

Technický list

SIMPSON**Strong-Tie**

GSE 4 Joist hanger

The GSE joist hanger is a connector which has been tested and proved to be Fire Resistance R30 in combustion chamber tests. The GSE hanger is used in structures where fire resistance is essential.

Features

Materiál

Steel quality:

S250GD

Corrosion protection:

275 g/m² on both sides - correspond to a zinc layer of approx. 20 µm

Vorteile

- *Wide range of products*
- *Easy to install*
- *Statically calculated*
- *Fire resistance*

Applications

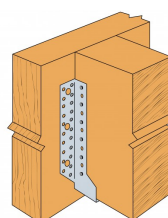
Support

Supporting member:

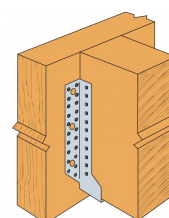
Solid wood, composite wood, glued laminated wood, concrete

Supported member:

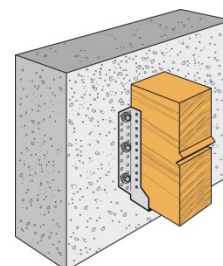
Solid wood, composite wood, glued laminated wood.



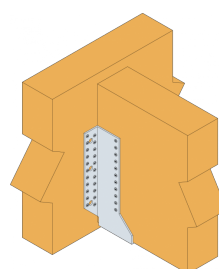
Teilausnagelung an Balken



Vollausnagelung an Balken



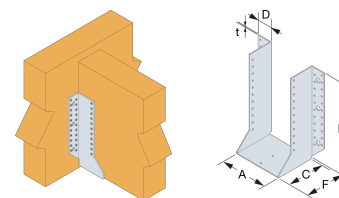
Befestigung an Beton



GSE 4
Joist hanger

Technical Data

Rozměry a typické hodnoty



Art. nr.	Rozměry vedlejšího nosníku [mm]			Rozměry a typické hodnoty [mm]						Otvory hlavy		Otvory trámu	Hmotnost [kg]
	Šířka	Výška [mm]		A	B	C	D	F	t	Ø5	Ø13	Ø5	
		Výška [mm]	Max.										
GSE380/80/4	80	160	225	80	150	110	45.5	118	4	16	4	8	1.3
GSE440/80/4	80	190	270	80	180	110	45.5	118	4	22	4	12	1.5
GSE380/100/4	100	150	210	100	140	110	45.5	118	4	16	2	8	1.3
GSE440/100/4	100	180	255	100	170	110	45.5	118	4	22	4	12	1.5
GSE500/100/4	100	210	300	100	200	110	45.5	118	4	28	4	14	1.6
GSE540/100/4	100	230	330	100	220	110	45.5	118	4	32	4	16	1.9
GSE600/100/4	100	260	375	100	250	110	45.5	118	4	38	4	20	2
GSE720/100/4	100	320	465	100	310	110	45.5	118	4	50	6	26	2.3
GSE540/120/4	120	220	315	120	210	110	45.5	118	4	32	4	16	1.9
GSE600/120/4	120	250	360	120	240	110	45.5	118	4	38	4	20	2
GSE720/120/4	120	310	450	120	300	110	45.5	118	4	50	6	26	2.3
GSE500/140/4	140	190	270	140	180	110	45.5	118	4	22	2	12	1.6
GSE540/140/4	140	210	300	140	200	110	45.5	118	4	26	4	14	1.8
GSE600/140/4	140	240	345	140	230	110	45.5	118	4	32	4	18	2
GSE660/140/4	140	270	390	140	260	110	45.5	118	4	38	4	20	2.1
GSE720/140/4	140	300	435	140	290	110	45.5	118	4	44	6	24	2.3
GSE780/140/4	140	330	480	140	320	110	45.5	118	4	50	6	26	2.7
GSE840/140/4	140	360	525	140	350	110	45.5	118	4	56	6	30	2.9
GSE900/140/4	140	390	570	140	380	110	45.5	118	4	62	6	32	3
GSE960/140/4	140	420	615	140	410	110	45.5	118	4	68	6	34	3.2
GSE1020/140/4	140	450	660	140	440	110	45.5	118	4	74	6	38	3.4
GSE500/160/4	160	180	255	160	170	110	45.5	118	4	22	2	12	1.6
GSE540/160/4	160	200	285	160	190	110	45.5	118	4	26	4	14	1.8
GSE600/160/4	160	230	330	160	220	110	45.5	118	4	32	4	18	2
GSE660/160/4	160	260	375	160	250	110	45.5	118	4	38	4	20	2.1
GSE720/160/4	160	290	420	160	280	110	45.5	118	4	44	6	24	2.3
GSE780/160/4	160	320	465	160	310	110	45.5	118	4	50	6	26	2.7
GSE840/160/4	160	350	510	160	340	110	45.5	118	4	56	6	30	2.9
GSE900/160/4	160	380	555	160	370	110	45.5	118	4	62	6	32	3
GSE960/160/4	160	410	600	160	400	110	45.5	118	4	68	6	34	3.2
GSE1020/160/4	160	440	645	160	430	110	45.5	118	4	74	6	38	3.4
GSE500/180/4	180	170	240	180	160	110	45.5	118	4	22	2	12	1.6
GSE540/180/4	180	190	270	180	180	110	45.5	118	4	26	4	14	1.8
GSE600/180/4	180	220	315	180	210	110	45.5	118	4	32	4	18	2
GSE660/180/4	180	250	360	180	240	110	45.5	118	4	38	4	20	2.1
GSE720/180/4	180	280	405	180	270	110	45.5	118	4	44	6	24	2.3
GSE780/180/4	180	310	450	180	300	110	45.5	118	4	50	6	26	2.7
GSE840/180/4	180	340	495	180	330	110	45.5	118	4	56	6	30	2.9
GSE900/180/4	180	370	540	180	360	110	45.5	118	4	62	6	32	3
GSE960/180/4	180	400	585	180	390	110	45.5	118	4	68	6	34	3.2
GSE1020/180/4	180	430	630	180	420	110	45.5	118	4	74	6	38	3.4
GSE500/200/4	200	160	225	200	150	110	45.5	118	4	22	2	12	1.6

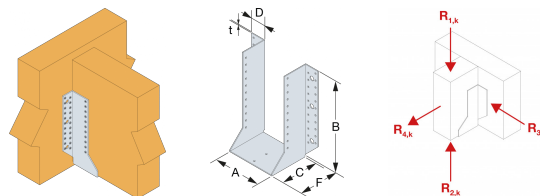
Technický list

GSE 4 Joist hanger

SIMPSON**Strong-Tie**[®]

Art. nr.	Rozměry vedlejšího nosníku [mm]			Rozměry a typické hodnoty [mm]						Otvory hlavy		Otvory trámu	Hmotnost [kg]
	Šířka	Výška [mm]		A	B	C	D	F	t	Ø5	Ø13	Ø5	
		Výška [mm]	Max.										
GSE540/200/4	200	180	255	200	170	110	45.5	118	4	26	4	14	1.8
GSE600/200/4	200	210	300	200	200	110	45.5	118	4	32	4	18	2
GSE660/200/4	200	240	345	200	230	110	45.5	118	4	38	4	20	2.1
GSE720/200/4	200	270	390	200	260	110	45.5	118	4	44	6	24	2.3
GSE780/200/4	200	300	435	200	290	110	45.5	118	4	50	6	26	2.7
GSE840/200/4	200	330	480	200	320	110	45.5	118	4	56	6	30	2.9
GSE900/200/4	200	360	525	200	350	110	45.5	118	4	62	6	32	3
GSE960/200/4	200	390	570	200	380	110	45.5	118	4	68	6	34	3.2
GSE1020/200/4	200	420	615	200	410	110	45.5	118	4	74	6	38	3.4

Nosnosti - dřevo na dřevo - dílčí hřebování



Art. nr.	Characteristic capacities - Timber to timber - Partial nailing					
	Upevňovací prvky		Charakteristické kapacity - dřevo C24 [kN]			
	Hlava	Trám	R _{1,k}	R _{2,k}	R _{3,k}	R _{4,k}
	Množství	Množství	CNA4,0x50	CNA4,0x50	CNA4,0x50	CNA4,0x50
GSE380/80/4	8	4	9.9	3.3	3.1	3.9
GSE440/80/4	12	6	14.3	6.7	4.4	5.9
GSE380/100/4	8	4	9.2	3.3	3.3	3.9
GSE440/100/4	12	6	13.3	6.7	4.8	5.9
GSE500/100/4	14	8	16.8	8.8	6.1	6.9
GSE540/100/4	16	8	19.9	11.1	5.9	7.8
GSE600/100/4	20	10	23.9	16.3	7	9.8
GSE720/100/4	26	14	31.9	24.8	8.8	12.7
GSE540/120/4	16	8	19	11.1	6.3	7.8
GSE600/120/4	20	10	23.9	16.3	7.6	9.8
GSE720/120/4	26	14	31.9	24.8	9.7	12.7
GSE500/140/4	12	6	14.3	6.7	5.2	5.9
GSE540/140/4	14	8	16.8	8.8	6.9	6.9
GSE600/140/4	18	10	21.8	13.6	8.3	8.8
GSE660/140/4	20	10	23.9	16.3	8	9.8
GSE720/140/4	24	12	27.9	21.3	9.3	11.8
GSE780/140/4	26	13	31.9	24.8	10.4	12.7
GSE840/140/4	30	15	35.9	28.4	11.4	14.7
GSE900/140/4	32	16	35.9	28.4	10.9	15.7
GSE960/140/4	36	17	39.9	31.9	11.8	16.7
GSE1020/140/4	38	19	43.9	35.5	12.5	18.6
GSE500/160/4	12	6	13.3	6.7	5.4	5.9
GSE540/160/4	14	8	15.8	8.8	7.1	6.9
GSE600/160/4	18	10	23.9	16.3	8.6	8.8
GSE660/160/4	20	10	23.9	16.3	8.4	9.8
GSE720/160/4	24	12	27.9	21.3	9.7	11.8
GSE780/160/4	26	13	31.9	24.8	11	12.7
GSE840/160/4	30	15	35.9	28.4	12.1	14.7
GSE900/160/4	32	16	35.9	28.4	11.7	15.7
GSE960/160/4	36	17	39.9	31.9	12.6	16.7
GSE1020/160/4	38	19	43.9	35.5	13.5	18.6
GSE500/180/4	12	6	12.2	6.7	5.5	5.9
GSE540/180/4	14	8	14.7	8.8	7.2	6.9
GSE600/180/4	18	10	23.9	16.3	8.8	8.8
GSE660/180/4	20	10	23.9	16.3	8.6	9.8
GSE720/180/4	24	12	27.9	21.3	10.1	11.8
GSE780/180/4	26	13	31.9	24.8	11.4	12.7
GSE840/180/4	30	15	35.9	28.4	12.6	14.7
GSE900/180/4	32	16	35.9	28.4	12.2	15.7

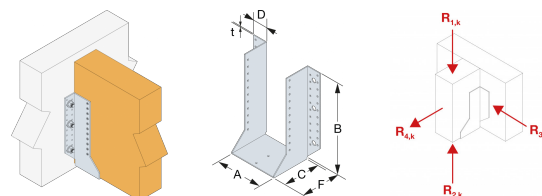
A, B a C jsou vnitřní rozměry trámové botky.

GSE 4 Joist hanger

Art. nr.	Characteristic capacities - Timber to timber - Partial nailing						
	Upevňovací prvky		Charakteristické kapacity - dřevo C24 [kN]				
	Hlava	Trám	R _{1,k}	R _{2,k}	R _{3,k}	R _{4,k}	
	Množství	Množství	CNA4,0x50	CNA4,0x50	CNA4,0x50	CNA4,0x50	
GSE960/180/4	36	17	39.9	31.9	13.3	16.7	
GSE1020/180/4	38	19	43.9	35.5	14.3	18.6	
GSE500/200/4	12	6	11.1	6.7	5.5	5.9	
GSE540/200/4	14	8	13.5	8.8	7.3	6.9	
GSE600/200/4	18	10	22.7	16.3	9	8.8	
GSE660/200/4	20	10	22.7	16.3	8.8	9.8	
GSE720/200/4	24	12	27.9	21.3	10.3	11.8	
GSE780/200/4	26	13	31.9	24.8	11.8	12.7	
GSE840/200/4	30	15	35.9	28.4	13.1	14.7	
GSE900/200/4	32	16	35.9	28.4	12.7	15.7	
GSE960/200/4	36	17	39.9	31.9	13.9	16.7	
GSE1020/200/4	38	19	43.9	35.5	15	18.6	

A, B a C jsou vnitřní rozměry trámové botky.

Nosnosti - dřevo na beton



Art. nr.	Charakteristické kapacity - Dřevo na beton nebo ocel							
	Upevňovací prvky				Charakteristické kapacity - dřevo C24 [kN]			
	Hlava		Trám		R _{1,k}	R _{2,k}	R _{3,k}	R _{4,k}
	Množství	Typ	Množství	Typ	CNA4,0x50	CNA4,0x50	CNA4,0x50	CNA4,0x50
GSE380/80/4	2	Ø12*	8	CNA	19.9	14.2	20	17.8
GSE440/80/4	4	Ø12*	12	CNA	27.9	21.3	20	20.8
GSE380/100/4	2	Ø12*	8	CNA	19.9	14.2	20	17.8
GSE440/100/4	4	Ø12*	12	CNA	27.9	21.3	20	20.8
GSE500/100/4	4	Ø12*	14	CNA	31.9	24.8	20	20.8
GSE540/100/4	4	Ø12*	16	CNA	65	28.4	20	20.8
GSE600/100/4	4	Ø12*	20	CNA	73.8	35.5	20	20.8
GSE720/100/4	6	Ø12*	26	CNA	87.1	46.1	24.1	31.2
GSE540/120/4	4	Ø12*	16	CNA	70.9	28.4	20	20.8
GSE600/120/4	4	Ø12*	20	CNA	79.7	35.5	20	20.8
GSE720/120/4	6	Ø12*	26	CNA	93	46.1	24.1	31.2
GSE500/140/4	2	Ø12*	12	CNA	24.1	21.3	20	10.4
GSE540/140/4	4	Ø12*	14	CNA	72.3	24.8	20	20.8
GSE600/140/4	4	Ø12*	18	CNA	80	31.9	20	20.8
GSE660/140/4	4	Ø12*	20	CNA	80	35.5	24.1	31.2
GSE720/140/4	6	Ø12*	24	CNA	94.5	42.6	24.1	31.2
GSE780/140/4	6	Ø12*	26	CNA	98.9	46.1	24.1	31.2
GSE840/140/4	6	Ø12*	30	CNA	107.8	53.2	24.1	31.2
GSE900/140/4	6	Ø12*	32	CNA	112.2	56.7	24.1	31.2
GSE960/140/4	6	Ø12*	34	CNA	116.7	60.3	24.1	31.2
GSE1020/140/4	6	Ø12*	38	CNA	120	67.4	24.1	31.2
GSE500/160/4	2	Ø12*	12	CNA	27.9	21.3	20	10.4
GSE540/160/4	4	Ø12*	14	CNA	78.2	24.8	20	20.8
GSE600/160/4	4	Ø12*	18	CNA	80	31.9	20	20.8
GSE660/160/4	4	Ø12*	20	CNA	80	35.5	20	20.8
GSE720/160/4	6	Ø12*	24	CNA	100.4	42.6	24.1	31.2
GSE780/160/4	6	Ø12*	26	CNA	104.8	46.1	24.1	31.2
GSE840/160/4	6	Ø12*	30	CNA	113.7	53.2	24.1	31.2
GSE900/160/4	6	Ø12*	32	CNA	118.1	56.7	24.1	31.2
GSE960/160/4	6	Ø12*	34	CNA	120	60.3	24.1	31.2
GSE1020/160/4	6	Ø12*	38	CNA	120	67.4	24.1	31.2

A, B and C dimensions are the internal dimensions of the joist hanger.

Load capacities on concrete shown in this table are given in the case of a full slab fixing. In the context of a different application, it is advisable to the designer to ensure the good anchoring performance (a help for dimensioning is available on our Anchor Designer software, which can be downloaded for free on this website).

*Refer to the Simpson Strong-Tie anchor product range for suitable anchors. Typical anchor solutions depend on the concrete type, spacing and edge distances. For this case a possible solution is WA M12-104/5.

1) Capacities under fire condition are R30 characteristic values. The header anchor must be FM-753 CRACK 3DG in order to justify the fire resistance of the anchor group. The only allowed joist fasteners in this case are CNA Ø4,0x75 mm nails or CSA Ø5,0x80-DE screws.

GSE 4 Joist hanger

Art. nr.	Charakteristické kapacity - Dřevo na beton nebo ocel							
	Upevňovací prvky				Charakteristické kapacity - dřevo C24 [kN]			
	Hlava		Trám		R _{1,k}	R _{2,k}	R _{3,k}	R _{4,k}
	Množství	Typ	Množství	Typ	CNA4,0x50	CNA4,0x50	CNA4,0x50	CNA4,0x50
GSE500/180/4	2	Ø12*	12	CNA	27.9	21.3	20	10.4
GSE540/180/4	4	Ø12*	14	CNA	80	24.8	20	20.8
GSE600/180/4	4	Ø12*	18	CNA	80	31.9	20	20.8
GSE660/180/4	4	Ø12*	20	CNA	80	35.5	20	20.8
GSE720/180/4	6	Ø12*	24	CNA	106.3	42.6	24.1	31.2
GSE780/180/4	6	Ø12*	26	CNA	110.7	46.1	24.1	31.2
GSE840/180/4	6	Ø12*	30	CNA	119.6	53.2	24.1	31.2
GSE900/180/4	6	Ø12*	32	CNA	120	56.7	24.1	31.2
GSE960/180/4	6	Ø12*	34	CNA	120	60.3	24.1	31.2
GSE1020/180/4	6	Ø12*	38	CNA	120	67.4	24.1	31.2
GSE500/200/4	2	Ø12*	12	CNA	27.9	21.3	20	10.4
GSE540/200/4	4	Ø12*	14	CNA	80	24.8	20	20.8
GSE600/200/4	4	Ø12*	18	CNA	80	31.9	20	20.8
GSE660/200/4	4	Ø12*	20	CNA	80	35.5	20	20.8
GSE720/200/4	6	Ø12*	24	CNA	112.2	42.6	24.1	31.2
GSE780/200/4	6	Ø12*	26	CNA	116.6	46.1	24.1	31.2
GSE840/200/4	6	Ø12*	30	CNA	120	53.2	24.1	31.2
GSE900/200/4	6	Ø12*	32	CNA	120	56.7	24.1	31.2
GSE960/200/4	6	Ø12*	34	CNA	120	60.3	24.1	31.2
GSE1020/200/4	6	Ø12*	38	CNA	120	67.4	24.1	31.2

A, B and C dimensions are the internal dimensions of the joist hanger.

Load capacities on concrete shown in this table are given in the case of a full slab fixing. In the context of a different application, it is advisable to the designer to ensure the good anchoring performance (a help for dimensioning is available on our Anchor Designer software, which can be downloaded for free on this website).

*Refer to the Simpson Strong-Tie anchor product range for suitable anchors. Typical anchor solutions depend on the concrete type, spacing and edge distances. For this case a possible solution is WA M12-104/5.

1) Capacities under fire condition are R30 characteristic values. The header anchor must be FM-753 CRACK 3DG in order to justify the fire resistance of the anchor group. The only allowed joist fasteners in this case are CNA Ø4,0x75 mm nails or CSA Ø5,0x80-DE screws.

Product characteristic capacities - Timber to Timber - Fire conditions - SSH

Table "Product characteristic capacities - Timber to Timber - Fire conditions - SSH" cannot be displayed : no references available.

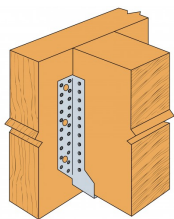
Installation

Befestigung

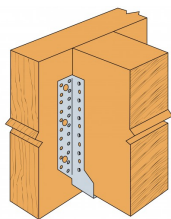
Timber support:

Use system nails CNA 4.0 x 50

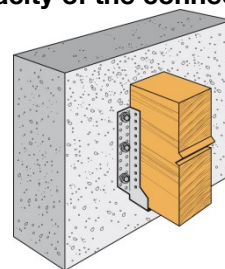
To ensure correct load-bearing capacity and fire resistance R30, use nails (CNA4.0x75). The use of SIMPSON Strong-Tie nails is a prerequisite for the full load-bearing capacity of the connection.



Vollausnagelung an Balken



Teilausnagelung an Balken



Befestigung an Beton



GSE 4
Joist hanger

Technical Notes

GSE 4
Joist hanger

