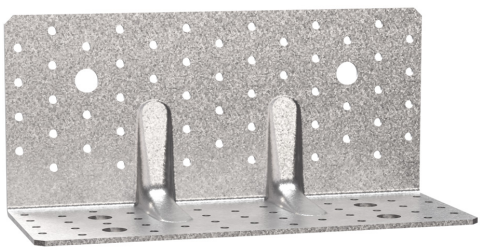
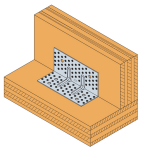
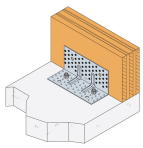
Technical Sheet

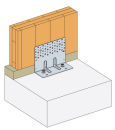
ABR255
Vinkelbeslag till KL-trä

ABR255 används främst i KL-trä konstruktioner där det kan finnas stora horisontella tvärkrafter. ABR255SO används i de situationer där det gjutits en syll/ram i betong som väggelementen monteras på.











Features

Material

- Stålkvalitet:
  Galvaniserat stål S250GD + Z275 enligt EN 10346
- Korrosionsskydd:
  275 g/m2 på båda sidorna när zinkbeläggningens tjocklek är cirka 20 µm

Fördelar

- Perfekt för CLT förbindelse
- Månsidig: Kan användas på trä- och betongunderlag
- Överlägsen prestanda för kraft i horisontella (F_2/F_3) och vertikala riktningar (F_1)

Applications

Monteras på

- Bärande medlem: Massivt trä, limträ, betong, stål m.m.
- Stöttande medlem: Massivt trä, kompositträ, limträ.

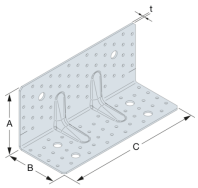
Användningsområden

- CLT

Technical Sheet

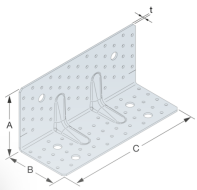
ABR255
Vinkelbeslag till KL-trä

Teknisk data



Mått

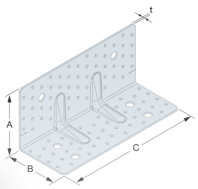
Referens	beslag mått										
	övrigt			produktmått[mm]				balk[mm]		fläns B[mm]	
	Tun / DB nr.	antal per förpackning	vikt[kg]	A[mm]	B[mm]	C[mm]	tjocklek[mm]	rund		rund	
								Ø5[mm]	Ø13[mm]	Ø5[mm]	Ø13[mm]
ABR255	1901628	10.0	1.2	120	100	255	3	52	2	41	4
ABR255SO	2112422	10.0	1.7	200	100	255	3	56	2	-	4



Karakteristisk bärförmåga - Balk-balk - 1 vinkelbeslag per fog - Fullständig utspikning - Nailing pattern 1

Karakteristisk bärförmåga - Balk-balk - 1 vinkelbeslag per fog - Fullständig utspikning - Nailing pattern 1
See full table online ➡️

Referens	antal of Fasteners														
	balk	fläns B													
	antal	antal	CNA4.0x35	CNA4.0x40	CNA4.0x50	CNA4.0x60	CNA4.0x35	40	CNA4.0x50	CNA4.0x60	CNA4.0x35	CNA4.0x40	CNA4		



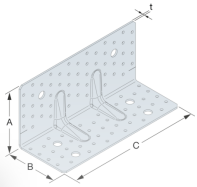
-

-
See full table online ➡️

Referens	antal of Fasteners														
	balk	fläns B													
	antal	antal	CNA4.0x35	CNA4.0x40	CNA4.0x50	CNA4.0x60	CNA4.0x35	CNA4.0x40	CNA4.0x50	CNA4.0x60	CNA4.0x35	CNA4.0x40	CNA4		

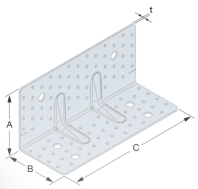
Technical Sheet

ABR255
Vinkelbeslag till KL-trä



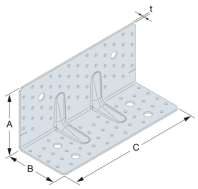
Karakteristisk bärförmåga - Balk-balk - 1 vinkelbeslag per fog - Delvis utspikning - Nailing pattern 2

Karakteristisk bärförmåga - Balk-balk - 1 vinkelbeslag per fog - Delvis utspikning - Nailing pattern 2
See full table online ➡️



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See full table online ➡️ -



Karakteristisk bärförmåga - Balk-balk - 1 vinkelbeslag per fog - Delvis utspikning - Nailing pattern 4

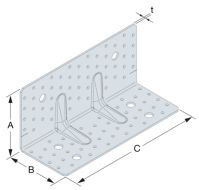
Referens	vinkelbeslag kapacitet									
	produkt capacities - trä to trä - Partial nailing - Nailing pattern 4									
	Characteristic capacities - trä C24 - 1 vinkelbeslag per connection[kN]								antal of Fasteners	
	$R_{2,k}=R_{3,k}$		$R_{1,k}$		R5,k		R4,k		balk	fläns B
	CNA4.0x50	CNA4.0x60	CNA4.0x50	60	CNA4.0x50	CNA4.0x60	CNA4.0x50	CNA4.0x60	antal	antal
ABR255	28.6	31.4	15,6/kmod^0,4	18,1/kmod^0,4	10.8/kmod^0.3	min (12.7/kmod^0,3 ; 12.8 / kmod)	15.9	18.3	24.0	21.0

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.

Technical Sheet

ABR255
Vinkelbeslag till KL-trä

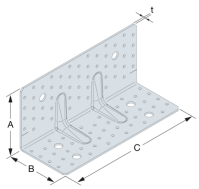
Förenklade karakteristiska kapaciteter – Trä mot trä – 1 vinkelbeslag – Partiell spikning – Spikmönster 4



Referens	vinkelbeslag kapacitet									
	produkt capacities - trä to trä - Partial nailing - Nailing pattern 4									
	antal of Fasteners		Characteristic capacities - trä C24 - 1 vinkelbeslag per connection[kN]							
	balk	fläns B	$R_{1,k}$		$R_{2,k}=R_{3,k}$		R5,k		R4,k	
	antal	antal	CNA4.0x50	CNA4.0x60	CNA4.0x50	CNA4.0x60	CNA4.0x50	CNA4.0x60	CNA4.0x50	CNA4.0x60
ABR255	24.0	21.0	16.2	18.8	28.6	31.4	11.1	16.7	15.9	18.3

The published characteristic capacity is based on short term load duration and service class 2 according to EC5 (EN 1995) – kmod = 0.9. For other load duration and service class, please refer to the ETA to get more accurate capacities.

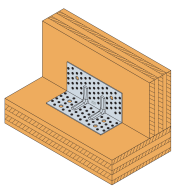
Karakteristisk bärförmåga - Balk-balk - 1 vinkelbeslag per fog - Delvis utspikning - Nailing pattern 5



Referens	vinkelbeslag kapacitet			
	produkt capacities - trä to trä - Partial nailing - Nailing pattern 5			
	Characteristic capacities - trä C24 - 1 vinkelbeslag per connection[kN]		antal of Fasteners	
	$R_{2,k}=R_{3,k}$	$R_{1,k}$	balk	fläns B
	CSA 5,0x50	CSA 5,0x50	antal	antal
ABR255	51.7	23,6 / kmod	46.0	41.0

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.

Karakteristisk bärförmåga - Balk-balk - 1 vinkelbeslag per fog - Delvis utspikning - Nailing pattern 6



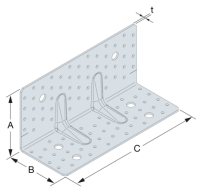
Referens	vinkelbeslag kapacitet					
	produkt capacities - trä to trä - Partial nailing - Nailing pattern 6					
	antal of Fasteners		Characteristic capacities - trä C24 - 1 vinkelbeslag per connection[kN]			
	balk	fläns B	$R_{2,k}=R_{3,k}$		$R_{1,k}$	
	antal	antal	CNA4.0x50	CNA4.0x60	CNA4.0x50	CNA4.0x60
ABR255	32.0	21.0	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.

Technical Sheet

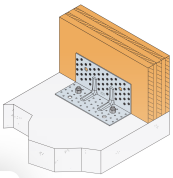
ABR255
Vinkelbeslag till KL-trä

Karakteristisk bärförmåga - CLT Balk-CLT Balk - Ø12 Betongskruvar - 1 vinkelbeslag per fog



Referens	vinkelbeslag kapacitet					
	produkt capacities - CLT beam to CLT beam - Ø12 beslag skruvar - 2 angle brackets					
	antal of Fasteners				Characteristic capacities - trä C24 - 1 vinkelbeslag per connection[kN]	
	balk		fläns B		$R_{2,k}=R_{3,k}$	$R_{1,k}$
	antal	typ	antal	typ	SSH12x80	SSH12x80
ABR255	2.0	SSH	4.0	SSH	16.6	13.4

Karakteristisk bärförmåga - Balk på betong - 1 vinkelbeslag per fog - Fullständig utspikning - Nailing pattern 1



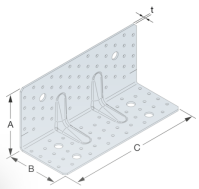
Karakteristisk bärförmåga - Balk på betong - 1 vinkelbeslag per fog - Fullständig utspikning - Nailing pattern 1
See full table online ➡️

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See full table online ➡️

The published characteristic capacity is based on short term load duration and service class 2 according to EC5

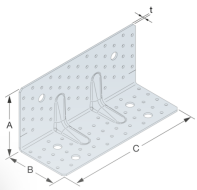
Karakteristisk bärförmåga - Balk på betong - 1 vinkelbeslag per fog - Delvis utspikning - Nailing pattern 2



Karakteristisk bärförmåga - Balk på betong - 1 vinkelbeslag per fog - Delvis utspikning - Nailing pattern 2
See full table online ➡️

Technical Sheet

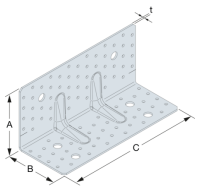
ABR255
Vinkelbeslag till KL-trä



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See full table online ➡️

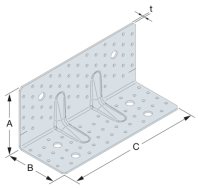
Referens												
	CNA4.0x3										CNA4.0x50	CNA
ABR255	15.94	18.8	24.4	24.4	21.6	23.7	29.3	32	20.3	20.3	20.3	



Karakteristik bärförmåga - Balk på betong - 1 vinkelbeslag per fog - delvis utspikning - nailing pattern 4

Referens	vinkelbeslag kapacitet											
	produkt capacities - trä to betong - Partial Nailing - Nailing pattern 4											
	antal of Fasteners				Characteristic capacities - trä C24 - 1 vinkelbeslag per connection[kN]							
	balk		fläns B		$R_{1,k}$		$R_{2,k}=R_{3,k}$		R4,k		R5,k	
	antal	typ	antal	typ	CNA4.0x50	CNA4.0x60	CNA4.0x50	CNA4.0x60	CNA4.0x50	CNA4.0x60	CNA4.0x50	CNA4.0x60
ABR255SO	26.0	CNA	2.0	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

Värdet i tabellen ovan kan användas om panelen inte kan roteras.
Ankarkapaciteterna måste kontrolleras separat genom att multiplacera F1-belastningen med en faktor på 1.1, F2-belastningen med en faktor på 1 och F5 med en faktor på 2.2.
Spikmönster 4 har specifikt utvecklats för CLT-applikationer. Det kan användas för applikationer med andra träbaserade material, förutsatt att materialen uppfyller kraven för avstånd och placering av fästelement i CLT.



Förenklade karakteristiska kapaciteter – Trä till styvt underlag – 1 vinkelbeslag – Delvis spikning – Spikmönster 4

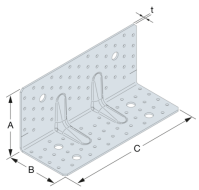
Referens	vinkelbeslag kapacitet											
	produkt capacities - trä to betong - Partial nailing - Nailing pattern 4											
	Characteristic capacities - trä C24 - 1 vinkelbeslag per connection[kN]								antal of Fasteners			
	$R_{1,k}$		$R_{2,k}=R_{3,k}$		R4,k		R5,k		balk		fläns B	
	CNA4.0x50	CNA4.0x60	CNA4.0x50	CNA4.0x60	CNA4.0x50	CNA4.0x60	CNA4.0x50	CNA4.0x60	antal	typ	antal	typ
ABR255SO	20.8	20.8	21.7	-	17.1	17.1	4.6	4.6	26.0	CNA	2.0	Ø12

The published characteristic capacity is based on short term load duration and service class 2 according to EC5 (EN 1995) – kmod = 0.9. For other load duration and service class, please refer to the ETA to get more accurate capacities.
The bolt design resistance requirement R#,d is determined from (bolt factor x connection design load F#,d) for the required load direction and fastener. Refer to the Simpson Strong-Tie anchor product range for suitable anchors. Typical anchor solutions are BOAXII, SET-XP, WA, AT-HP, depending on the concrete type, spacing and edge distances.

Technical Sheet

ABR255
Vinkelbeslag till KL-trä

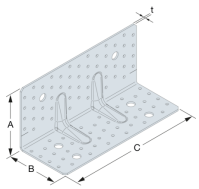
Karakteristisk bärförmåga - Balk på betong - 1 vinkelbeslag per fog - Delvis utspikning - Nailing pattern 7



Referens	vinkelbeslag kapacitet							
	produkt capacities - trä to betong - Partial nailing - Nailing pattern 7							
	Characteristic capacities - trä C24 - 1 vinkelbeslag per connection[kN]				antal of Fasteners			
	$R_{1,k}$		$R_{2,k}=R_{3,k}$		fläns B		balk	
	CNA4.0x50	CNA4.0x60	CNA4.0x50	CNA4.0x60	antal	typ	antal	typ
ABR255	-	-	39.8	42.5	2.0	Ø12	30.0	CNA
ABR255SO	-	-	-	-	-	-	-	-

The value in the table above can be used if the panel can't rotate.
The anchor capacities must be checked separatly by multiplying the F_2 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.

Karakteristisk bärförmåga - Balk på betong - 1 vinkelbeslag per fog - Delvis utspikning - Nailing pattern 8



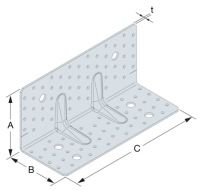
Referens	vinkelbeslag kapacitet											
	produkt capacities - trä to betong - Partial Nailing - Nailing pattern 8											
	antal of Fasteners				Characteristic capacities - trä C24 - 1 vinkelbeslag per connection[kN]							
	balk		fläns B		$R_{1,k}$		$R_{2,k}=R_{3,k}$		R4,k		R5,k	
	antal	typ	antal	typ	CNA4.0x50	CNA4.0x60	CNA4.0x50	CNA4.0x60	CNA4.0x50	CNA4.0x60	CNA4.0x50	CNA4.0x60
ABR255	17.0	CNA	2.0	Ø12	20	20	24.9	26.5	18.3/kmod^0.7	18.3/kmod^0.7	5.9/kmod^0.6	6.7/kmod^0.5
ABR255SO	30.0	CNA	2.0	Ø12	22,9/kmod	22,9/kmod	26.1	-	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 separatly by multiplying the F_1 load by a factor 1.1, F_2 load by a factor of 1 and F5 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.

Technical Sheet

ABR255
Vinkelbeslag till KL-trä

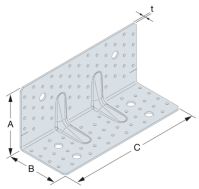
Förenklade karakteristiska kapaciteter – Trä till styvt underlag – 1 vinkelbeslag – Delvis spikning – Spikmönster 8



Referens	vinkelbeslag kapacitet											
	produkt capacities - trä to betong - Partial nailing - Nailing pattern 8											
	Characteristic capacities - trä C24 - 1 vinkelbeslag per connection[kN]								antal of Fasteners			
	$R_{1,k}$		$R_{4,k}$		$R_{2,k}=R_{3,k}$		$R_{5,k}$		balk		fläns B	
	CNA4.0x50	CNA4.0x60	CNA4.0x50	CNA4.0x60	CNA4.0x50	CNA4.0x60	CNA4.0x50	CNA4.0x60	antal	typ	antal	typ
ABR255	23.4	25.8	19.7	19.7	24.9	26.5	6.2	7	17.0	CNA	2.0	Ø12
ABR255SO	20.8	20.8	17.1	17.1	26.1	-	4.6	4.6	56.0	CNA	2.0	Ø12

The published characteristic capacity is based on short term load duration and service class 2 according to EC5 (EN 1995) – kmod = 0.9. For other load duration and service class, please refer to the ETA to get more accurate capacities.
The bolt design resistance requirement R#,d is determined from (bolt factor x connection design load F#,d) for the required load direction and fastener. Refer to the Simpson Strong-Tie anchor product range for suitable anchors. Typical anchor solutions are BOAXII, SET-XP, WA, AT-HP, depending on the concrete type, spacing and edge distances.

Karakteristisk bärförmåga - Balk på betong - 1 vinkelbeslag per fog - Delvis utspikning - Nailing pattern 9

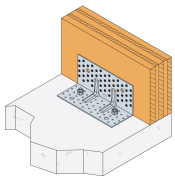


Referens	vinkelbeslag kapacitet					
	produkt capacities - trä to betong - Partial nailing - Nailing pattern 9					
	antal of Fasteners				Characteristic capacities - trä C24 - 1 vinkelbeslag per connection[kN]	
	balk		fläns B		$R_{1,k}$	$R_{2,k}=R_{3,k}$
	antal	typ	antal	typ	CSA 5,0x50	CSA 5,0x50
ABR255	35.0	CSA	2.0	Ø12	min (79,5 ; 22 / kmod)	min (58 ; 57,6 / kmod)
ABR255SO	-	-	-	-	-	-

The value in the table above can be used if the panel can't rotate.
The anchor capacities must be checked separatly 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.

Technical Sheet

ABR255
Vinkelbeslag till KL-trä



Produktens karakteristiska kapacitet – CLT-balk till styvt underlag – Ø12 anslutningsskruvar – 1 vinkelbeslag

Referens	vinkelbeslag kapacitet							
	produkt capacities - CLT beam to rigid stöd - Ø12 beslag skruvar - 1 vinkelbeslag							
	antal of Fasteners				Characteristic capacities - trä C24 - vinkelbeslag per connection[kN]			
	balk		fläns B		$R_{2,k}=R_{3,k}$		$R_{1,k}$	
	antal	typ	antal	typ	SSH12x80	SSH12x120	SSH12x80	SSH12x120
ABR255	2.0	SSH	2.0	Ø12	27.5	27.5	17.6	21.3
ABR255SO	2.0	SSH	2.0	Ø12	19.8	-	17.4	-

Produktens karakteristiska kapacitet – CLT-balk till styvt underlag – 1 vinkelbeslag + US-bricka

Referens	vinkelbeslag kapacitet				
	produkt capacities - CLT beam to rigid stöd - 1 vinkelbeslag with US washers - Nailing pattern 11				
	antal of Fasteners				Characteristic capacities - trä C24 - 1 vinkelbeslag per connection[kN]
	balk		fläns B		$R_{1,k}$
	antal	typ	antal	typ	CNA4.0x50
ABR255	17.0	CNA	2.0	Bolt Ø12	42.35
The perfiormances are valid only with the use of 2 US40/50/10G washers per brackets					

ABR255
Vinkelbeslag till KL-trä

Montering

Fastsättning

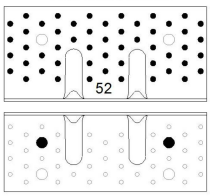
Trä:

- CNA 4.0x50 på trä
- CSA 5.0x40 eller CSA 5.0x50 skruvar
- SHH Ø 12 x 80 mm

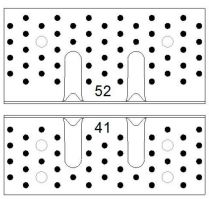
Betong:

- Mekanisk ankare: WA M12-104/5
- Kemisk ankare: AT-HP resin + LMAS M12-150/35 threaded rod

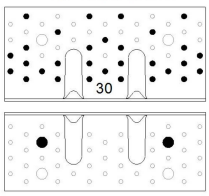
NP1 timber-concrete



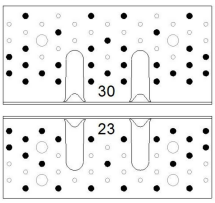
NP1 timber-timber



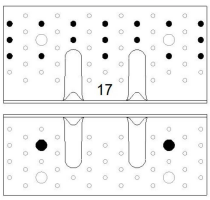
NP2 timber-concrete



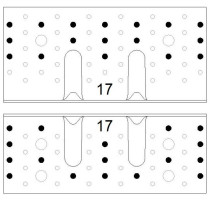
NP2 timber-timber



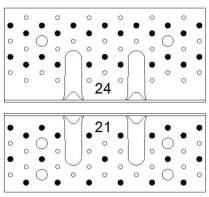
NP3 timber-concrete

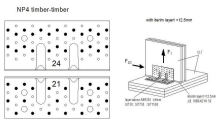


NP3 timber-timber

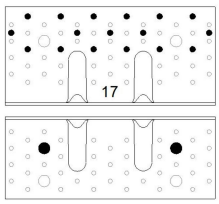


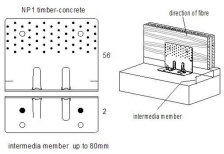
NP4 timber-timber

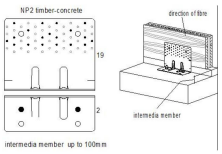


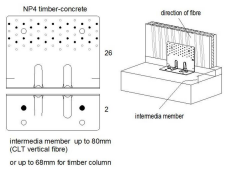


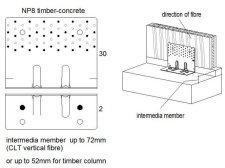
NP8 timber-concrete





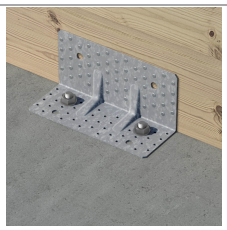
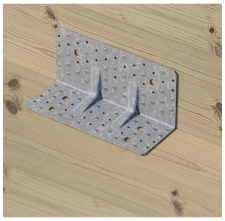
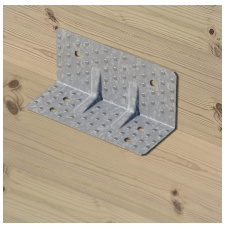






Technical Sheet

ABR255
Vinkelbeslag till KL-trä

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