

Scheda tecnica

BSNN

Scarpa ancoraggio esterno

SIMPSON

Strong-Tie

La scarpa d'ancoraggio esterno BSNN è progettata per applicazioni che richiedono una maggiore resistenza. Le scarpe sono installate con chiodi CNA, ma sono dotate di fori $\varnothing 11,5\text{mm}$ sulle alette per ancoranti. L'altezza della scarpa d'ancoraggio deve essere pari ad almeno $2/3$ dell'altezza dell'elemento supportato per evitarne la rotazione, a meno che non si aggiunga un ulteriore fissaggio laterale nella parte superiore.

Caratteristiche prodotto

Materiale

- Acciaio zincato S250GD + Z275 secondo EN 10346.
- Spessore 2mm

Vantaggi

- Le scarpe di ancoraggio BSNN sono certificate per carichi su tre assi.
- Sono consentiti collegamenti a calcestruzzo, acciaio e muratura, vedi i valori statici.

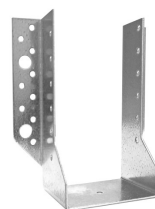
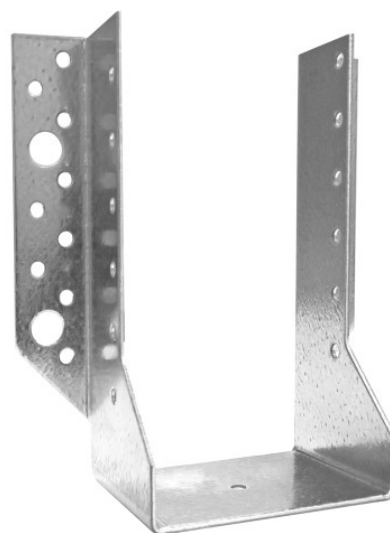
Campi di impiego

Applicazioni

- **Elemento di supporto:** Legno massiccio, elementi strutturali compositi (SCL), X-Lam, Acciaio, Calcestruzzo.
- **Elemento secondario:** Legno massiccio, elementi strutturali compositi (SCL), legno ingegnerizzato, legno lamellare.

Utilizzo

- Per la connessione di travi secondarie di legno/legno ingegnerizzato ai travi/pali principali di legno ingegnerizzato/calcestruzzo o acciaio.



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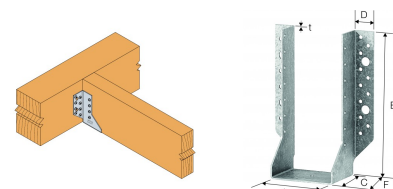
Dati tecnici

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Strong-Tie



Gamma prodotto

Codici	DB nr.	NOBB nr.	Travetto Dimensioni [mm]				Dimensioni [mm]						Fori Supporto		Fori Travetti	Box Quantity	Peso [kg]
			Larghezza		Altezza		A	B	C	D	F	t	Ø5 [mm]	Ø11.5 [mm]	Ø5 [mm]		
			Min.	Max.	Min.	Max.											
BSNN36/142	1971609	53490761	34	36	152	213	36	142	60	27	63	2	16	2	10	40	0.3
BSNN40/95	1971612	53490795	38	40	105	143	40	95	60	27	63	2	8	2	6	50	0.21
BSNN40/110	1971610	53490776	38	40	120	165	40	110	60	27	63	2	12	2	6	40	0.24
BSNN40/140	1971611	53490780	38	40	150	210	40	140	60	27	63	2	16	2	10	40	0.3
BSNN45/93	1971617	53490844	43	45	102	139	45	92	60	27	63	2	8	2	6	50	0.21
BSNN45/108	1971613	53490806	43	45	118	161	45	108	60	27	63	2	12	2	6	40	0.24
BSNN45/138	1971614	53490814	43	45	148	206	45	138	60	27	63	2	16	2	10	40	0.3
BSNN45/168	1971615	53490825	43	45	178	251	45	168	60	27	63	2	18	4	12	40	0.35
BSNN45/198	1971616	53490833	43	45	208	296	45	198	60	27	63	2	22	4	14	30	0.42
BSNN48/91	1971621	53490897	46	48	101	136	48	91	60	27	63	2	8	2	6	50	0.21
BSNN48/136	1971618	53490852	46	48	146	204	48	136	60	27	63	2	16	2	10	40	0.3
BSNN48/166	1971619	53490863	46	48	176	249	48	166	60	27	63	2	18	4	12	40	0.35
BSNN48/226	1971620	53490882	46	48	236	339	48	226	60	27	63	2	26	4	16	30	0.46
BSNN51/90	1971626	53490946	49	51	100	134	51	90	60	27	63	2	8	2	6	50	0.21
BSNN51/105	1971622	53490901	49	51	114	157	51	104	60	27	63	2	12	2	6	40	0.24
BSNN51/135	1971623	53490916	49	51	144	202	51	134	60	27	63	2	16	2	10	40	0.3
BSNN51/164	1971624	53490920	49	51	174	247	51	164	60	27	63	2	18	4	12	40	0.35
BSNN51/195	1971625	53490935	49	51	204	292	51	194	60	27	63	2	22	4	14	30	0.42
BSNN56/190	-	-	54	56	210	285	56	190	60	27	63	2	22	4	14	-	0.24
BSNN60/100	1971627	53490954	58	60	110	150	60	100	60	27	63	2	12	2	6	40	0.24
BSNN60/130	1971628	53490965	58	60	140	195	60	130	60	27	63	2	16	2	10	40	0.3
BSNN60/160	1971629	53490973	58	60	170	240	60	160	60	27	63	2	18	4	12	40	0.35
BSNN60/190	1971630	53490984	58	60	200	285	60	190	60	27	63	2	22	4	14	30	0.42
BSNN60/220	1971631	53490992	58	60	230	330	60	220	60	27	63	2	26	4	16	30	0.46
BSNN64/98	1971633	53491018	62	64	108	147	64	98	60	27	63	2	12	2	6	40	0.21
BSNN64/128	1971632	53491003	62	64	138	192	64	128	60	27	63	2	16	2	10	40	0.3
BSNN66/217	1971634	53491022	64	66	227	326	66	217	60	27	63	2	26	4	16	30	0.46
BSNN70/125	1971635	53491037	68	70	135	188	70	125	60	27	63	2	16	2	10	40	0.3
BSNN70/155	1971636	53491041	68	70	165	232	70	155	60	27	63	2	18	4	12	40	0.35
BSNN73/124	1971637	53491056	71	73	134	185	73	124	60	27	63	2	16	2	10	40	0.3
BSNN73/154	1971638	53491060	71	73	164	230	73	154	60	27	63	2	18	4	12	40	0.35
BSNN73/184	1971639	53491075	71	73	194	275	73	184	60	27	63	2	22	4	14	30	0.42
BSNN76/122	1971640	53491086	74	76	132	183	76	122	60	27	63	2	16	2	10	40	0.3
BSNN76/152	1971641	53491094	74	76	162	228	76	152	60	27	63	2	18	4	12	40	0.35
BSNN76/182	1971642	53491105	74	76	192	273	76	182	60	27	63	2	22	4	14	30	0.42
BSNN80/120	1971643	53491113	78	80	130	180	80	120	60	27	63	2	16	2	10	40	0.3
BSNN80/150	1971644	53491124	78	80	160	225	80	150	60	27	63	2	18	4	12	40	0.35
BSNN80/180	1971645	53491132	78	80	190	270	80	180	60	27	63	2	22	4	14	30	0.42
BSNN80/210	1971646	53491143	78	80	220	315	80	210	60	27	63	2	26	4	16	30	0.46
BSNN90/145	1971647	53491158	88	90	155	218	90	145	60	27	63	2	18	4	12	40	0.35
BSNN90/205	1971648	53491162	88	90	215	308	90	205	60	27	63	2	26	4	16	30	0.46
BSNN98/141	1971649	53491177	96	98	151	212	98	141	60	27	63	2	18	4	12	40	0.35

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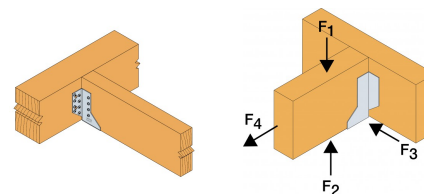
Scarpa ancoraggio esterno

Codici	DB nr.	NOBB nr.	Travetto Dimensioni [mm]				Dimensioni [mm]						Fori Supporto		Fori Travetti	Box Quantity	Peso [kg]
			Larghezza		Altezza		A	B	C	D	F	t	Ø5 [mm]	Ø11.5 [mm]	Ø5 [mm]		
			Min.	Max.	Min.	Max.											
BSNN100/100	2084730	-	97	100	110	150	100	100	60	27	63	2	14	2	8	40	0.28
BSNN100/110	1971599	53490666	98	100	120	165	100	110	60	27	63	2	16	2	10	-	0.3
BSNN100/140	1971600	53490674	98	100	150	210	100	140	60	27	63	2	18	4	12	40	0.35
BSNN100/170	1971601	53490685	98	100	180	255	100	170	60	27	63	2	22	4	14	30	0.42
BSNN100/200	1971602	53490693	98	100	210	300	100	200	60	27	63	2	26	4	16	30	0.46
BSNN115/163	1971603	53490704	113	115	172	244	115	162	60	27	63	2	22	4	14	30	0.42
BSNN115/193	1971604	53490712	113	115	202	289	115	192	60	27	63	2	26	4	16	30	0.46
BSNN120/110	-	-	117	120	120	180	120	110	60	27	63	2	12	2	8	30	0.32
BSNN120/160	1971605	53490723	118	120	170	240	120	160	60	27	63	2	22	4	14	30	0.42
BSNN140/120	-	-	137	140	150	210	140	120	60	27	63	2	16	2	10	30	0.35
BSNN120/190	1971606	53490738	118	120	200	285	120	190	60	27	63	2	26	4	16	30	0.46
BSNN140/150	1971607	53490742	138	140	160	225	140	150	60	27	63	2	22	4	14	30	0.42
BSNN140/180	1971608	53490757	138	140	190	270	140	180	60	27	63	2	26	4	16	30	0.46

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Legno/Legno - Chiodatura completa

Codici	Legno/Legno - Chiodatura completa																
	Fissaggi		Capacità caratteristiche - Legno C24 [kN]														
	Supporto	Travetto	R _{1,k}					R _{2,k}					R _{3,k}				
	Q.tà	Q.tà	CNA 4.0x35	CNA 4.0x40	CNA 4.0x50	CNA 4.0x60	CSA 5.0x40	CNA 4.0x35	CNA 4.0x40	CNA 4.0x50	CNA 4.0x60	CSA 5.0x40	CNA 4.0x35	CNA 4.0x40	CNA 4.0x50	CNA 4.0x60	!
BSNN36/142	16	10	17.7	-	-	-	-	5.4	-	-	-	-	6.7	-	-	-	
BSNN40/95	8	6	7.6	8.9	-	-	16.2	4.3	4.3	-	-	4.3	3.4	3.9	-	-	
BSNN40/110	12	6	11.8	13.8	-	-	18	5.1	5.1	-	-	5.1	4.8	5.5	-	-	
BSNN40/140	16	10	17.5	20.3	-	-	27	5.9	5.9	-	-	5.9	6.7	7.7	-	-	
BSNN45/93	8	6	7.2	8.4	-	-	16.1	4.7	4.7	-	-	4.6	3.4	3.9	-	-	
BSNN45/108	12	6	11.4	13.4	-	-	18	5.7	5.7	-	-	5.6	4.8	5.5	-	-	
BSNN45/138	16	10	17.1	19.9	-	-	27	6.6	6.6	-	-	6.5	6.7	7.7	-	-	
BSNN45/168	18	12	22.1	25.4	-	-	31.5	7.4	7.4	-	-	7.3	7.8	9	-	-	
BSNN45/198	22	14	26.6	29.3	-	-	36	8.2	8.2	-	-	8	9.2	10.6	-	-	
BSNN48/91	8	6	7.1	8.4	-	-	15.9	5	5	-	-	5	3.4	3.9	-	-	
BSNN48/136	16	10	16.9	19.7	-	-	27	7	7	-	-	7	6.7	7.7	-	-	
BSNN48/166	18	12	21.9	25.2	-	-	31.5	7.9	7.9	-	-	7.9	7.8	9	-	-	
BSNN48/226	26	16	29.9	32.9	-	-	40.5	9.4	9.4	-	-	9.4	10.5	12.1	-	-	
BSNN51/90	8	6	6.9	8.2	10.5	-	15.8	5.2	5.2	5.2	-	5.3	3.4	3.9	5	-	
BSNN51/105	12	6	11	12.9	16.6	-	18	6.3	6.3	6.3	-	6.4	4.8	5.5	6.9	-	
BSNN51/135	16	10	16.7	19.4	24.7	-	27	7.4	7.4	7.4	-	7.5	6.7	7.7	9.7	-	
BSNN51/164	18	12	21.7	25	31.1	-	31.5	8.3	8.3	8.3	-	8.5	7.8	9	11.4	-	
BSNN51/195	22	14	26.6	29.3	35.5	-	36	9.2	9.2	9.2	-	9.4	9.2	10.6	13.5	-	
BSNN56/190	22	14	26.6	29.3	35.5	-	36	9.2	9.2	9.2	-	9.4	9.2	10.6	13.5	-	
BSNN60/100	12	6	10.3	12.1	15.6	18.4	18	7.2	7.2	7.2	7.2	7.2	4.8	5.5	6.9	7.9	
BSNN60/130	16	10	16	18.7	23.8	27.6	27	8.5	8.5	8.5	8.5	8.5	6.7	7.7	9.7	11.3	
BSNN60/160	18	12	21.2	24.4	30.8	33	31.5	9.7	9.7	9.7	9.7	9.7	7.8	9	11.4	13.2	
BSNN60/190	22	14	26.6	29.3	35.5	37.8	36	10.7	10.7	10.7	10.7	10.7	9.2	10.6	13.5	15.6	
BSNN60/220	26	16	29.9	32.9	40	42.5	40.5	11.6	11.6	11.6	11.6	11.6	10.5	12.1	15.4	17.9	
BSNN64/98	12	6	10	11.8	15.2	18	18	7.6	7.6	7.6	7.6	7.6	4.8	5.5	6.9	7.9	
BSNN64/128	16	10	15.7	18.3	23.4	27.2	27	9	9	9	9	9	6.7	7.7	9.7	11.3	
BSNN66/217	26	16	29.9	32.9	40	42.5	40.5	12.7	12.7	12.7	12.7	13	10.5	12.1	15.4	17.9	
BSNN70/125	16	10	15.2	17.8	22.8	26.5	27	9.7	9.7	9.7	9.7	9.9	6.7	7.7	9.7	11.3	
BSNN70/155	18	12	20.5	23.7	30	33	31.5	11.1	11.1	11.1	11.1	11.3	7.8	9	11.4	13.2	
BSNN73/124	16	10	14.9	17.5	22.4	26.2	27	10.1	10.1	10.1	10.1	9.9	6.7	7.7	9.7	11.3	
BSNN73/154	18	12	20.3	23.5	29.7	33	31.5	11.5	11.5	11.5	11.5	11.3	7.8	9	11.4	13.2	
BSNN73/184	22	14	26.6	29.3	35.5	37.8	36	12.7	12.7	12.7	12.7	12.6	9.2	10.6	13.5	15.6	
BSNN76/122	16	10	14.7	17.2	22.1	25.8	27	10.4	10.4	10.4	10.4	10.8	6.7	7.7	9.7	11.3	

I carichi di sollevamento R_{2,k} sono determinati per un travetto con un'altezza di 4/3x B (B = altezza della BSNN) chiodatura parziale. Per dimensioni inferiori è possibile determinare un carico superiore in base all'ETA.

Carico combinato:

$$\sum \left(\frac{F_{i,d}}{R_{i,d}} \right)^2 \leq 1$$

BSNN

Scarpa ancoraggio esterno

Legno/Legno - Chiodatura completa

Codici	Fissaggi		Capacità caratteristiche - Legno C24 [kN]													
	Supporto	Travetto	R _{1,k}					R _{2,k}					R _{3,k}			
	Q.tà	Q.tà	CNA 4.0x35	CNA 4.0x40	CNA 4.0x50	CNA 4.0x60	CSA 5.0x40	CNA 4.0x35	CNA 4.0x40	CNA 4.0x50	CNA 4.0x60	CSA 5.0x40	CNA 4.0x35	CNA 4.0x40	CNA 4.0x50	CNA 4.0x60
BSNN76/152	18	12	20.1	23.3	29.5	33	31.5	11.9	11.9	11.9	11.9	11.9	7.8	9	11.4	13.2
BSNN76/182	22	14	26.6	29.3	35.5	37.8	36	13.2	13.2	13.2	13.2	13.2	9.2	10.6	13.5	15.6
BSNN80/120	16	10	14.3	16.8	21.6	25.3	27	10.8	10.8	10.8	10.8	10.8	6.7	7.7	9.7	11.3
BSNN80/150	18	12	19.8	23	29.1	33	31.5	12.4	12.4	12.4	12.4	12.4	7.8	9	11.4	13.2
BSNN80/180	22	14	26.4	29.3	35.5	37.8	36	13.8	13.8	13.8	13.8	13.8	9.2	10.6	13.5	15.6
BSNN80/210	26	16	29.9	32.9	40	42.5	40.5	15.1	15.1	15.1	15.1	15.1	10.5	12.1	15.4	17.9
BSNN90/145	18	12	19	22.2	28.2	32.3	31.2	13.7	13.7	13.7	13.7	13.7	7.8	9	11.4	13.2
BSNN90/205	26	16	29.9	32.9	40	42.5	40.5	16.7	16.7	16.7	16.7	16.7	10.5	12.1	15.4	17.9
BSNN98/141	18	12	18.4	21.5	27.3	31.5	31.5	14.6	14.6	14.6	14.6	14.9	7.8	9	11.4	13.2
BSNN100/100	14	8	9.9	11.8	15.3	18.4	22.5	11.3	12.1	12.1	12.1	-	5.6	6.4	8.1	9.4
BSNN100/110	16	10	12.4	14.7	19	22.6	27	12.8	12.8	12.8	12.8	12.8	6.7	7.7	9.7	11.3
BSNN100/140	18	12	18.2	21.3	27.1	31.3	31.5	14.9	14.9	14.9	14.9	14.9	7.8	9	11.4	13.2
BSNN100/170	22	14	24.9	28.9	35.5	37.8	36	16.7	16.7	16.7	16.7	16.7	9.2	10.6	13.5	15.6
BSNN100/200	26	16	29.9	32.9	40	42.5	40.5	18.3	18.3	18.3	18.3	18.3	10.5	12.1	15.4	17.9
BSNN115/163	22	14	23.7	27.5	34.9	37.8	36	18.7	18.7	18.7	18.7	18.6	9.2	10.6	13.5	15.6
BSNN115/193	26	16	29.9	32.9	40	42.5	40.5	20.6	20.6	20.6	20.6	20.5	10.5	12.1	15.4	17.9
BSNN120/110	12	8	11.5	13.5	17.2	20	22.5	11.9	13.2	13.2	13.2	-	5.9	6.8	8.6	9.9
BSNN120/160	22	14	23.2	27.1	34.4	37.8	36	19.3	19.3	19.3	19.3	19.3	9.2	10.6	13.5	15.6
BSNN140/120	16	10	15	17.6	22.5	26.3	27	12.8	15.1	18.9	18.9	-	7	8.1	10.2	11.8
BSNN120/190	26	16	29.9	32.9	40	42.5	40.5	21.4	21.4	21.4	21.4	21.4	10.5	12.1	15.4	17.9
BSNN140/150	22	14	21.4	25	32	37.1	36	21.7	21.7	21.7	21.7	21.7	9.2	10.6	13.5	15.6
BSNN140/180	26	16	29	32.9	40	42.5	40.5	24.1	24.1	24.1	24.1	24.1	10.5	12.1	15.4	17.9

I carichi di sollevamento R_{2,k} sono determinati per un travetto con un'altezza di 4/3x B (B = altezza della BSNN) chiodatura parziale. Per dimensioni inferiori è possibile determinare un carico superiore in base all'ETA.

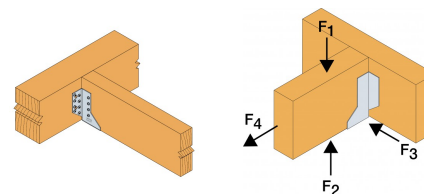
Carico combinato:

$$\sum \left(\frac{F_{i,d}}{R_{i,d}} \right)^2 \leq 1$$

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Strong-Tie



Legno/Legno - Chiodatura parziale

Codici	Legno/Legno - Chiodatura parziale																
	Fissaggi		Capacità caratteristiche - Legno C24 [kN]														
	Supporto	Tretto	R _{1,k}					R _{2,k}					R _{3,k}				
	Q.tà	Q.tà	CNA 4.0x35	CNA 4.0x40	CNA 4.0x50	CNA 4.0x60	CSA 5.0x40	CNA 4.0x35	CNA 4.0x40	CNA 4.0x50	CNA 4.0x60	CSA 5.0x40	CNA 4.0x35	CNA 4.0x40	CNA 4.0x50	CNA 4.0x60	CNA 5.0x60
BSNN36/142	10	6	11.9	-	-	-	-	5.4	-	-	-	-	2.4	-	-	-	-
BSNN40/95	6	3	6.6	7.7	-	-	11.3	3.8	4.3	-	-	4.3	1.3	1.4	-	-	1
BSNN40/110	8	4	8.5	9.9	-	-	13.5	5.1	5.1	-	-	5.1	2	2.2	-	-	2
BSNN40/140	10	6	11.7	13.5	-	-	18	5.9	5.9	-	-	5.9	2.4	2.7	-	-	3
BSNN45/93	6	3	6.4	7.4	-	-	11.3	3.8	4.5	-	-	4.6	1.3	1.4	-	-	1
BSNN45/108	8	4	8.3	9.7	-	-	13.5	5.7	5.7	-	-	5.6	2	2.2	-	-	2
BSNN45/138	10	6	11.5	13.3	-	-	18	6.6	6.6	-	-	6.5	2.4	2.7	-	-	3
BSNN45/168	12	6	13.3	14.6	-	-	18	7.4	7.4	-	-	7.3	2.9	3.2	-	-	3
BSNN45/198	14	8	16.6	18.3	-	-	22.5	8.2	8.2	-	-	8	3.3	3.6	-	-	4
BSNN48/91	6	3	6.3	7.4	-	-	11.3	3.8	4.5	-	-	5	1.3	1.4	-	-	1
BSNN48/136	10	6	11.4	13.2	-	-	18	7	7	-	-	7	2.4	2.7	-	-	3
BSNN48/166	12	6	13.3	14.6	-	-	18	7.9	7.9	-	-	7.9	2.9	3.2	-	-	3
BSNN48/226	16	8	16.6	18.3	-	-	22.5	9.4	9.4	-	-	9.4	3.7	4.1	-	-	-
BSNN51/90	6	3	6.2	7.2	9.2	-	11.3	3.8	4.5	5.2	-	5.3	1.3	1.4	1.7	-	1
BSNN51/105	8	4	8	9.4	12	-	13.5	5.9	6.3	6.3	-	6.4	2	2.2	2.7	-	2
BSNN51/135	10	6	11.3	13.1	16.5	-	18	7.4	7.4	7.4	-	7.5	2.4	2.7	3.3	-	3
BSNN51/164	12	6	13.3	14.6	17.8	-	18	8.3	8.3	8.3	-	8.5	2.9	3.2	3.8	-	3
BSNN51/195	14	8	16.6	18.3	22.2	-	22.5	9.2	9.2	9.2	-	9.4	3.3	3.6	4.4	-	4
BSNN56/190	14	8	16.6	18.3	22.2	-	22.5	9.2	9.2	9.2	-	9.4	3.3	3.6	4.4	-	4
BSNN60/100	8	4	7.6	8.9	11.4	13.3	13.5	5.9	7	7.2	7.2	7.2	2	2.2	2.7	2.9	2
BSNN60/130	10	6	10.9	12.6	16	18.3	18	8.3	8.5	8.5	8.5	8.5	2.4	2.7	3.3	3.5	3
BSNN60/160	12	6	13.3	14.6	17.8	18.9	18	9.7	9.7	9.7	9.7	9.7	2.9	3.2	3.8	4.1	3
BSNN60/190	14	8	16.6	18.3	22.2	23.6	22.5	10.7	10.7	10.7	10.7	10.7	3.3	3.6	4.4	4.7	4
BSNN60/220	16	8	16.6	18.3	22.2	23.6	22.5	11.6	11.6	11.6	11.6	11.6	3.7	4.1	4.9	5.2	-
BSNN64/98	8	4	7.4	8.7	11.1	13	13.5	5.9	7	7.6	7.6	7.6	2	2.2	2.7	2.9	2
BSNN64/128	10	6	10.7	12.4	15.7	18.1	18	8.3	9	9	9	9	2.4	2.7	3.3	3.5	3
BSNN66/217	16	8	16.6	18.3	22.2	23.6	22.5	12.7	12.7	12.7	12.7	13	3.7	4.1	4.9	5.2	-
BSNN70/125	10	6	10.4	12.1	15.4	17.7	18	8.3	9.7	9.7	9.7	9.9	2.4	2.7	3.3	3.5	3
BSNN70/155	12	6	13.3	14.6	17.8	18.9	18	10	11	11.1	11.1	11.3	2.9	3.2	3.8	4.1	3
BSNN73/124	10	6	10.2	12	15.2	17.5	18	8.3	9.8	10.1	10.1	9.9	2.4	2.7	3.3	3.5	3
BSNN73/154	12	6	13.3	14.6	17.8	18.9	18	10	11	11.5	11.5	11.3	2.9	3.2	3.8	4.1	3
BSNN73/184	14	8	16.6	18.3	22.2	23.6	22.5	12.7	12.7	12.7	12.7	12.6	3.3	3.6	4.4	4.7	4
BSNN76/122	10	6	10.1	11.8	15	17.3	18	8.3	9.8	10.4	10.4	10.4	2.4	2.7	3.3	3.5	3
BSNN76/152	12	6	13.3	14.6	17.8	18.9	18	10	11	11.9	11.9	11.9	2.9	3.2	3.8	4.1	3
BSNN76/182	14	8	16.6	18.3	22.2	23.6	22.5	13.2	13.2	13.2	13.2	13.2	3.3	3.6	4.4	4.7	4
BSNN80/120	10	6	9.9	11.5	14.7	17.1	18	8.3	9.8	10.8	10.8	10.8	2.4	2.7	3.3	3.5	3

Carico combinato:

$$\sum \left(\frac{F_{i,d}}{R_{i,d}} \right)^2 \leq 1$$

BSNN

Scarpa ancoraggio esterno

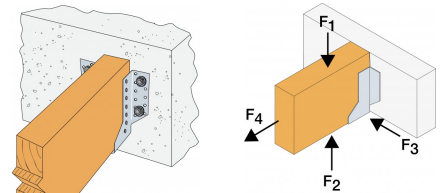
Legno/Legno - Chiodatura parziale

Codici	Fissaggi		Capacità caratteristiche - Legno C24 [kN]														
	Supporto	Tretto	R _{1,k}					R _{2,k}					R _{3,k}				
	Q.tà	Q.tà	CNA 4.0x35	CNA 4.0x40	CNA 4.0x50	CNA 4.0x60	CSA 5.0x40	CNA 4.0x35	CNA 4.0x40	CNA 4.0x50	CNA 4.0x60	CSA 5.0x40	CNA 4.0x35	CNA 4.0x40	CNA 4.0x50	CNA 4.0x60	C
BSNN80/150	12	6	13.3	14.6	17.8	18.9	18	10	11	12.4	12.4	12.4	2.9	3.2	3.8	4.1	3
BSNN80/180	14	8	16.6	18.3	22.2	23.6	22.5	13.3	13.8	13.8	13.8	13.8	3.3	3.6	4.4	4.7	4
BSNN80/210	16	8	16.6	18.3	22.2	23.6	22.5	13.3	14.6	15.1	15.1	15.1	3.7	4.1	4.9	5.2	
BSNN90/145	12	6	13.2	14.6	17.8	18.9	18	10	11	13.3	13.7	13.5	2.9	3.2	3.8	4.1	3
BSNN90/205	16	8	16.6	18.3	22.2	23.6	22.5	13.3	14.6	16.7	16.7	16.7	3.7	4.1	4.9	5.2	
BSNN98/141	12	6	12.7	14.6	17.8	18.9	18	10	11	13.3	14.2	13.5	2.9	3.2	3.8	4.1	3
BSNN100/100	8	4	7.3	8.6	11	12.9	13.5	6.6	7	8.9	9.4	-	2	2.2	2.7	2.9	
BSNN100/110	10	6	11.6	13.4	17	18.9	18	8.3	9.8	12.7	12.8	12.8	2.4	2.7	3.3	3.5	3
BSNN100/140	12	6	12.6	14.6	17.8	18.9	18	10	11	13.3	14.2	13.5	2.9	3.2	3.8	4.1	3
BSNN100/170	14	8	16.6	18.3	22.2	23.6	22.5	13.3	14.6	16.7	16.7	16.7	3.3	3.6	4.4	4.7	4
BSNN100/200	16	8	16.6	18.3	22.2	23.6	22.5	13.3	14.6	17.8	18.3	18	3.7	4.1	4.9	5.2	
BSNN115/163	14	8	15.8	18.3	22.2	23.6	22.5	13.3	14.6	17.8	18.7	18	3.3	3.6	4.4	4.7	4
BSNN115/193	16	8	16.6	18.3	22.2	23.6	22.5	13.3	14.6	17.8	18.9	18	3.7	4.1	4.9	5.2	
BSNN120/110	8	4	8.3	9.6	12.3	14.1	13.5	5.9	7	8.9	9.4	-	2.3	2.5	3	3.2	
BSNN120/160	14	8	15.6	18.1	22.2	23.6	22.5	13.3	14.6	17.8	18.9	18	3.3	3.6	4.4	4.7	4
BSNN140/120	10	6	9.7	11.3	14.5	16.8	18	8.3	9.8	12.6	14.2	-	2.7	3	3.6	3.8	
BSNN120/190	16	8	16.6	18.3	22.2	23.6	22.5	13.3	14.6	17.8	18.9	18	3.7	4.1	4.9	5.2	
BSNN140/150	14	8	14.4	16.8	21.4	23.6	22.5	13.3	14.6	17.8	18.9	18	3.3	3.6	4.4	4.7	4
BSNN140/180	16	8	16.6	18.3	22.2	23.6	22.5	13.3	14.6	17.8	18.9	18	3.7	4.1	4.9	5.2	

Carico combinato:

$$\sum \left(\frac{F_{i,d}}{R_{i,d}} \right)^2 \leq 1$$

Product capacities - Timber to concrete or steel



Codici	Characteristic capacities - Timber to concrete or steel																	
	Fasteners				Product characteristic capacities - Timber C24 [kN]													
	Header		Joist		R _{1,k}				R _{2,k}				R _{3,k}				R	
	Qty	Type	Qty	Type	CNA 4.0x35	CNA 4.0x40	CNA 4.0x50	CNA 4.0x60	CNA 4.0x35	CNA 4.0x40	CNA 4.0x50	CNA 4.0x60	CNA 4.0x35	CNA 4.0x40	CNA 4.0x50	CNA 4.0x60	CNA 4.0x35	CNA 4.0x40
BSNN36/142	2	Ø10	10	CNA	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BSNN40/95	2	Ø10	6	CNA	13.3	-	-	-	4.3	-	-	-	10	11	-	-	5	-
BSNN40/110	2	Ø10	6	CNA	13.3	-	-	-	5.1	-	-	-	6.6	-	-	-	5	-
BSNN40/140	2	Ø10	10	CNA	14.2	-	-	-	5.9	-	-	-	8	-	-	-	5	-
BSNN45/93	2	Ø10	6	CNA	13.3	14.2	-	-	4.7	4.7	-	-	10	11	-	-	5	5
BSNN45/108	2	Ø10	6	CNA	13.3	14.2	-	-	5.7	5.7	-	-	7.5	8.2	-	-	5	5
BSNN45/138	2	Ø10	10	CNA	14.2	14.2	-	-	6.6	6.6	-	-	9.1	10	-	-	5	5
BSNN45/168	4	Ø10	12	CNA	22.7	22.7	-	-	7.4	7.4	-	-	7.8	8.6	-	-	10	10
BSNN45/198	4	Ø10	14	CNA	22.7	22.7	-	-	8.2	8.2	-	-	8	8.9	-	-	10	10
BSNN48/91	2	Ø10	6	CNA	13.3	14.2	-	-	5	5	-	-	10.6	11.7	-	-	5	5
BSNN48/136	2	Ø10	10	CNA	14.2	14.2	-	-	7	7	-	-	9.7	10.6	-	-	5	5
BSNN48/166	4	Ø10	12	CNA	22.7	22.7	-	-	7.9	7.9	-	-	7.8	8.6	-	-	10	10
BSNN48/226	4	Ø10	16	CNA	22.7	22.7	-	-	9.4	9.4	-	-	9.2	10.2	-	-	10	10
BSNN51/90	2	Ø10	6	CNA	13.3	14.2	-	-	5.2	5.2	-	-	11.3	12.4	-	-	5	5
BSNN51/105	2	Ø10	6	CNA	13.3	14.2	-	-	6.3	6.3	-	-	8.5	9.3	-	-	5	5
BSNN51/135	2	Ø10	10	CNA	14.2	14.2	-	-	7.4	7.4	-	-	10.3	11.3	-	-	5	5
BSNN51/164	4	Ø10	12	CNA	22.7	22.7	-	-	8.3	8.3	-	-	7.8	8.6	-	-	10	10
BSNN51/195	4	Ø10	14	CNA	22.7	22.7	-	-	9.2	9.2	-	-	8.1	9	-	-	10	10
BSNN56/190	4	Ø10	14	CNA	22.7	22.7	-	-	9.2	9.2	-	-	8.1	9	-	-	10	10
BSNN60/100	2	Ø10	6	CNA	13.3	14.2	14.2	-	7.2	7.2	7.2	-	10	11	13.3	-	5	5
BSNN60/130	2	Ø10	10	CNA	14.2	14.2	14.2	-	8.5	8.5	8.5	-	12.1	13.3	16.1	-	5	5
BSNN60/160	4	Ø10	12	CNA	22.7	22.7	22.7	-	9.7	9.7	9.7	-	7.9	8.7	10.1	-	10	10
BSNN60/190	4	Ø10	14	CNA	22.7	22.7	22.7	-	10.7	10.7	10.7	-	8.1	9	10.7	-	10	10
BSNN60/220	4	Ø10	16	CNA	22.7	22.7	22.7	-	11.6	11.6	11.6	-	9.2	10.3	12.2	-	10	10
BSNN64/98	2	Ø10	6	CNA	13.3	14.2	14.2	14.2	7.6	7.6	7.6	7.6	10.6	11.7	14.2	15.1	5	5
BSNN64/128	2	Ø10	10	CNA	14.2	14.2	14.2	14.2	9	9	9	9	12.9	14.2	17.2	18.3	5	5
BSNN66/217	4	Ø10	16	CNA	22.7	22.7	22.7	22.7	12.7	12.7	12.7	12.7	9.3	10.3	12.2	14.2	10	10
BSNN70/125	2	Ø10	10	CNA	14.2	14.2	14.2	14.2	9.7	9.7	9.7	9.7	14.1	15.5	18.8	20	5	5
BSNN70/155	4	Ø10	12	CNA	22.7	22.7	22.7	22.7	11.1	11.1	11.1	11.1	8	8.7	10.2	11.7	10	10
BSNN73/124	2	Ø10	10	CNA	14.2	14.2	14.2	14.2	10.1	10.1	10.1	10.1	14.7	16.2	19.6	20.9	5	5
BSNN73/154	4	Ø10	12	CNA	22.7	22.7	22.7	22.7	11.5	11.5	11.5	11.5	8	8.8	10.2	11.7	10	10
BSNN73/184	4	Ø10	14	CNA	22.7	22.7	22.7	22.7	12.7	12.7	12.7	12.7	8.2	9.1	10.8	12.5	10	10
BSNN76/122	2	Ø10	10	CNA	14.2	14.2	14.2	14.2	10.4	10.4	10.4	10.4	15.3	16.9	20.5	21.7	5	5
BSNN76/152	4	Ø10	12	CNA	22.7	22.7	22.7	22.7	11.9	11.9	11.9	11.9	8	8.8	10.2	11.7	10	10
BSNN76/182	4	Ø10	14	CNA	22.7	22.7	22.7	22.7	13.2	13.2	13.2	13.2	8.2	9.1	10.8	12.5	10	10
BSNN80/120	2	Ø10	10	CNA	14.2	14.2	14.2	14.2	10.8	10.8	10.8	10.8	16.1	17.7	21.5	22.9	5	5

Combined load:

$$\sum \left(\frac{F_{i,d}}{R_{i,d}} \right)^2 \leq 1$$

Scheda tecnica

BSNN

Scarpa ancoraggio esterno

SIMPSON

Strong-Tie

Characteristic capacities - Timber to concrete or steel

Codici	Product characteristic capacities - Timber C24 [kN]																	
	Fasteners				R													
	Header		Joist		R _{1,k}				R _{2,k}				R _{3,k}				R	
	Qty	Type	Qty	Type	CNA 4.0x35	CNA 4.0x40	CNA 4.0x50	CNA 4.0x60	CNA 4.0x35	CNA 4.0x40	CNA 4.0x50	CNA 4.0x60	CNA 4.0x35	CNA 4.0x40	CNA 4.0x50	CNA 4.0x60	CNA 4.0x35	CNA 4.0x40
BSNN80/150	4	Ø10	12	CNA	22.7	22.7	22.7	22.7	12.4	12.4	12.4	12.4	8	8.8	10.2	11.7	10	10
BSNN80/180	4	Ø10	14	CNA	22.7	22.7	22.7	22.7	13.8	13.8	13.8	13.8	8.2	9.1	10.8	12.6	10	10
BSNN80/210	4	Ø10	16	CNA	22.7	22.7	22.7	22.7	15.1	15.1	15.1	15.1	9.3	10.4	12.3	14.3	10	10
BSNN90/145	4	Ø10	12	CNA	22.7	22.7	22.7	22.7	13.7	13.7	13.7	13.7	8.1	8.9	10.3	11.8	10	10
BSNN90/205	4	Ø10	16	CNA	22.7	22.7	22.7	22.7	16.7	16.7	16.7	16.7	9.4	10.4	12.4	14.4	10	10
BSNN98/141	4	Ø10	12	CNA	22.7	22.7	22.7	22.7	14.6	14.6	14.6	14.6	8.2	8.9	10.4	11.9	10	10
BSNN100/100	2	Ø10	8	CNA	14.2	14.2	14.2	14.2	12.1	12.1	12.1	12.1	-	-	-	-	-	-
BSNN100/110	2	Ø10	10	CNA	14.2	14.2	14.2	14.2	12.8	12.8	12.8	12.8	20.1	22.2	26.9	28.6	5	5
BSNN100/140	4	Ø10	12	CNA	22.7	22.7	22.7	22.7	14.9	14.9	14.9	14.9	8.2	9	10.4	11.9	10	10
BSNN100/170	4	Ø10	14	CNA	22.7	22.7	22.7	22.7	16.7	16.7	16.7	16.7	8.4	9.3	10.9	12.7	10	10
BSNN100/200	4	Ø10	16	CNA	22.7	22.7	22.7	22.7	18.3	18.3	18.3	18.3	9.5	10.5	12.4	14.4	10	10
BSNN115/163	4	Ø10	14	CNA	22.7	22.7	22.7	22.7	18.7	18.7	18.7	18.7	8.5	9.4	11.1	12.8	10	10
BSNN115/193	4	Ø10	16	CNA	22.7	22.7	22.7	22.7	20.6	20.6	20.6	20.6	9.5	10.6	12.5	14.5	10	10
BSNN120/110	2	Ø10	8	CNA	14.2	14.2	14.2	14.2	13.3	14.2	14.2	14.2	-	-	-	-	-	-
BSNN120/160	4	Ø10	14	CNA	22.7	22.7	22.7	22.7	19.3	19.3	19.3	19.3	8.5	9.4	11.1	12.8	10	10
BSNN140/120	2	Ø10	12	CNA	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	-	-	-	-	-	-
BSNN120/190	4	Ø10	16	CNA	22.7	22.7	22.7	22.7	21.4	21.4	21.4	21.4	9.6	10.6	12.5	14.5	10	10
BSNN140/150	4	Ø10	14	CNA	22.7	22.7	22.7	22.7	21.7	21.7	21.7	21.7	8.6	9.5	11.2	13	10	10
BSNN140/180	4	Ø10	16	CNA	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.7	9.7	10.8	12.7	14.7	10	10

Combined load:

$$\sum \left(\frac{F_{i,d}}{R_{i,d}} \right)^2 \leq 1$$

BSNN

Scarpa ancoraggio esterno

Installazione tipica

Fissaggi

Elemento secondario:

- Chiodi CNA Ø4x50.
- Chiodi CNA Ø4x35 per spessori trave inferiori a 64mm.
- Viti CSA Ø5x40.
- Viti CSA Ø5x35 per spessori trave inferiori a 60mm.

Elemento di supporto:

Supporto in legno:

- Chiodi CNA Ø4x50.
- Chiodi CNA Ø4x35 per spessori trave inferiori a 64mm.
- Viti CSA Ø5x40.
- Viti CSA Ø5x35 per spessori trave inferiori a 60mm.

Supporto in acciaio:

- Bullone Ø10mm. La differenza tra il diametro del foro e il bullone non può essere superiore a 2 mm.

Supporto in calcestruzzo:

- Ancorante meccanico: FM -753 M10.
- Ancorante chimico: KEM-V + barra filettata M10.

