

## bi-Trapez Bearing

Structural bearing for impact sound insulation

### Impact sound levels

Measured according to DIN 7396 in the compressive stress range  $\sigma = 0.1 \text{ N/mm}^2 - 0.7 \text{ N/mm}^2$ .

IMPACT SOUND LEVELS						
Bearing thickness [mm]	Bearing width [mm]	Eff. vertical load [kN/m]	$\Delta L_{w,flight}^*$ max. [dB]	$\Delta L_{w,flight}$ max. [dB]	$\Delta L_{n,w}^*$ max. [dB]	Deflection [mm]
10	50	5-35	20	22	23	0.8-3.8
	100	10-70				
	150	15-105				
	200	20-140				
15	50	5-35	22	24	25	0.9-5.5
	100	10-70				
	150	15-105				
	200	20-140				
20	100	10-70	23	25	26	1.2-7.4
	200	20-140				

#### LEGEND

$\Delta L_{w,flight}^*$  Rated flight impact sound level difference as per DIN 7396 for certification in compliance with DIN 4109-2  
 $\Delta L_{w,flight}$  Rated flight impact sound level difference as per DIN 7396 for certification in compliance with ISO 12354-2  
 $\Delta L_{n,w}^*$  Rated impact sound level difference for rigid connection and with decoupling in compliance with DIN 7396, product parameter

### Example of the sound insulation certificate in compliance with DIN 4109 Part 2

#### For apartment buildings:

Single-skin, bend-proof staircase wall

Stair flight on a single-skin, bend-proof staircase wall as per DIN 4109-32:  $L_{n,eq,0,w} \leq 60 \text{ dB}$

Rated flight impact sound level difference  
bi-Trapez Bearing  $t = 15 \text{ mm}$ ,  $b = 50 \text{ mm}$ , measured as per DIN 7396:  $\Delta L_{w,Lauf}^* \geq 22 \text{ dB}$

#### Certificate

$$L'_{n,w} = L_{n,eq,0,w} - \Delta L_{w,Lauf}^* = 60 \text{ dB} - 22 \text{ dB} = 38 \text{ dB}$$

$$L'_{n,w} + u_{Prog} = 38 \text{ dB} + 3 \text{ dB} = 41 \text{ dB}$$

The following requirements are thus met:

DIN 4109, strict requirement  $L'_{n,w} \leq 47 \text{ dB}$

DEGA, Class B  $L'_{n,w} \leq 43 \text{ dB}$

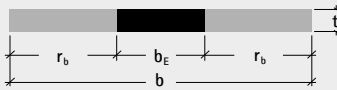
VDI 4100, SSt III  $L'_{n,w} \leq 44 \text{ dB}$

## bi-Trapez Bearing

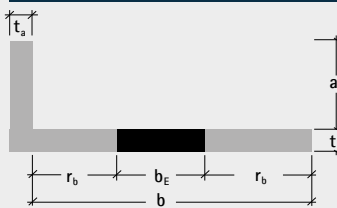
Structural bearing for impact sound insulation

Impact Sound Stop stair element  
for cast-in-place concrete applications

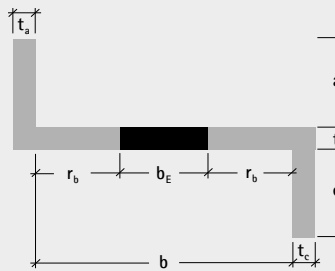
### CROSS-SECTION TYPE I



### CROSS-SECTION TYPE L



### CROSS-SECTION TYPE Z

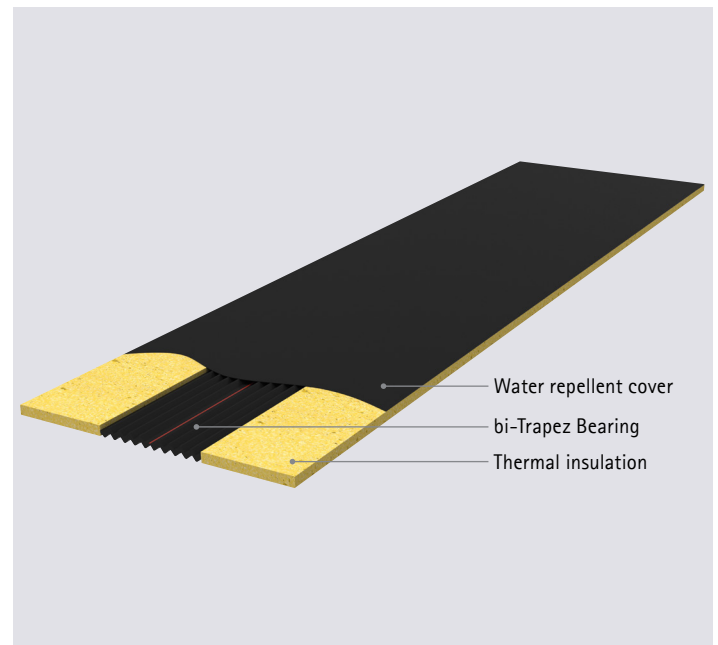


### MEASUREMENTS

l	Overall length
b	Overall width
t	Overall thickness
a	Web length top
c	Web length bottom
t <sub>a</sub>	Web thickness top
t <sub>c</sub>	Web thickness bottom
b <sub>E</sub>	bi-Trapez Bearing width
r <sub>b</sub>	Edge width

### IMPACT SOUND STOP STAIR ELEMENT

Bearing thickness [mm]	Bearing width [mm]	Cross-section type
10	50	I
		L
		Z
10	100	I
		L
		Z
15	50	I
		L
		Z
15	100	I
		L
		Z
20	100	I
		L
		Z



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