

Timber deck for heavy loadings GSA- TCD-System

n'H-Timber beams with GSA-shear connectors
Chart only to be used for pre-calculations
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Live Load q_{LL}	2.0kN/m ²		3.0kN/m ²		5.0kN/m ²	
span [m]	dimension [mm]		dimension [mm]		dimension [mm]	
7.0	200/240		200/240		200/280	
8.0	200/280		200/280		200/320	
9.0	200/320		200/320		240/360	200/400
10.0	240/360	200/400	240/360	200/400	240/400	200/440
11.0	240/400	200/440	240/400	200/440	240/440	200/480
12.0	240/440	200/480	240/440	200/480	240/480	200/520
more than 13.0	on demand		on demand		on demand	

base:

Criteria	ULS and SLS according to Eurocode
Self weight of deck	$g_k = 3.5 \text{ kN/m}^2$
Dead Load	$q_{DL} = 2.0 \text{ kN/m}^2$
Spacing of beams	1.0 m
Depth of concrete	$h = 120 \text{ mm}$
Service class	1
System	single span (with applied precamber)
Fire resistance	REI 60
Noise protection ⁽¹⁾	$L'_{n,w} = 47 - 32 \text{ dB (Impact)}$
Noise protection ⁽¹⁾	$R'_w = 62 - 64 \text{ dB (Airborne)}$

Additional basic conditions such as support of beams, general details, quality of concrete, concrete reinforcements etc. : To be determined by engineering office or n'H.

Vibrations according to P. Hamm – Konstruktionsregeln für die Praxis, 2. Internationales Forum Holzbau Beaune 2012

⁽¹⁾ Floor composition: Cement screed and insulation (mineral fibre)