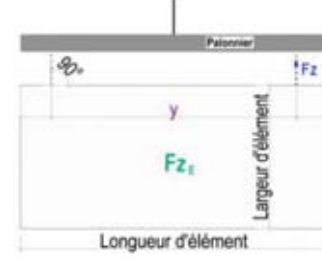
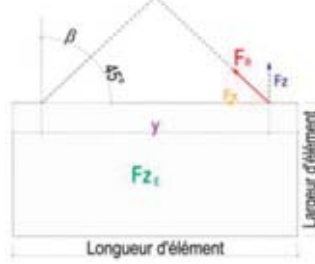


Charges de levage pour des éléments de parois extérieures

Valeurs caractéristiques des charges de l'élément Fz-E [kN]



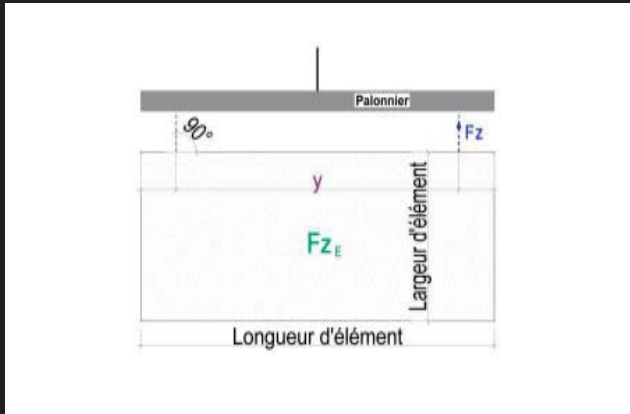
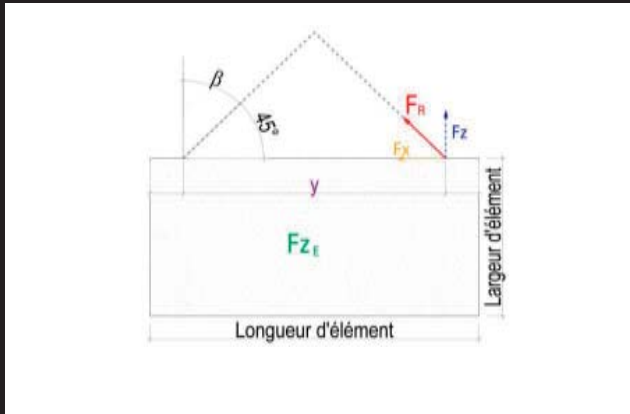
Matériaux: Bois d'ossature 500 kg/m³ (part de bois 15%), isolation intermédiaire en cellulose 60 kg/m³, isolation supplémentaire en fibres de bois 180 kg/m³, revêtement OSB/3 ou en panneau de fibre de bois MDF 10 kg/m², façade incl. lattage 16 kg/m², revêtement intérieur en panneau de plâtre armé de fibres incl. lattage 20 kg/m², couche d'étanchéité à l'air et au vent 0.2 kg/m² chacun (collage des joints incl.).

		Longueur d'élément [m]																							
		5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0				
Standard d'isolation valeur U ≈ 0.19 W/m ² K (15% de part de bois)	0.50 kN/m ²		0.50	max. y [m] ¹	7.0																				
					2.6	Fz-E	6.5	7.8	9.1	10.4	11.7	13.0	14.3	15.6	16.9	18.2	Fz-E	6.5	7.8	9.1	10.4	11.7	13.0	14.3	15.6
	Standard d'isolation valeur U ≈ 0.11 W/m ² K (15% de part de bois)	0.73 kN/m ²		0.73	max. y [m] ¹	10.0																			
						2.6	Fz-E	9.5	11.4	13.3	15.2	17.1	19.0	20.9	22.8	24.7	26.6	Fz-E	9.5	11.4	13.3	15.2	17.1	19.0	20.9
		Référence: Bois massif	1 kN/m ²		1.00	max. y [m] ¹	9.0																		
							2.6	Fz-E	13.0	15.6	18.2	20.8	23.4	26.0	28.6	31.2	33.8	36.4	Fz-E	13.0	15.6	18.2	20.8	23.4	26.0

¹ distance d'ancrage maximal autorisée d'après la vérification de la sécurité structurale "flambage" de la membrure supérieure (MINERGIE 60/180 mm, MINERGIE-P 60/320 mm)

Charges de levage d'élément de parois intérieures

Valeur caractéristique de la charge de l'élément Fz-E [kN]



Matériaux: Bois d'ossature 500 kg/m³ (part de bois 14%), isolation intermédiaire en fibre minérale 60 kg/m³, revêtement en OSB/3 ou panneau de fibres de bois MDF 10 kg/m², revêtement panneau de plâtre armé de fibres 15 kg/m² resp. 18 kg/m² (12.5 ou 15 mm).

		Longueur d'élément [m]																								
		5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0					
	max. y [m] ¹	4.0				3.0						6.0				7.0										
		Poids de l'élément [kN/m ²]	Largeur d'élément [m]	2.6	Fz-E	6.0	7.2	8.4	9.6	10.8	12.0	13.2	14.4	15.6	16.8	Fz-E	6.0	7.2	8.4	9.6	10.8	12.0	13.2	14.4	15.6	16.8
				Fz	3.0	3.6	4.2	4.8	5.4	6.0	6.6	7.2	7.8	8.4	Fz	3.0	3.6	4.2	4.8	5.4	6.0	6.6	7.2	7.8	8.4	
				Fx	3.0	3.6	4.2	4.8	5.4	6.0	6.6	7.2	7.8	8.4												
	FR			4.3	5.1	6.0	6.8	7.7	8.5	9.4	10.2	11.1	11.9													
	2.8	Fz-E	6.5	7.8	9.1	10.4	11.6	12.9	14.2	15.5	16.8	18.1	Fz-E	6.5	7.8	9.1	10.4	11.6	12.9	14.2	15.5	16.8	18.1			
	Fz	3.3	3.9	4.6	5.2	5.8	6.5	7.1	7.8	8.4	9.1	Fz	3.3	3.9	4.6	5.2	5.8	6.5	7.1	7.8	8.4	9.1				
	Fx	3.3	3.9	4.6	5.2	5.8	6.5	7.1	7.8	8.4	9.1															
	FR	4.7	5.6	6.6	7.4	8.3	9.2	10.1	11.1	11.9	12.9															
	3	Fz-E	6.9	8.3	9.7	11.1	12.5	13.8	15.2	16.6	18.0	19.4	Fz-E	6.9	8.3	9.7	11.1	12.5	13.8	15.2	16.6	18.0	19.4			
	Fz	3.5	4.2	4.9	5.6	6.3	6.9	7.6	8.3	9.0	9.7	Fz	3.5	4.2	4.9	5.6	6.3	6.9	7.6	8.3	9.0	9.7				
	Fx	3.5	4.2	4.9	5.6	6.3	6.9	7.6	8.3	9.0	9.7															
FR	5.0	6.0	7.0	8.0	9.0	9.8	10.8	11.8	12.8	13.8																
3.2	Fz-E	7.4	8.9	10.4	11.8	13.3	14.8	16.2	17.7	19.2	20.7	Fz-E	7.4	8.9	10.4	11.8	13.3	14.8	16.2	17.7	19.2	20.7				
Fz	3.7	4.5	5.2	5.9	6.7	7.4	8.1	8.9	9.6	10.4	Fz	3.7	4.5	5.2	5.9	6.7	7.4	8.1	8.9	9.6	10.4					
Fx	3.7	4.5	5.2	5.9	6.7	7.4	8.1	8.9	9.6	10.4																
FR	5.3	6.4	7.4	8.4	9.5	10.5	11.5	12.6	13.6	14.8																
	max. y [m] ¹	3.0						5.0				6.0				7.0										
		Poids de l'élément [kN/m ²]	Largeur d'élément [m]	2.6	Fz-E	7.8	9.4	11.0	12.5	14.1	15.6	17.2	18.8	20.3	21.9	Fz-E	7.8	9.4	11.0	12.5	14.1	15.6	17.2	18.8	20.3	21.9
				Fz	3.9	4.7	5.5	6.3	7.1	7.8	8.6	9.4	10.2	11.0	Fz	3.9	4.7	5.5	6.3	7.1	7.8	8.6	9.4	10.2	11.0	
				Fx	3.9	4.7	5.5	6.3	7.1	7.8	8.6	9.4	10.2	11.0												
	FR			5.6	6.7	7.8	9.0	10.1	11.1	12.2	13.3	14.5	15.6													
	2.8	Fz-E	8.4	10.1	11.8	13.5	15.2	16.8	18.5	20.2	21.9	23.6	Fz-E	8.4	10.1	11.8	13.5	15.2	16.8	18.5	20.2	21.9	23.6			
	Fz	4.2	5.1	5.9	6.8	7.6	8.4	9.3	10.1	11.0	11.8	Fz	4.2	5.1	5.9	6.8	7.6	8.4	9.3	10.1	11.0	11.8				
	Fx	4.2	5.1	5.9	6.8	7.6	8.4	9.3	10.1	11.0	11.8															
	FR	6.0	7.3	8.4	9.7	10.8	11.9	13.2	14.3	15.6	16.7															
	3	Fz-E	9.0	10.8	12.6	14.4	16.2	18.0	19.8	21.6	23.4	25.2	Fz-E	9.0	10.8	12.6	14.4	16.2	18.0	19.8	21.6	23.4	25.2			
	Fz	4.5	5.4	6.3	7.2	8.1	9.0	9.9	10.8	11.7	12.6	Fz	4.5	5.4	6.3	7.2	8.1	9.0	9.9	10.8	11.7	12.6				
	Fx	4.5	5.4	6.3	7.2	8.1	9.0	9.9	10.8	11.7	12.6															
FR	6.4	7.7	9.0	10.2	11.5	12.8	14.1	15.3	16.6	17.9																
3.2	Fz-E	9.6	11.6	13.5	15.4	17.3	19.2	21.2	23.1	25.0	26.9	Fz-E	9.6	11.6	13.5	15.4	17.3	19.2	21.2	23.1	25.0	26.9				
Fz	4.8	5.8	6.8	7.7	8.7	9.6	10.6	11.6	12.5	13.5	Fz	4.8	5.8	6.8	7.7	8.7	9.6	10.6	11.6	12.5	13.5					
Fx	4.8	5.8	6.8	7.7	8.7	9.6	10.6	11.6	12.5	13.5																
FR	6.8	8.3	9.7	10.9	12.4	13.6	15.0	16.5	17.7	19.1																
	max. y [m] ¹	2.5				3.0						5.0				6.0				7.0						
		Poids de l'élément [kN/m ²]	Largeur d'élément [m]	2.6	Fz-E	11.0	13.2	15.3	17.5	19.7	21.9	24.1	26.3	28.4	30.6	Fz-E	11.0	13.2	15.3	17.5	19.7	21.9	24.1	26.3	28.4	30.6
				Fz	5.5	6.6	7.7	8.8	9.9	11.0	12.1	13.2	14.2	15.3	Fz	5.5	6.6	7.7	8.8	9.9	11.0	12.1	13.2	14.2	15.3	
				Fx	5.5	6.6	7.7	8.8	9.9	11.0	12.1	13.2	14.2	15.3												
	FR			7.8	9.4	10.9	12.5	14.1	15.6	17.2	18.7	20.1	21.7													
	2.8	Fz-E	11.8	14.2	16.5	18.9	21.2	23.6	25.9	28.3	30.6	33.0	Fz-E	11.8	14.2	16.5	18.9	21.2	23.6	25.9	28.3	30.6	33.0			
	Fz	5.9	7.1	8.3	9.5	10.6	11.8	13.0	14.2	15.3	16.5	Fz	5.9	7.1	8.3	9.5	10.6	11.8	13.0	14.2	15.3	16.5				
	Fx	5.9	7.1	8.3	9.5	10.6	11.8	13.0	14.2	15.3	16.5															
	FR	8.4	10.1	11.8	13.5	15.0	16.7	18.4	20.1	21.7	23.4															
	3	Fz-E	12.6	15.2	17.7	20.2	22.7	25.2	27.8	30.3	32.8	35.3	Fz-E	12.6	15.2	17.7	20.2	22.7	25.2	27.8	30.3	32.8	35.3			
	Fz	6.3	7.6	8.9	10.1	11.4	12.6	13.9	15.2	16.4	17.7	Fz	6.3	7.6	8.9	10.1	11.4	12.6	13.9	15.2	16.4	17.7				
	Fx	6.3	7.6	8.9	10.1	11.4	12.6	13.9	15.2	16.4	17.7															
FR	9.0	10.8	12.6	14.3	16.2	17.9	19.7	21.5	23.2	25.1																
3.2	Fz-E	13.5	16.2	18.9	21.6	24.2	26.9	29.6	32.3	35.0	37.7	Fz-E	13.5	16.2	18.9	21.6	24.2	26.9	29.6	32.3	35.0	37.7				
Fz	6.8	8.1	9.5	10.8	12.1	13.5	14.8	16.2	17.5	18.9	Fz	6.8	8.1	9.5	10.8	12.1	13.5	14.8	16.2	17.5	18.9					
Fx	6.8	8.1	9.5	10.8	12.1	13.5	14.8	16.2	17.5	18.9																
FR	9.7	11.5	13.5	15.3	17.2	19.1	21.0	23.0	24.8	26.8																

¹ Valeur d'après la vérification de la sécurité structurale "flambage" de la membrure supérieure (60/100 mm)