.9	14.9	16.7	17.5	22.2	24.6
ift_41	lab	Tv2-1-4_bCLT80-bCLT160-bCLT80	wall-floor	screws, metal brackets	No	No	5.00	0.53	1-2	10.7	14.5	13.5	10.9	9.2	8.8	9.5	8.6	10.4	11.1	10.9	9.4	11.6	10.8	12.4	10.7	10.8	12.5	10.6	15.9	18.0	16.2
ift_41	lab	Tv2-1-4_bCLT80-bCLT160-bCLT80	wall-floor	screws, metal brackets	No	No	5.00	0.53	2-4	22.8	16.0	14.5	11.4	12.4	12.3	20.6	20.9	20.4	20.1	21.5	18.1	25.6	26.5	25.1	27.1	23.8	24.3	27.2	25.6	33.6	34.0
ift_42	lab	Tv2-1-4_bCLT80-bCLT160-bCLT80	wall-floor	screws, metal brackets	No	No	5.00	0.60	1-4	15.1	7.8	7.2	5.4	4.4	7.1	10.9	11.8	14.2	12.6	13.4	12.1	17.2	18.2	18.9	17.9	17.3	17.4	19.1	17.2	19.7	20.6
ift_42	lab	Tv2-1-4_bCLT80-bCLT160-bCLT80	wall-floor	screws, metal brackets	No	No	5.00	0.60	1-2	14.2	14.3	13.1	12.5	9.9	14.1	15.4	15.0	15.1	14.0	14.1	14.4	15.3	12.6	13.3	14.1	12.8	13.3	12.7	12.5	13.1	14.6
ift_42	lab	Tv2-1-4_bCLT80-bCLT160-bCLT80	wall-floor	screws, metal brackets	No	No	5.00	0.60	2-4	22.0	18.3	17.8	15.5	13.1	19.4	23.7	22.4	21.5	21.6	19.6	19.6	23.0	21.7	24.3	24.0	27.0	28.1	28.3	30.6	31.6	29.2
ift_43	lab	Tv2-1-4_bCLT80-bCLT160+-bCLT80	wall-floor	screws, metal brackets	No	No	5.00	0.60	2-4	26.0	20.9	21.4	20.7	15.3	16.5	25.6	23.9	24.5	26.5	27.1	25.7	26.0	26.3	26.9	26.9	28.9	30.9	30.0	31.8	31.5	28.1
ift_50	in situ	Tv2-1-4_bCLT260-bCLT20-bCLT260	wall-floor	screws, decoupled metal brackets 90x90 (cork)	Yes	No	3.40	0.77	1-2	11.2	21.0	17.0	13.0	12.5	11.3	11.8	11.4	10.6	13.8	12.0	11.6	9.4	10.2	10.0	11.7	15.6	14.9	16.3	22.8	27.2	26.7
ift_50	in situ	Tv2-1-4_bCLT260-bCLT20-bCLT260	wall-floor	screws, decoupled metal brackets 90x90 (cork)	Yes	No	3.40	0.77	2-4	19.3	18.5	22.2	18.4	15.3	14.9	16.2	16.4	16.7	16.8	19.2	20.2	19.3	22.4	19.7	22.7	26.8	32.5	34.9	39.5	41.5	49.9
Empa_01	lab	Tv2-1-4_bCLT80-HBV-bCLT80	wall-floor	CLT to concrete with 2 metal brackets and bolts, metal brackets e=440mm	No	No	4.57	1.00	2-4	27.8	20.0	23.7	21.7	27.6	29.6	25.4	30.2	26.7	20.7	20.5	25.1	28.2	31.0	33.2	34.4	35.0	37.3	39.0	39.3	41.8	40.7
Empa_01	lab	Tv2-1-4_bCLT80-HBV-bCLT80	wall-floor	CLT to concrete with 2 metal brackets and bolts, metal brackets e=440mm	No	No	2.28	1.00	2-1a	12.3	10.9	12.4	9.4	12.5	15.8	10.1	14.0	12.2	10.4	10.7	9.7	13.9	12.5	13.3	13.6	12.8	12.6	14.6	16.3	19.7	22.5
Empa_01	lab	Tv2-1-4_bCLT80-HBV-bCLT80	wall-floor	CLT to concrete with 2 metal brackets and bolts, metal brackets e=440mm	No	No	2.28	1.00	2-1b	24.3	18.7	22.3	14.8	17.6	23.1	18.7	22.2	21.1	22.9	23.0	25.3	27.7	27.4	25.6	23.7	26.1	26.7	24.3	27.7	31.6	33.7
Empa_01	lab	Tv2-1-4_bCLT80-HBV-bCLT80	wall-floor	CLT to concrete with 2 metal brackets and bolts, metal brackets e=440mm	No	No	4.57	1.00	4-1a	16.8	17.6	17.5	16.6	14.2	13.6	11.2	13.1	15.3	15.6	16.2	16.5	15.4	18.6	20.3	20.3	20.0	21.0	20.7	20.3	23.2	21.9
Empa_01	lab	Tv2-1-4_bCLT80-HBV-bCLT80	wall-floor	CLT to concrete with 2 metal brackets and bolts, metal brackets e=440mm	No	No	4.57	1.00	4-1b	33.9	22.0	26.6	24.0	23.1	26.3	21.8	25.1	29.6	31.1	31.0	34.6	37.2	37.5	39.3	39.7	43.3	47.1	47.3	49.1	52.1	-
Empa_01	lab	Tv2-1-4_bCLT80-HBV-bCLT80	wall-floor	CLT to concrete with 2 metal brackets and bolts, metal brackets e=440mm	No	No	-	1.00	1a-1b	11.8	2.5	4.6	1.2	3.9	8.5	4.3	7.3	7.1	9.8	10.7	13.3	16.7	11.9	13.7	15.9	19.6	22.4	21.3	21.2	27.8	-
Holtz_01	lab	Tv2-1-4	wall-floor	n/a	No	n/a	n/a	n/a	1-4	13.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Holtz_01	lab	Tv2-1-4	wall-floor	n/a	No	n/a	n/a	n/a	2-4	23.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRC_04	lab	Tv2-1-4_bCLT175-bCLT175-bCLT175	wall-floor	90mm metal brackets, e=30cm	No	n/a	3.65	1.00	2-4	12.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRC_04	lab	Tv2-1-4_bCLT175-bCLT175-bCLT176	wall-floor	90mm metal brackets, e=30cm	No	n/a	3.65	1.00	1-4	6.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRC_04	lab	Tv2-1-4_bCLT175-bCLT175-bCLT177	wall-floor	90mm metal brackets, e=30cm	No	n/a	3.65	1.00	1-2	6.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 62 T-junctions wall-floor (Tv1-24)

Description			Junction							Vibration reduction index K_{ij} in dB																						
ID	Lab/ In situ	VaBDat	Elements	Fixing	Resilient layer	Additional load	l_{ij} in m	m'_2/m'_1	Path	$K_{ij,200\text{-}1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz
HsRo_10	lab	Tv1-24-bCLT162-bCLT81	wall-floor	screws 8x80mm, e=40cm; continuous metal bracket 80x80x8mm	No	Yes	3.00	0.50	1-2	9.2	14.8	-	18.4	11.6	19.1	16.0	11.0	12.6	9.1	8.9	10.5	9.0	6.6	6.4	9.0	7.2	7.8	12.4	15.3	16.7	12.9
HsRo_10	lab	Tv1-24-bCLT162-bCLT81	wall-floor	screws 8x80mm, e=40cm; continuous metal bracket 80x80x8mm	No	Yes	3.00	0.50	1-4	8.4	19.9	-	19.3	10.8	13.4	14.8	10.5	10.2	9.6	8.2	8.9	8.5	6.2	5.9	7.8	4.0	7.4	8.1	12.2	13.8	14.9
HsRo_10	lab	Tv1-24-bCLT162-bCLT81	wall-floor	screws 8x80mm, e=40cm; continuous metal bracket 80x80x8mm	No	Yes	3.00	0.50	2-4	5.0	5.7	-	8.2	11.4	11.4	11.8	13.0	7.4	4.3	5.3	5.7	3.6	2.2	2.5	1.0	-3.1	-0.5	-3.5	-4.3	-0.5	0.5
HsRo_11	lab	Tv1-24-bCLT162-bCLT81	wall-floor	screws 8x80mm, e=40cm;decoupled continuous metal bracket 80x80x8mm	No	Yes	3.00	0.50	1-2	11.7	22.6	-	12.0	7.1	14.0	14.9	13.0	13.8	13.7	13.3	13.0	10.8	7.6	9.8	10.5	13.7	14.9	21.9	25.7	23.4	-
HsRo_11	lab	Tv1-24-bCLT162-bCLT81	wall-floor	screws 8x80mm, e=40cm;decoupled continuous metal bracket 80x80x8mm	No	Yes	3.00	0.50	1-4	11.2	19.9	18.3	13.1	10.9	14.8	13.7	14.1	12.1	13.2	13.2	12.2	9.7	8.3	7.9	9.7	10.8	14.6	19.6	24.7	21.1	22.2
HsRo_11	lab	Tv1-24-bCLT162-bCLT81	wall-floor	screws 8x80mm, e=40cm;decoupled continuous metal bracket 80x80x8mm	No	Yes	3.00	0.50	2-4	3.9	8.1	-	9.3	11.2	7.2	8.9	8.1	5.3	3.1	4.4	5.0	2.9	2.9	2.4	0.7	-1.6	0.5	-2.5	-2.8	-1.0	-
Schramm_01	lab	Tv2-13_bCLT81-bCLT135	wall-floor	2x 90mm metal brackets	No	No	1.50	0.60	1-3	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Schramm_01	lab	Tv2-13_bCLT81-bCLT135	wall-floor	2x 90mm metal brackets	No	No	1.50	0.60	1-2	17.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ift_01	lab	Tv2-13_CLT80-CLT160	wall-floor	screws	No	No	4.30	0.53	1-2	14.7	12.8	16.9	15.0	14.2	16.5	17.2	17.2	16.3	15.2	13.5	15.4	14.0	13.7	14.1	12.6	11.1	13.0	14.5	13.1	15.2	11.5
ift_01	lab	Tv2-13_CLT80-CLT160	wall-floor	screws	No	No	4.30	0.53	2-3	15.5	16.6	17.4	17.0	15.6	17.4	17.1	17.0	15.2	16.0	15.2	14.8	15.4	15.6	15.7	14.3	15.1	14.6	16.8	14.2	18.2	16.6
ift_01	lab	Tv2-13_CLT80-CLT160	wall-floor	screws	No	No	4.30	0.53	1-3	3.4	4.0	5.5	8.1	6.9	9.2	7.9	8.0	6.2	6.6	4.8	5.0	0.7	1.0	1.0	-2.7	-1.6	-1.4	2.9	5.5	6.2	2.0
ift_02	lab	Tv2-13_bCLT80-bCLT160	wall-floor	screws	No	No	4.30	0.53	1-2	13.6	13.1	14.9	14.6	11.3	14.4	14.1	14.3	12.9	14.3	13.5	13.8	14.1	12.7	14.1	12.5	10.5	11.3	12.0	13.3	13.0	10.9
ift_02	lab	Tv2-13_bCLT80-bCLT160	wall-floor	screws	No	No	4.30	0.53	2-3	14.2	15.5	16.5	15.5	10.9	16.4	14.2	14.7	14.1	13.5	13.1	15.4	14.6	14.7	13.2	14.4	13.9	13.0	12.9	13.3	12.8	13.2
ift_02	lab	Tv2-13_bCLT80-bCLT160	wall-floor	screws	No	No	4.30	0.53	1-3	3.8	4.7	5.9	6.5	5.9	8.6	8.2	9.0	6.1	6.0	5.0	4.5	2.1	1.6	1.4	-1.1	-0.1	-0.1	2.8	1.9	1.4	1.5
ift_03	lab	Tv2-13_bCLT80+-bCLT160	wall-floor	screws	No	No	4.30	0.53	1-3	3.8	2.0	4.3	4.8	4.3	6.6	7.2	8.5	6.1	7.1	4.9	3.6	2.2	1.7	0.7	-1.0	-1.0	-1.7	4.1	2.2	2.0	1.7
ift_04	lab	Tv2-13_bCLT140-bCLT160	wall-floor	screws	No	No	4.30	0.93	1-2	13.3	7.7	10.7	9.8	10.0	10.6	9.9	10.3	11.4	12.6	13.3	13.9	15.6	14.0	14.8	13.5	14.7	14.0	12.5	12.7	15.3	14.8
ift_04	lab	Tv2-13_bCLT140-bCLT160	wall-floor	screws	No	No	4.30	0.93	2-3	12.9	8.5	8.6	8.9	8.2	10.3	10.1	11.1	11.8	11.2	12.4	13.8	14.1	14.5	14.6	12.2	14.3	15.1	13.7	12.6	11.8	11.6
ift_04	lab	Tv2-13_bCLT140-bCLT160	wall-floor	screws	No	No	4.30	0.93	1-3	1.9	3.0	4.9	7.1	4.0	7.9	4.7	4.8	2.2	1.9	2.8	1.7	3.4	1.8	0.5	-1.6	1.4	-0.8	5.2	-1.0	0.0	-0.7
ift_05	lab	Tv2-13_bCLT140+-bCLT160	wall-floor	screws	No	No	4.30	0.93	1-3	2.3	5.4	5.9	10.3	4.5	9.9	6.7	5.4	4.2	2.9	1.3	2.2	4.6	1.2	0.4	-1.2	1.8	9.6	7.1	3.9	10.3	11.6
ift_06	lab	Tv2-1:3_bCLT140+-bCLT160:bCLT160	wall-floor	screws	No	No	4.30	1.00	1-3	17.7	8.7	9.2	15.4	13.7	16.3	14.3	15.7	19.9	20.1	15.6	14.8	19.4	16.5	18.0	19.1	27.6	27.1	24.7	26.2	23.0	23.4
ift_07	lab	Tv2-1:3_bCLT140-bCLT160:bCLT160	wall-floor	screws	No	No	4.30	0.93	1-2	12.2	11.9	15.6	14.2	14.2	12.0	12.5	10.2	14.0	11.2	11.7	13.3	15.3	12.4	11.6	10.4	9.1	10.9	13.0	16.2	15.1	12.3
ift_07	lab	Tv2-1:3_bCLT140-bCLT160:bCLT160	wall-floor	screws	No	No	4.30	0.93	2-3	12.7	12.6	12.4	14.8	10.1	13.4	11.6	10.6	13.1	10.4	11.2	12.0	14.6	17.0	13.1	12.4	14.5	14.0	12.3	14.3	12.0	13.8
ift_07	lab	Tv2-1:3_bCLT140-bCLT160:bCLT160	wall-floor	screws	No	No	4.30	0.93	1-3	13.6	6.9	9.9	12.9	12.1	12.9	10.8	11.0	14.5	13.8	15.5	15.5	15.0	9.9	11.2	16.0	25.1	22.5	15.0	24.3	22.8	21.9
ift_08	lab	Tv2-1:3_bCLT80-bCLT160:bCLT160	wall-floor	screws	No	No	4.30	0.53	1-2	11.9	13.5	14.7	12.9	11.0	11.8	10.8	8.4	8.6	8.2	12.9	11.0	12.5	14.3	15.3	15.7	10.3	12.7	15.5	17.9	15.5	13.2
ift_08	lab	Tv2-1:3_bCLT80-bCLT160:bCLT160	wall-floor	screws	No	No	4.30	0.53	2-3	11.7	15.8	17.1	15.2	9.8	14.4	13.1	10.4	9.6	10.0	11.2	11.9	11.2	13.5	14.0	13.7	12.5	13.4	13.4	15.2	13.2	16.6
ift_08	lab	Tv2-1:3_bCLT80-bCLT160:bCLT160	wall-floor	screws	No	No	4.30	0.53	1-3	10.6	7.4	13.2	11.1	8.3	11.7	8.0	9.9	11.2	10.7	12.7	10.2	8.7	8.0	11.5	12.3	16.4	17.9	24.4	24.8	21.5	18.2
ift_09	lab	Tv2-1:3_bCLT80+-bCLT160:bCLT160	wall-floor	screws	No	No	4.30	0.53	1-3	13.9	7.8	11.4	13.4	11.1	16.7	14.5	15.7	16.3	15.4	12.7	11.7	14.0	13.4	12.3	13.3	16.7	20.6	25.1	33.2	27.9	24.6
ift_38	lab	Tv2-1:3_bCLT80-bCLT160:bCLT160	wall-floor	screws	No	No	4.10	0.53	1-2	13.5	11.1	11.4	10.4	11.5	10.0	9.7	9.6	11.6	9.6	12.1	13.0	14.3	16.6	16.6	18.1	16.7	17.4	17.6	14.0	15.9	16.7
ift_38	lab	Tv2-1:3_bCLT80-bCLT160:bCLT160	wall-floor	screws	No	No	4.10	0.53	2-3	12.3	11.9	12.3	12.9	10.7	10.7	10.8	11.3	12.6	14.3	15.2	14.2	10.6	10.8	11.0	11.0	13.6	14.2	16.4	18.8	14.0	14.5
ift_38	lab	Tv2-1:3_bCLT80-bCLT160:bCLT160	wall-floor	screws	No	No	4.10	0.53	1-3	10.4	2.6	1.8	5.9	8.0	3.7	4.2	6.9	8.8	11.4	13.5	11.9	8.5	7.1	11.0	14.1	19.1	21.5	19.1	20.2	21.8	22.8
ift_39	lab	Tv2-1:3_bCLT160-bCLT160:bCLT160	wall-floor	screws	No	No	4.10	0.53	1-2	25.8	15.5	17.1	19.8	17.1	19.6	17.8	16.1	18.0	17.1	21.6	22.6	28.5	32.2	36.7	38.9	41.1	44.7	40.2	39.7	40.5	39.6
ift_39	lab	Tv2-1:3_bCLT160-bCLT160:bCLT160	wall-floor	screws	No	No	4.10	0.53	2-3	23.8	14.2	17.3	19.2	12.2	18.5	17.8	16.8	16.6	15.5	20.4	20.9	24.8	29.4	32.3	37.5	38.8	43.3	43.4	38.1	35.8	37.7
ift_39	lab	Tv2-1:3_bCLT160-bCLT160:bCLT160	wall-floor	screws	No	No	4.10	0.53	1-3	35.0	15.4	17.9	25.5	22.4	28.6	27.6	27.3	28.1	28.1	34.1	34.9	37.8	40.1	42.5	42.6	43.4	45.6	43.1	43.7	43.8	43.9

Table 63 X-junctions wall-floor and wall-wall

Description			Junction								Vibration reduction index K_{ij} in dB																							
ID	Lab/ In situ	VaBDat	Elements	Fixing	Resilient layer	Additional load	l_{ij} in m	m'_2/m'_1	Path	$K_{ij,1200-1250}$	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz
ift_44	lab	Xv2-1:3-4_bCLT80-bCLT160:bCLT160-bCLT80	wall-floor	screws, metal brackets	No	No	4.10	0.60	3-4	15.3	14.8	14.5	12.3	14.4	15.1	14.8	14.4	15.1	15.3	13.2	14.3	15.2	16.7	16.6	16.7	14.0	14.6	14.9	16.0	17.3	17.6
ift_44	lab	Xv2-1:3-4_bCLT80-bCLT160:bCLT160-bCLT80	wall-floor	screws, metal brackets	No	No	4.10	0.60	1-4	16.2	18.4	16.8	14.0	15.7	14.4	15.6	15.7	17.2	15.2	14.4	13.7	16.1	17.7	16.9	19.0	18.0	17.3	17.6	20.6	24.4	26.3
ift_44	lab	Xv2-1:3-4_bCLT80-bCLT160:bCLT160-bCLT80	wall-floor	screws, metal brackets	No	No	4.10	0.60	1-3	9.1	8.3	9.2	8.0	8.9	8.3	7.1	6.6	11.4	13.0	10.9	9.6	5.5	5.3	8.7	11.2	8.4	12.3	13.3	14.1	18.4	20.6
ift_45	lab	Xv2-1:3-4_bCLT80-bCLT160:bCLT160-bCLT80	wall-floor	screws, metal brackets	No	No	4.10	0.60	2-3	12.0	15.7	14.9	13.1	13.2	12.6	9.4	11.9	11.0	8.2	9.2	10.3	11.5	12.1	16.8	16.7	10.8	10.6	7.2	8.7	8.1	7.6
ift_45	lab	Xv2-1:3-4_bCLT80-bCLT160:bCLT160-bCLT80	wall-floor	screws, metal brackets	No	No	4.10	0.60	1-2	11.8	15.6	17.4	10.2	13.2	11.6	10.9	11.9	9.4	8.4	9.9	10.8	12.1	14.1	16.4	13.2	10.2	9.5	6.9	8.5	8.6	8.3
ift_45	lab	Xv2-1:3-4_bCLT80-bCLT160:bCLT160-bCLT80	wall-floor	screws, metal brackets	No	No	4.10	0.60	1-3	8.8	8.0	9.0	6.6	8.9	8.5	6.0	8.5	11.2	12.2	11.0	9.5	6.0	4.0	7.5	9.5	10.0	11.1	11.7	14.3	19.3	18.6
ift_46	in situ	Xv2-1:3-4_bCLT80-bCLT160:bCLT160-bCLT80	wall-floor	screws, metal brackets	No	No	4.10	0.60	3-4	14.0	11.0	7.1	7.3	7.7	8.5	10.8	11.4	12.3	11.5	11.9	13.8	15.4	16.2	16.7	17.2	13.1	14.8	13.6	14.3	18.2	19.2
ift_46	in situ	Xv2-1:3-4_bCLT80-bCLT160:bCLT160-bCLT80	wall-floor	screws, metal brackets	No	No	4.10	0.60	2-3	12.5	15.3	16.2	15.1	15.2	13.6	11.4	11.3	10.6	10.7	10.5	10.5	11.9	14.1	16.8	16.1	10.7	12.3	9.2	9.5	11.7	10.3
ift_46	in situ	Xv2-1:3-4_bCLT80-bCLT160:bCLT160-bCLT80	wall-floor	screws, metal brackets	No	No	4.10	0.60	2-4	21.4	20.2	24.1	19.2	21.3	21.9	23.2	24.3	22.6	18.3	19.3	20.3	22.5	20.9	22.7	21.9	18.2	20.0	20.0	24.4	24.2	27.2
HsRo_16	in situ	Xv2-13-4_bCLT100-bCLT200-bCLT100	wall-floor	screws, decoupled metal brackets 90x90 (cork)	Yes	No	3.40	0.50	1-4	15.1	18.7	19.3	20.1	17.4	19.1	14.0	15.6	14.4	13.9	13.2	14.4	15.4	14.5	14.5	19.8	17.2	17.2	16.6	26.1	29.1	17.1
HsRo_16	in situ	Xv2-13-4_bCLT100-bCLT200-bCLT100	wall-floor	screws, decoupled metal brackets 90x90 (cork)	Yes	No	3.40	0.50	2-3	13.4	15.8	-	23.3	15.9	12.8	12.3	14.0	12.2	14.2	12.4	13.6	12.2	13.6	14.3	13.7	14.5	15.2	16.8	17.3	19.7	12.6
HsRo_16	in situ	Xv2-13-4_bCLT100-bCLT200-bCLT100	wall-floor	screws, decoupled metal brackets 90x90 (cork)	Yes	No	3.40	0.50	2-4	26.9	30.0	-	31.7	28.2	25.7	19.7	18.7	24.6	27.2	29.0	28.7	28.7	28.6	27.1	29.4	28.5	31.3	32.7	36.5	34.9	16.2
HsRo_16	in situ	Xv2-13-4_bCLT100-bCLT200-bCLT100	wall-floor	screws, decoupled metal brackets 90x90 (cork)	Yes	No	3.40	0.50	3-4	14.8	23.0	20.3	19.2	16.9	17.4	14.2	14.1	13.4	14.2	12.7	13.9	15.4	16.3	15.4	17.5	18.0	18.7	19.4	17.7	15.9	11.6
ift_47	in situ	Xv2-13-4_bCLT100-bCLT200-bCLT100	wall-floor	screws, decoupled metal brackets 90x90 (cork)	Yes	No	3.40	0.50	3-4	15.2	25.7	16.9	18.4	16.2	14.8	12.1	13.8	13.0	14.3	13.8	14.1	16.6	16.9	17.5	17.0	18.1	19.5	18.4	18.5	22.9	24.5
ift_47	in situ	Xv2-13-4_bCLT100-bCLT200-bCLT100	wall-floor	screws, decoupled metal brackets 90x90 (cork)	Yes	No	3.40	0.50	1-4	14.7	20.6	17.9	18.9	16.9	15.7	12.2	14.0	13.4	13.8	14.3	14.1	15.5	15.0	14.3	17.8	17.1	14.0	16.8	18.0	18.3	10.3
ift_47	in situ	Xv2-13-4_bCLT100-bCLT200-bCLT100	wall-floor	screws, decoupled metal brackets 90x90 (cork)	Yes	No	3.40	0.50	1-3	0.5	5.7	9.1	11.4	12.0	9.8	6.0	5.6	2.1	2.2	-0.4	-2.0	-1.8	-0.7	-0.7	0.0	-2.7	0.0	1.8	0.3	1.0	7.2
ift_48	in situ	Xv2-13-4_bCLT100-bCLT200-bCLT100	wall-floor	screws, decoupled metal brackets 90x90 (cork)	Yes	No	3.40	0.50	2-3	12.8	15.0	20.8	20.2	13.9	10.4	10.1	11.7	10.8	13.2	11.3	14.0	12.9	13.3	15.4	12.6	12.3	15.9	14.0	18.9	21.0	23.1
ift_48	in situ	Xv2-13-4_bCLT100-bCLT200-bCLT100	wall-floor	screws, decoupled metal brackets 90x90 (cork)	Yes	No	3.40	0.50	2-4	26.3	30.6	32.3	29.0	25.1	21.9	16.3	16.5	22.6	25.8	28.6	29.2	28.6	28.8	27.1	29.1	28.2	31.5	31.8	32.3	41.8	44.4
CSTB_02	in situ	Xv2-13-4_bCLT115-bCLT115-bCLT115	wall-floor	metal brackets	No	Yes	n/a	1.00	1-3	11.0	24.0	21.7	16.5	18.4	18.4	14.9	16.6	12.7	18.1	13.2	8.9	7.5	7.9	6.3	7.4	8.5	9.3	14.3	13.5	16.0	15.0
CSTB_02	in situ	Xv2-13-4_bCLT115-bCLT115-bCLT115	wall-floor	metal brackets	No	Yes	n/a	1.00	1-4	20.0	23.4	22.0	21.7	18.2	20.2	18.8	17.3	19.0	20.8	20.4	19.2	19.2	20.5	21.3	22.1	23.4	25.1	25.1	27.5	30.8	32.9
CSTB_02	in situ	Xv2-13-4_bCLT115-bCLT115-bCLT115	wall-floor	metal brackets	No	Yes	n/a	1.00	1-2	16.3	22.0	19.2	18.4	15.5	17.2	16.3	16.6	15.0	16.4	16.7	15.9	15.4	16.2	16.9	17.8	20.1	19.9	20.3	21.2	25.3	28.3
CSTB_02	in situ	Xv2-13-4_bCLT115-bCLT115-bCLT115	wall-floor	metal brackets	No	Yes	n/a	1.00	2-4	25.6	26.4	20.1	22.7	21.4	19.3	22.1	19.7	25.4	24.7	27.0	27.4	24.2	23.9	28.4	29.5	28.4	28.7	30.0	36.2	43.4	50.4
CSTB_03	in situ	Xv2-13-4_bCLT98-bCLT115-bCLT98	wall-floor	metal brackets	No	Yes	n/a	0.82	1-3	8.7	8.9	10.8	4.4	3.5	11.0	10.3	12.5	13.1	11.0	11.5	10.2	6.7	5.0	3.8	4.4	3.5	4.2	8.8	13.2	14.0	15.7
Schramm_02	lab	Xv2-13-4_bCLT85-bCLT135-bCLT81	wall-floor	2x 90mm metal brackets	No	No	1.50	0.60/0.63	1-4	18.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Schramm_02	lab	Xv2-13-4_bCLT85-bCLT135-bCLT81	wall-floor	2x 90mm metal brackets	No	No	1.50	0.60/0.63	2-4	34.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Schramm_02	lab	Xv2-13-4_bCLT85-bCLT135-bCLT81	wall-floor	2x 90mm metal brackets	No	No	1.50	0.60/0.63	1-3	7.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Schramm_03	lab	Xv2-13-4_bCLT85-bCLT135-bCLT81	wall-floor	2x 90mm metal brackets	No	Yes	1.50	0.60/0.63	1-4	16.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Schramm_03	lab	Xv2-13-4_bCLT85-bCLT135-bCLT81	wall-floor	2x 90mm metal brackets	No	Yes	1.50	0.60/0.63	2-4	22.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRC_01	lab	Xv2-13-4_bCLT78-bCLT175-bCLT78	wall-floor	90mm metal brackets, e=30cm	No	n/a	3.65	0.46	3-4	10.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRC_03	lab	Xv2-13-4_bCLT175-bCLT175-bCLT175	wall-floor	90mm metal brackets, e=30cm	No	n/a	3.65	1.00	1-3	17.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRC_03	lab	Xv2-13-4_bCLT175-bCLT175-bCLT175	wall-floor	90mm metal brackets, e=30cm	No	n/a	3.65	1.00	1-4	10.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRC_03	lab	Xv2-13-4_bCLT175-bCLT175-bCLT175	wall-floor	90mm metal brackets, e=30cm	No	n/a	3.65	1.00	3-4	10.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
UniBo_11	lab	Xh2-1:3-4_bCLT100-bCLT100:bCLT100-bCLT100	wall-wall	screws 8x240mm, e=40cm	No	No	2.30	1.00	1-2	15.2	-	-	-	13.1	12.4	13.7	10.8	13.2	12.2	12.8	14.4	15.9	17.0	19.7	21.2	25.0	27.9	29.7	32.6	-	-
UniBo_11	lab	Xh2-1:3-4_bCLT100-bCLT100:bCLT100-bCLT100	wall-wall	screws 8x240mm, e=40cm	No	No	2.30	1.00	2-3	9.8	-	-	-	9.9	10.4	8.7	8.0	9.8	7.7	8.4	9.4	11.2	10.1	11.5	12.3	15.0	16.8	18.0	21.2	-	-
UniBo_11	lab	Xh2-1:3-4_bCLT100-bCLT100:bCLT100-bCLT100	wall-wall	screws 8x240mm, e=40cm	No	No	2.30	1.00	2-4	15.8	-	-	-	12.5	12.1	12.7	12.3	14.6	13.3	11.9	14.0	16.8	16.8	20.5	21.7	23.9	27.5	28.3	31.6	-	-
UniBo_11	lab	Xh2-1:3-4_bCLT100-bCLT100:bCLT100-bCLT100	wall-wall	screws 8x240mm, e=40cm	No	No	2.30	1.00	1-3	12.5	-	-	-	12.9	11.2	11.6	9.8	12.7	12.5	11.6	11.9	13.8	12.6	13.4	13.9	16.8	18.6	20.7	22.9	-	-
UniBo_12	lab	Xh2-1:3-4_bCLT100-bCLT100:bCLT100-bCLT100	wall-wall	screws 7x260mm, e=40cm	No	No	2.30	1.00	1-2	14.3	-	-	-	11.0	8.6	8.9	9.7	10.1	7.1	12.3	13.4	15.1	17.8	19.8	23.3	24.9	30.8	33.7	37.3	-	-
UniBo_12	lab	Xh2-1:3-4_bCLT100-bCLT100:bCLT100-bCLT100	wall-wall	screws 7x260mm, e=40cm	No	No	2.30	1.00	2-3	10.4	-	-	-	7.8	8.7	7.1	6.5	6.7	3.3	8.7	10.0	13.1	12.5	16.1	17.0	17.2	21.2	20.2	24.3	-	-
UniBo_12	lab	Xh2-1:3-4_bCLT100-bCLT100:bCLT100-bCLT100	wall-wall	screws 7x260mm, e=40cm	No	No	2.30	1.00	2-4	17.5	-	-	-	9.8	9.6	13.6	12.0	9.5	8.7	15.9	17.5	18.7	20.8	26.7	28.2	27.9	35.7	36.4	42.6	-	-
UniBo_12	lab	Xh2-1:3-4_bCLT100-bCLT100:bCLT100-bCLT100	wall-wall	screws 7x260mm, e=40cm	No	No	2.30	1.00	1-3	12.6	-	-	-	13.0	9.8	5.5	5.6	7.8	8.0	11.8	9.6	13.6	17.6	18.3	20.8	19.8	27.4	30.3	29.1	-	-
UniBo_13	lab	Xh2-1:3-4_bCLT100-bCLT100:bCLT100-bCLT100	wall-wall	screws 8x240mm, e=40cm	No	No	2.30	1.00	1-2	16.6	-	-	-	11.4	8.5	6.9	10.1	14.1	10.9	14.6	17.1	16.9	20.9	22.0	22.8	28.7	33.4	37.2	39.3	-	-
UniBo_13	lab	Xh2-1:3-4_bCLT100-bCLT100:bCLT100-bCLT100	wall-wall	screws 8x240mm, e=40cm	No	No	2.30	1.00	2-3	10.7	-	-	-	5.9	6.3	7.3	6.3	8.4	6.1	8.5	11.6	12.2	13.6	12.8	16.5	17.6	19.6	23.6	25.1	-	-
UniBo_13	lab	Xh2-1:3-4_bCLT100-bCLT100:bCLT100-bCLT100	wall-wall	screws 8x240mm, e=40cm	No	No	2.30	1.00	2-4	19.6	-	-	-	13.4	12.3	11.0	12.9	15.5	14.6	17.0	17.5	19.7	26.4	25.1	28.1	27.4	35.4	39.9	39.6	-	-
UniBo_13	lab	Xh2-1:3-4_bCLT100-bCLT100:bCLT100-bCLT100	wall-wall	screws 8x240mm, e=40cm	No	No	2.30	1.00	1-3	14.8	-	-	-	9.5	8.1	9.0	8.2	12.7	11.5	14.3	13.3	17.1	18.5	17.3	20.5	23.9	24.4	29.2	32.8	-	-
UniBo_14	lab	Xh2-1:3-4_bCLT100-bCLT100:bCLT100-bCLT100	wall-wall	screws 8x240mm, e=40cm	No	No	2.30	1.00	1-2	14.7	-	-	-	10.5	7.2	5.1	6.0	9.9	8.1	11.5	14.3	16.8	18.4	22.0	25.1	27.5	33.5	36.1	36.4	-	-
UniBo_14	lab	Xh2-1:3-4_bCLT100-bCLT100:bCLT100-bCLT100	wall-wall	screws 8x240mm, e=40cm	No	No	2.30	1.00	2-3	10.7	-	-	-	7.4	5.1	1.7	4.3	5.1	4.4	9.8	11.8	12.9	14.2	15.8	17.5	16.9	22.2	26.1	25.4	-	-
UniBo_14	lab	Xh2-1:3-4_bCLT100-bCLT100:bCLT100-bCLT100	wall-wall	screws 8x240mm, e=40cm	No	No	2.30	1.00	2-4	18.3	-	-	-	10.2	9.9	2.5	9.9	12.2	10.1	14.1	18.5	19.8	21.8	26.1	31.8	31.9	38.6	42.7	42.0	-	-
UniBo_14	lab	Xh2-1:3-4_bCLT100-bCLT100:bCLT100-bCLT100	wall-wall	screws 8x240mm, e=40cm	No	No	2.30	1.00	1-3	15.9	-	-	-	10.1	7.9	9.0	5.7	11.0	11.1	15.1	16.5	19.4	19.2	21.7	23.8	24.4	32.7	34.7	35.3	-	-
UniBo_32	lab	Xh2-1:3-4_bCLT100-bCLT100:bCLT100-bCLT100	wall-wall	Rotho BlaasX-PLATE BASE X, X-PLATE TOP X	No	No	2.30	1.00	1-4	9.7	-	-	-	12.7	11.4	10.2	8.5	8.5	7.0	8.1	10.7	11.5	9.5	11.1	12.5	15.8	17.5	17.5	21.6	-	-
UniBo_32	lab	Xh2-1:3-4_bCLT100-bCLT100:bCLT100-bCLT100	wall-wall	Rotho BlaasX-PLATE BASE X, X-PLATE TOP X	No	No	2.30	1.00	2-4	10.6	-	-	-	18.9	12.0	13.3	9.7	8.7	8.8	6.6	11.1	13.1	11.7	13.4	12.6	13.8	14.4	12.4	16.9	-	-
UniBo_32	lab	Xh2-1:3-4_bCLT100-bCLT100:bCLT100-bCLT100	wall-wall	Rotho BlaasX-PLATE BASE X, X-PLATE TOP X	No	No	2.30	1.00	1-3	12.0	-	-	-	15.0	13.7	13.6	12.0	11.8	9.3	8.2	12.6	15.4	13.3	12.6	13.2	19.0	21.6	24.0	31.4	-	-

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