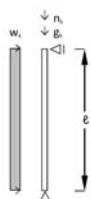


# Structural analysis

## EXTERNAL WALLS

04/2012



External walls ( $w = 1.00 \text{ kN/m}^2$ )

In accordance with approval Z 9.1-559  
DIN 1052 (2008) and/or EN 1995-1-1 (2006)

Dead weight gk*)	Imposed load nk	Height (buckling length)														
		2,50 m				3,00 m				4,00 m						
		R 0	R 30	R 60	R 90	R 0	R 30	R 60	R 90	R 0	R 30	R 60	R 90			
10,00	10,00	60 C3s	80 C3s	80 C3s	120 C3s	60 C3s	80 C3s	100 C5s	120 C3s	60 C3s	80 C3s	100 C5s	120 C3s			
	20,00															
	30,00															
	40,00															
	50,00															
20,00	60,00	80 C3s					90 C3s			90 C3s	100 C5s					
	10,00	60 C3s	80 C3s	80 C3s	120 C3s	60 C3s	80 C3s	100 C5s	120 C3s	80 C3s	80 C3s	100 C5s	140 C5s			
	20,00													90 C3s		
	30,00													100 C3s		
	40,00													100 C3s		
50,00												100 C3s				
30,00	60,00	80 C3s					90 C3s	120 C5s		90 C3s	100 C5s					
	10,00	60 C3s	80 C3s	80 C3s	120 C3s	60 C3s	80 C3s	100 C5s	120 C3s	80 C3s	90 C3s	120 C5s	140 C5s			
	20,00														100 C3s	
	30,00														100 C3s	
	40,00														100 C3s	
50,00														100 C3s		
40,00	60,00	80 C3s			140 C5s		90 C3s	120 C5s		90 C3s	100 C5s					
	10,00	60 C3s	80 C3s	80 C3s	120 C3s	60 C3s	80 C3s	100 C5s	120 C3s	80 C3s	90 C3s	120 C5s	140 C5s			
	20,00														100 C3s	
	30,00														100 C3s	
	40,00														100 C3s	
50,00														100 C3s		
50,00	60,00	80 C3s			140 C5s		90 C3s	120 C5s		90 C3s	100 C5s					
	10,00	60 C3s	80 C3s	80 C3s	120 C3s	60 C3s	80 C3s	100 C5s	120 C3s	80 C3s	100 C3s	120 C5s	140 C5s			
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	30,00														100 C3s	
	40,00														100 C3s	
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60,00	60,00	80 C3s			140 C5s		90 C3s	120 C5s		90 C3s	100 C5s					
	10,00	60 C3s	80 C3s	80 C3s	120 C3s	60 C3s	80 C3s	100 C5s	120 C3s	90 C3s	100 C3s	120 C5s	140 C5s			
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	30,00														100 C3s	
	40,00														100 C3s	
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60,00	60,00	90 C3s			120 C5s		100 C3s	120 C5s		100 C3s	120 C3s					
	10,00	60 C3s	80 C3s	80 C3s	120 C3s	60 C3s	80 C3s	100 C5s	120 C3s	90 C3s	100 C3s	120 C5s	140 C5s			
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	30,00														100 C3s	
	40,00														100 C3s	
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60,00	60,00	90 C3s			120 C5s		100 C3s	120 C5s		100 C3s	120 C3s					
	10,00	60 C3s	80 C3s	80 C3s	120 C3s	60 C3s	80 C3s	100 C5s	120 C3s	90 C3s	100 C3s	120 C5s	140 C5s			
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	40,00														100 C3s	
50,00														100 C3s		
60,00	60,00	90 C3s			120 C5s		100 C3s	120 C5s		100 C3s	120 C3s					
	10,00	60 C3s	80 C3s	80 C3s	120 C3s	60 C3s	80 C3s	100 C5s	120 C3s	90 C3s	100 C3s	120 C5s	140 C5s			
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60,00	60,00	90 C3s			120 C5s		100 C3s	120 C5s		100 C3s	120 C3s					
	10,00	60 C3s	80 C3s	80 C3s	120 C3s	60 C3s	80 C3s	100 C5s	120 C3s	90 C3s	100 C3s	120 C5s	140 C5s			
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60,00	60,00	90 C3s			120 C5s		100 C3s	120 C5s		100 C3s	120 C3s					
	10,00	60 C3s	80 C3s	80 C3s	120 C3s	60 C3s	80 C3s	100 C5s	120 C3s	90 C3s	100 C3s	120 C5s	140 C5s			
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	40,00														100 C3s	
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60,00	60,00	90 C3s			120 C5s		100 C3s	120 C5s		100 C3s	120 C3s					
	10,00	60 C3s	80 C3s	80 C3s	120 C3s	60 C3s	80 C3s	100 C5s	120 C3s	90 C3s	100 C3s	120 C5s	140 C5s			
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60,00	60,00	90 C3s			120 C5s		100 C3s	120 C5s		100 C3s	120 C3s					
	10,00	60 C3s	80 C3s	80 C3s	120 C3s	60 C3s	80 C3s	100 C5s	120 C3s	90 C3s	100 C3s	120 C5s	140 C5s			
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60,00	60,00	90 C3s			120 C5s		100 C3s	120 C5s		100 C3s	120 C3s					
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60,00	60,00	90 C3s			120 C5s		100 C3s	120 C5s		100 C3s	120 C3s					
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60,00	60,00	90 C3s			120 C5s		100 C3s	120 C5s		100 C3s	120 C3s					
	10,00	60 C3s	80 C3s	80 C3s	120 C3s	60 C3s	80 C3s	100 C5s	120 C3s	90 C3s	100 C3s	120 C5s	140 C5s			
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	40,00														100 C3s	
50,00														100 C3s		
60,00	60,00	90 C3s			120 C5s		100 C3s	120 C5s		100 C3s	120 C3s					
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60,00	60,00	90 C3s			120 C5s		100 C3s	120 C5s		100 C3s	120 C3s					
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60,00	60,00	90 C3s			120 C5s		100 C3s	120 C5s		100 C3s	120 C3s					
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	20,00														100 C3s	
	30,00														100 C3s	
	40,00			</												

\* The CLT self-weight is already taken into account in the table at  $\rho = 500 \text{ kg/m}^3$ !

Service class 1, imposed load category A ( $\psi_0 = 0.7$ ;  $\psi_1 = 0.5$ ;  $\psi_2 = 0.3$ )

### Load-bearing capacity:

- Verification as a column (compression in accordance with equivalent member method)
- Shearing stresses

$k_{mod} = 0.8$

### Fire resistance

$v_{1,i} = 0.63 \text{ mm/min}$   
 $v_{1,a} = 0.86 \text{ mm/min}$

R0
R30
R60
R90

This table is only for preliminary estimate purposes and is not a substitute for a structural analysis.