

ABR255 Angle Bracket for CLT

The ABR255 angle bracket is developed for CLT construction. It can be used on timber or concrete support. Flexible, it is designed for shear loading.

Features

Materiál

Kvalita oceli:

- S 250 GD+Z 275 dle norem DIN EN

Ochrana proti korozi:

- 275 g/m pozinkováno z obou stran cca 20mm

Vorteile

- Perfect for CLT building
- Versatile: can be used on timber and concrete support
- Superior performance for forces in horizontal (F_2/F_3) and vertical directions (F_1)

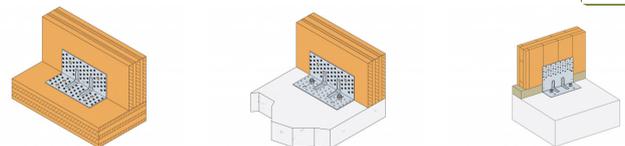
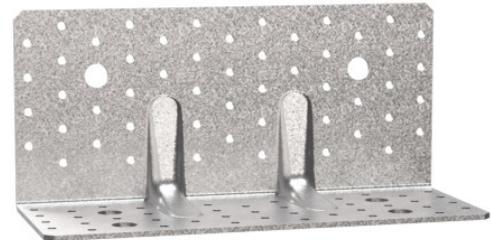
Applications

Anwendbare Materialien

- **Supporting member:** solid wood, glued-laminated wood, concrete, steel, etc.
- **Supported member:** solid wood, composite lumber, glued-laminated wood.

Anwendungsbereich

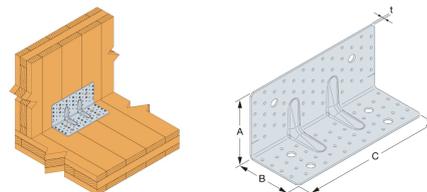
- Solid timber panels,
- CLT panels.



ABR255
Angle Bracket for CLT

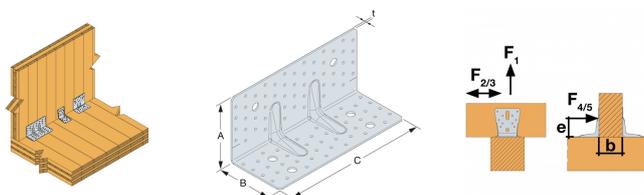
Technical Data

Rozměry a typické hodnoty



Art. nr.	Rozměry a typické hodnoty [mm]				Příruba A		Hlava		Box Quantity	Hmotnost [kg]
	A	B	C	Tloušťka	Ø5	Ø14	Ø5	Ø14		
ABR255	120	100	255	3	52	2	41	4	10	1.2
ABR255S0	200	100	255	3	56	2	-	4	10	1.7

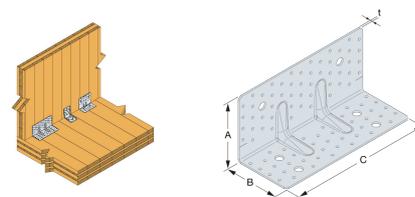
Product characteristic capacities - Timber to timber - 1 angle bracket - Full nailing - Nailing pattern 1



Art. nr.	Product capacities - Timber to timber - Full nailing - Nailing pattern 1					
	Upevňovací prvky		Charakteristické kapacity - dřevo C24 [kN]			
	Příruba A	Hlava	R _{1,k}		R _{2,k} = R _{3,k}	
	Množství	Množství	CNA4.0x...		CNA4.0x...	
			50	60	50	60
ABR255	52	41	19,5 / kmod ^{0,4}	22,5 / kmod ^{0,4}	45.9	50.5

The value in the table above can be used if the panel can't rotate.

Product characteristic capacities - Timber to timber - 1 angle bracket - Partial nailing - Nailing pattern 2

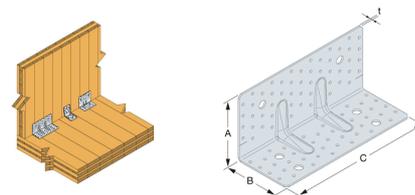


Art. nr.	Product capacities - Timber to timber - Partial nailing - Nailing pattern 2					
	Upevňovací prvky		Charakteristické kapacity - dřevo C24 [kN]			
	Příruba A	Hlava	R _{1,k}		R _{2,k} = R _{3,k}	
	Množství	Množství	CNA4.0x...		CNA4.0x...	
			50	60	50	60
ABR255	30	23	16,5 / kmod ^{0,4}	19,5 / kmod ^{0,4}	38	42.1

The value in the table above can be used if the panel can't rotate.

ABR255 Angle Bracket for CLT

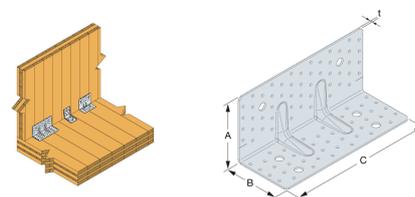
Product characteristic capacities - Timber to timber - 1 angle bracket - Partial nailing - Nailing pattern 4



Art. nr.	Product capacities - Timber to timber - Partial nailing - Nailing pattern 4					
	Upevňovací prvky		Charakteristické kapacity - dřevo C24 [kN]			
	Příruba A	Hlava	$R_{1,k}$		$R_{2,k} = R_{3,k}$	
	Množství	Množství	CNA4,0x...		CNA4,0x...	
			50	60	50	60
ABR255	24	21	15,6/kmod ^{0,4}	18,1/kmod ^{0,4}	28.6	31.4

The value in the table above can be used if the panel can't rotate. Nailing pattern 4 has been specifically developed for CLT application. It can be used for applications with other timber based materials provided that the materials comply with the spacing and distances of fasteners in CLT.

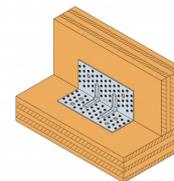
Product characteristic capacities - Timber to timber - 1 angle bracket - Partial nailing - Nailing pattern 5



Art. nr.	Product capacities - Timber to timber - Partial nailing - Nailing pattern 5			
	Upevňovací prvky		Charakteristické kapacity - dřevo C24 [kN]	
	Příruba A	Hlava	$R_{1,k}$	$R_{2,k} = R_{3,k}$
	Množství	Množství	CSA5.0x50	CSA5.0x50
ABR255	46	41	23,6 / kmod	51.7

The value in the table above can be used if the panel can't rotate. Nailing pattern 5 has been specifically developed for CLT application. It can be used for applications with other timber based materials provided that the materials comply with the spacing and distances of fasteners in CLT.

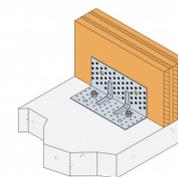
Product characteristic capacities - Timber to timber - 1 angle bracket - Partial nailing - Nailing pattern 6



Art. nr.	Product capacities - Timber to timber - Partial nailing - Nailing pattern 6					
	Upevňovací prvky		Charakteristické kapacity - dřevo C24 [kN]			
	Příruba A	Hlava	$R_{1,k}$		$R_{2,k} = R_{3,k}$	
	Množství	Množství	CNA4.0x50	CNA4.0x60	CNA4.0x50	CNA4.0x60
ABR255	32	21	-	-	36.1	39.2

The value in the table above can be used if the panel can't rotate. Nailing pattern 6 has been specifically developed for CLT application. It can be used for applications with other timber based materials provided that the materials comply with the spacing and distances of fasteners in CLT.

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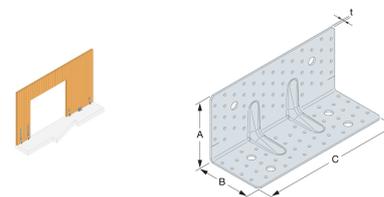


Product characteristic capacities - Timber to rigid support - 1 angle bracket - Full nailing - Nailing pattern 1

Art. nr.	Product capacities - Timber to Concrete - Full nailing - Nailing pattern 1									
	Upevňovací prvky				Charakteristické kapacity - dřevo C24 [kN]					
	Příruba A		Hlava		R _{1,k}			R _{2,k} = R _{3,k}		R _{4,k}
	Množství	Typ	Množství	Typ	CNA4.0x...			CNA4.0x...		CNA4.0x...
				35-50-60	50	60	50	60	35-50-60	
ABR255	52	CNA	2	Ø12	22 / kmod	22 / kmod	22 / kmod	min (45,3 ; 42,9/kmod)	min (49,2 ; 42,9/kmod)	18,3 / kmod ^{0,7}
ABR255S0	56	CNA	2	Ø12	22,9 / kmod	22,9/kmod	22,9/kmod	38,6	-	18,6 / kmod ^{0,66}

The value in the table above can be used if the panel can't rotate.
The anchors must be checked separately using tension value of 1.1*F1, 1*F2 and 1.1*F5

Product characteristic capacities - Timber to rigid support - 1 angle bracket - Partial nailing - Nailing pattern 2

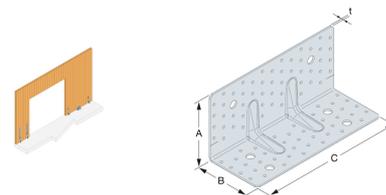


Art. nr.	Product capacities - Timber to Concrete - Partial nailing - Nailing pattern 2												
	Upevňovací prvky				Charakteristické kapacity - dřevo C24 [kN]								
	Příruba A		Hlava		R _{1,k}		R _{2,k} = R _{3,k}		R _{4,k}			R _{5,k}	
	Množství	Typ	Množství	Typ	CNA4.0x...		CNA4.0x...		CNA4.0x...			CNA4.0x...	
				50	60	50	60	35-50-60	50	60	50		
ABR255	30	CNA	2	Ø12	min (24,8 ; 22 / kmod)	min (30,3 ; 22 / kmod)	29	32	18,3 / kmod ^{0,7}	18,3/kmod ^{0,7}	18,3/kmod ^{0,7}	min (19,9/kmod ^{0,4} ; 17,7 / kmod)	(23,3 / ; 17,
ABR255S0	19	CNA	2	Ø12	min (34,7 ; 22,9/kmod)	22,9/kmod	20,7	-	18,2 / kmod ^{0,66}	18,2/kmod ^{0,66}	18,2/kmod ^{0,66}	5,05/kmod	5,0

The value in the table above can be used if the panel can't rotate.
The anchors must be checked separately using tension value of 1.1*F1, 1*F2 and 1.1*F5

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Product characteristic capacities - Timber to rigid support -
1 angle bracket - Partial nailing - Nailing pattern 4



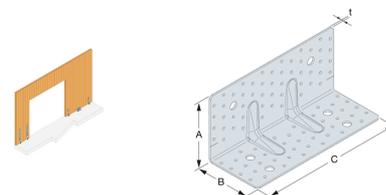
Art. nr.	Product capacities - Timber to Concrete - Partial Nailing - Nailing pattern 4											
	Fasteners				Characteristic capacities - Timber C24 - 1 angle bracket per connection [kN]							
	Flange A		Flange B		R _{1,k}		R _{2,k} = R _{3,k}		R _{4,k}		R _{5,k}	
	Qty	Type	Qty	Type	CNA4.0x50	CNA4.0x60	CNA4.0x50	CNA4.0x60	CNA4.0x50	CNA4.0x60	CNA4.0x50	CNA4.0x60
ABR255S0	26	CNA	2	Ø12	22,9/kmod	22,9/kmod	21.7	-	18,2/kmod ^{0,66}	18,2/kmod ^{0,66}	5,05/kmod	5,05/kmod

The value in the table above can be used if the panel can't rotate.

The anchor capacities must be checked separately by multiplying the F1 load by a factor 1.1, F2 load by a factor of 1 and F5 by a factor of 2.2.

Nailing pattern 4 has been specifically developed for CLT application. It can be used for applications with other timber based materials provided that the materials comply with the spacing and distances of fasteners in CLT.

Product characteristic capacities - Timber to rigid support -
1 angle bracket - Partial nailing - Nailing pattern 7



Art. nr.	Product capacities - Timber to concrete - Partial nailing - Nailing pattern 7							
	Upevňovací prvky				Charakteristické kapacity - dřevo C24 [kN]			
	Příruba A		Hlava		R _{1,k}		R _{2,k} = R _{3,k}	
	Množství	Typ	Množství	Typ	CNA4.0x50	CNA4.0x60	CNA4.0x50	CNA4.0x60
ABR255	30	CNA	2	Ø12	-	-	39.8	42.5
ABR255S0	-	-	-	-	-	-	-	-

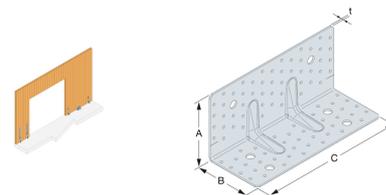
The value in the table above can be used if the panel can't rotate.

The anchor capacities must be checked separately by multiplying the F₂ load by a factor of 1.

Nailing pattern 7 has been specifically developed for CLT application. It can be used for applications with other timber based materials provided that the materials comply with the spacing and distances of fasteners in CLT.

ABR255 Angle Bracket for CLT

Product characteristic capacities - Timber to rigid support -
1 angle bracket - Partial nailing - Nailing pattern 8



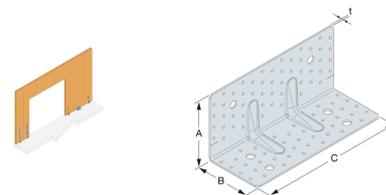
Art. nr.	Product capacities - Timber to Concrete - Partial Nailing - Nailing pattern 8							
	Upevňovací prvky				Charakteristické kapacity - dřevo C24 [kN]			
	Příruba A		Hlava		$R_{1,k}$		$R_{2,k} = R_{3,k}$	
	Množství	Typ	Množství	Typ	CNA4.0x...		CNA4.0x...	
					50	60	50	60
ABR255	17	CNA	2	Ø12	20	20	24.9	26.5
ABR255S0	30	CNA	2	Ø12	22,9/kmod	22,9/kmod	26.1	-

The value in the table above can be used if the panel can't rotate.

The anchor capacities must be checked separately by multiplying the F_1 load by a factor 1.1, F_2 load by a factor of 1 and F_5 by a factor of 2.2.

Nailing pattern 8 has been specifically developed for CLT application. It can be used for applications with other timber based materials provided that the materials comply with the spacing and distances of fasteners in CLT.

Product characteristic capacities - Timber to rigid support -
1 angle bracket - Partial nailing - Nailing pattern 9



Art. nr.	Product capacities - Timber to Concrete - Partial nailing - Nailing pattern 9							
	Upevňovací prvky				Charakteristické kapacity - dřevo C24 [kN]			
	Příruba A		Hlava		$R_{1,k}$		$R_{2,k} = R_{3,k}$	
	Množství	Typ	Množství		CSA5.0x50		CSA5.0x50	
ABR255	35	CSA	2		min (79,5 ; 22 / kmod)		min (58 ; 57,6 / kmod)	
ABR255S0	-	-	-		-		-	

The value in the table above can be used if the panel can't rotate.

The anchor capacities must be checked separately by multiplying the F_1 load by a factor 1.1 and F_2 load by a factor of 1.

Nailing pattern 9 has been specifically developed for CLT application. It can be used for applications with other timber based materials provided that the materials comply with the spacing and distances of fasteners in CLT.

ABR255

Angle Bracket for CLT

Installation

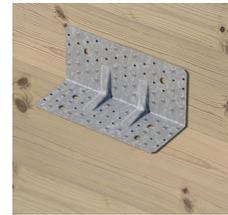
Befestigung

On timber:

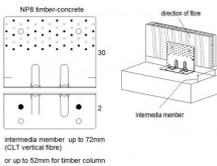
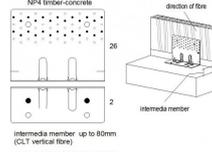
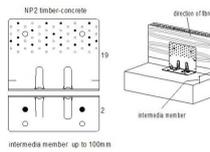
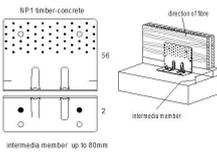
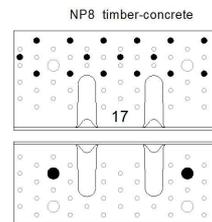
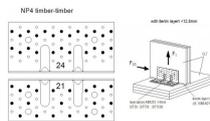
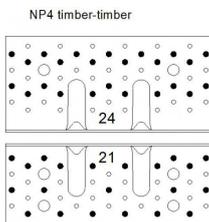
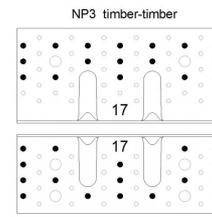
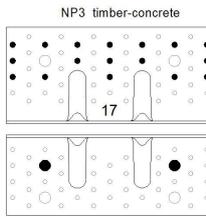
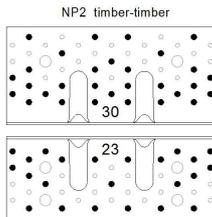
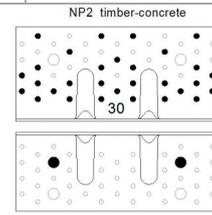
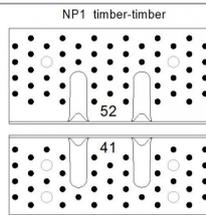
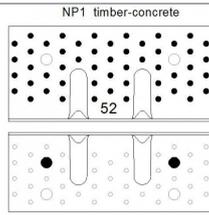
- CNA 4.0x50 on timber
- CSA 5.0x40 or CSA 5.0x50 screws
- SSH Ø 12 x 80 mm

On concrete:

- Mechanical anchor: WA M12-104/5
- Chemical anchor: AT-HP resin + LMAS M12-150/35 threaded rod



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