

HNT-ceiling system

Certainly the cheapest alternative for ceiling elements!

By using the HNT-ceiling system you can save up to 10% in material costs and up to 10% in timber volume compared to cross laminated timber!

Grading / quality

Strength classes:

GL24h, GL28h
GL32h and GL36h on request

Quality:

Industrial quality
Visual quality

Cross sections

Thickness:

80 mm up to 240 mm (in increments of 20 mm)

Width:

200 mm up to 1200 mm (in increments of 40 mm)

Length:

up to 27 m

Advantages of HNT-ceiling system

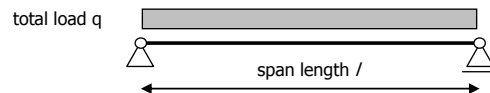
- higher capability and cheaper than cross laminated timber
- easy and fast assembling
- mm-accurate picking
→ no waste and no cutting on building site



Pre-dimensioning of HNT-ceiling system

(Max. deflection in case of total load = $l / 300$; for $l / 400$: $q^* = q \times 1,33$; for $l / 500$: $q^* = q \times 1,67$)

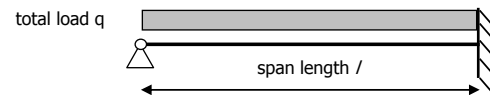
ceiling elements used as single-span-girder under total load q



span length [m]	q = g + p [kN/m ²] (g < p)										
	2,0	2,5	3,0	3,5	4,0	4,5	5,0	5,5	6,0	6,5	
3,0	80	80	80	80	80	100	100	100	100	100	100
3,5	80	80	100	100	100	100	100	120	120	120	120
4,0	100	100	100	120	120	100	100	120	120	120	140
4,5	100	120	120	120	120	140	140	140	140	140	140
5,0	120	120	140	140	140	140	140	160	160	160	160
5,5	120	140	140	140	160	160	160	160	180	180	180
6,0	140	160	160	160	180	180	180	180	180	200	200
6,5	160	160	180	180	180	200	200	200	200	200	220
7,0	160	160	180	200	200	200	220	220	220	220	220
7,5	180	180	200	200	220	220	220	240	240	240	240

This span table should be used for a first evaluation for the thickness of this elements. It can not replace a detailed structural analysis.

ceiling elements used as multi-span-girder under total load q (consideration of the last span-length)

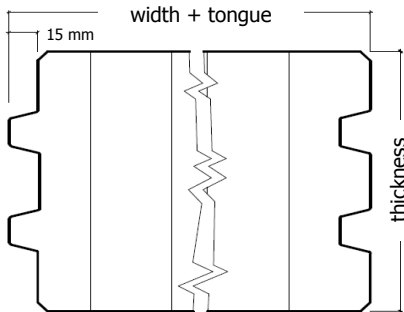


span length [m]	q = g + p [kN/m ²] (g < p)										
	2,0	2,5	3,0	3,5	4,0	4,5	5,0	5,5	6,0	6,5	
3,5	80	80	80	80	80	80	80	80	80	80	80
4,0	80	80	80	80	80	80	100	100	100	100	100
4,5	80	80	100	100	100	100	100	100	100	100	120
5,0	80	100	100	100	100	100	120	120	120	120	120
5,5	100	100	100	120	120	120	120	120	120	140	140
6,0	100	120	120	120	120	140	140	140	140	140	140
6,5	120	120	120	140	140	140	140	140	160	160	160
7,0	140	140	140	140	140	160	160	160	160	160	180
7,5	140	140	140	160	160	160	160	160	180	180	180
8,0	140	140	160	160	160	180	180	180	180	200	200
8,5	160	160	160	180	180	180	180	200	200	200	200
9,0	160	160	180	180	180	200	200	200	200	220	220
9,5	160	180	180	200	200	200	200	220	220	220	240

This span table should be used for a first evaluation for the thickness of this elements. It can not replace a detailed structural analysis.

HNT-ceiling system

The connection between the elements - an easy but reliable system!



Tongue and groove

Element grid

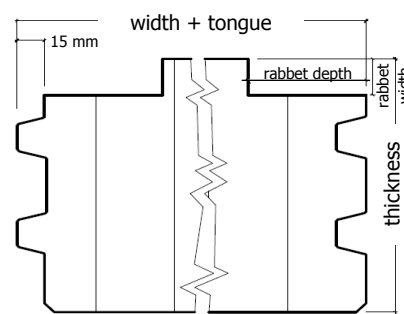
thickness: in 20 mm increments
width + tongue: in 40 mm increments
face with = (width+tongue) - 15 mm
lengths up to 27 m are possible

Thickness

80 mm
100, 120, 140 mm
160, 180 mm
200, 220, 240 mm

Tongue & groove

1 tongue & groove
2 tongue & groove
3 tongue & groove
4 tongue & groove



Tongue and groove with double rabbet

Element grid

thickness: in 20 mm increments
width + tongue: in 40 mm increments
face with = (width+tongue) - 15 mm
lengths up to 27 m are possible

Thickness

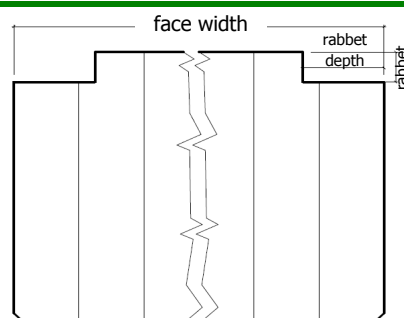
as mentioned above

Tongue & groove

as mentioned above

Standard size of rabbet

rabbet depth: 60 mm
rabbet width: 20 mm



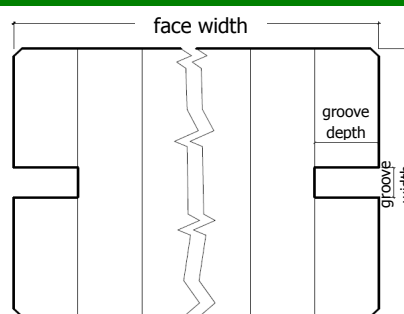
Double rabbet

Element grid

thickness: in 20 mm increments
face width: in 40 mm increments
face width = finished size
lengths up to 27 m are possible

Standard size of rabbet

rabbet depth: 50 mm
rabbet width: 20 mm



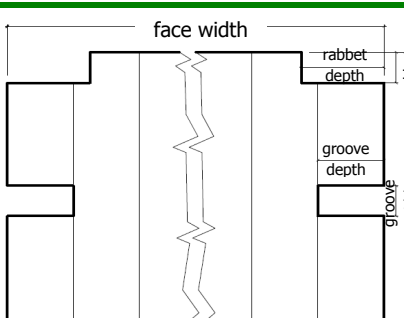
Groove with loose tongue

Element grid

thickness: in 20 mm increments
face width: in 40 mm increments
face width = finished size
lengths up to 27 m are possible

Standard sizes of groove

groove depth: 40 mm
groove with: 20 mm



Double rabbet with loose tongue

Element grid

thickness: in 20 mm increments
face width: in 40 mm increments
face width = finished size
lengths up to 27 m are possible

Standard sizes of rabbet

rabbet depth: 50 mm
rabbet width: 20 mm

Standard sizes of groove

groove depth: 40 mm
groove with: 20 mm