



El uso de estribos SAE se ha impuesto en el sector de la construcción desde hace ya algunos años. Su utilización permite dar respuesta a una gran variedad de instalaciones. Consiguen uniones fiables, sin necesidad de realizar un mecanizado específico, y mejoran la fiabilidad de las estructuras.



[ES-DoP-e06/0270](#), [ETA-06/0270](#)

### CARACTERÍSTICAS

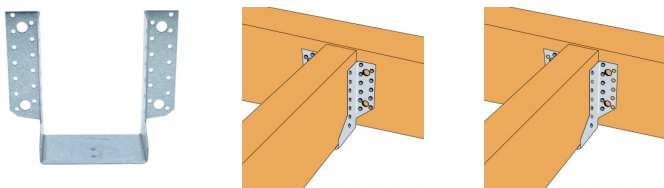


#### Materia

- Acero galvanizado S250GD + Z275 según NF EN 10346,
- Espesor : 2 mm.

#### Vantajas

- Instalación rápida y sencilla.



### APLICACIONES

#### Soporte

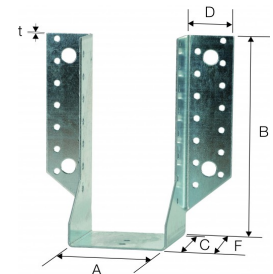
- **Elemento principal** : madera maciza, madera compuesta, madera laminada, acero, hormigón,
- **Elemento secundario** : madera maciza, madera compuesta, madera laminada.

#### Campos de aplicación

- Vigas,
- Correas,
- Vigas planas y montantes de revestimientos,
- Apoyos de cabrios,
- Refuerzo de uniones existentes, ...

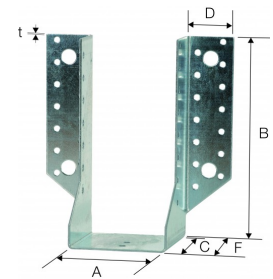
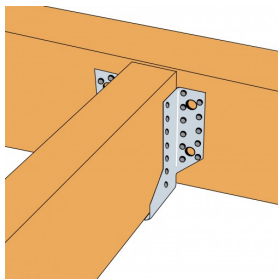
DATOS TÉCNICOS

Desarrollo y anchura



Modelo	Desarrollo [mm]	Anchura [mm]	Profundidad [mm]	Fijaciones en la viga CNA4.0x50 o CSA5.0x40	Fijaciones en el soporte CNA4.0x50 o CSA5.0x40	Anclajes en el soporte
SAE200	200	24 - 80 mm	84	5	8	2 Ø10
SAE250	250	24 - 80 mm	84	7	12	2 Ø10
SAEL300	300	24 - 116 mm	84	10	18	4 Ø12
SAEL340	340	24 - 116 mm	84	12	22	4 Ø12
SAEL380	380	24 - 156 mm	84	12	22	4 Ø12
SAEL440	440	24 - 156 mm	84	15	28	4 Ø12
SAEL500	500	24 - 156 mm	84	15	34	4 Ø12

Dimensiones y Valores Característicos



Modelo	Dimensiones de la viga [mm]				Dimensiones y Valores Característicos [mm]					Agujeros soporte			Agujeros viga	
	Anchura		Altura		A	B	C	D	F	t	Ø5	Ø11	Ø13	Ø5
	Mín.	Máx.	Mín.	Máx.										
SAE200/32/2	30	32	99	126	32	84	84	41.5	86	2	8	2	-	5
SAE250/32/2	30	32	119	164		109	84	41.5	86	2	12	2	-	7
SAE300/32/2	30	32	149	201		134	84	41.5	86	2	18	-	4	10
SAE200/38/2	36	38	96	122	38	81	84	41.5	86	2	8	2	-	5
SAE250/38/2	36	38	116	159		106	84	41.5	86	2	12	2	-	7
SAE300/38/2	36	38	146	197		131	84	41.5	86	2	18	-	4	10
SAE340/38/2	36	38	166	227		151	84	41.5	86	2	22	-	4	12
SAE440/38/2	36	38	216	302		201	84	41.5	86	2	28	-	4	15
SAE200/40/2	38	40	95	120	40	80	84	41.5	86	2	8	2	-	5
SAE250/40/2	38	40	115	158		105	84	41.5	86	2	12	2	-	7
SAE300/40/2	38	40	145	195		130	84	41.5	86	2	18	-	4	10
SAE340/40/2	38	40	165	225		150	84	41.5	86	2	22	-	4	12

Modelo	Dimensiones de la viga [mm]				Dimensiones y Valores Característicos [mm]						Agujeros soporte			Agujeros viga
	Anchura		Altura		A	B	C	D	F	t	Ø5	Ø11	Ø13	Ø5
	Min.	Máx.	Min.	Máx.										
SAE200/46/2	44	46	92	116	46	77	84	41.5	86	2	8	2	-	5
SAE250/46/2	44	46	112	153		102	84	41.5	86	2	12	2	-	7
SAE340/46/2	44	46	162	221		147	84	41.5	86	2	22	-	4	12
SAE500/46/2	44	46	242	341		227	84	41.5	86	2	34	-	6	18
SAE200/50/2	48	50	90	113	50	75	84	41.5	86	2	8	2	-	5
SAE250/50/2	48	50	110	150		100	84	41.5	86	2	12	2	-	7
SAE300/50/2	48	50	140	188		125	84	41.5	86	2	18	-	4	10
SAE340/50/2	48	50	160	218		145	84	41.5	86	2	22	-	4	12
SAE500/50/2	48	50	240	338		225	84	41.5	86	2	34	-	6	18
SAE200/60/2	58	60	85	105	60	70	84	41.5	86	2	8	2	-	5
SAE250/60/2	58	60	105	143		95	84	41.5	86	2	12	2	-	7
SAE300/60/2	58	60	135	180		120	84	41.5	86	2	18	-	4	10
SAE340/60/2	58	60	155	210		140	84	41.5	86	2	22	-	4	12
SAE200/64/2	62	64	83	102	64	68	84	41.5	86	2	8	2	-	5
SAE250/64/2	62	64	103	140		93	84	41.5	86	2	12	2	-	7
SAE300/64/2	62	64	133	177		118	84	41.5	86	2	18	-	4	10
SAE340/64/2	62	64	153	207		138	84	41.5	86	2	22	-	4	12
SAE380/64/2	62	64	173	237		158	84	41.5	86	2	22	-	4	12
SAE380/66/2	64	66	172	236	66	157	84	41.5	86	2	22	-	4	12
SAE440/66/2	64	66	202	281		187	84	41.5	86	2	28	-	4	15
SAE200/70/2	68	70	80	98	70	65	84	41.5	86	2	8	2	-	5
SAE250/70/2	68	70	100	135		90	84	41.5	86	2	12	2	-	7
SAE300/70/2	68	70	130	173		115	84	41.5	86	2	18	-	4	10
SAE340/70/2	68	70	150	203		135	84	41.5	86	2	22	-	4	12
SAE380/70/2	68	70	170	233		155	84	41.5	86	2	22	-	4	12
SAE440/70/2	68	70	200	278		185	84	41.5	86	2	28	-	4	15
SAEL300/72/2	70	72	129	171	72	114	84	41.5	86	2	16	-	4	8
SAEL340/72/2	70	72	149	201		134	84	41.5	86	2	20	-	4	10
SAE380/72/2	70	72	169	231		154	84	41.5	86	2	22	-	4	12
SAE440/72/2	70	72	199	276		184	84	41.5	86	2	28	-	4	15
SAE200/76/2	74	76	77	93	76	62	84	41.5	86	2	8	2	-	5
SAE250/76/2	74	76	97	131		87	84	41.5	86	2	12	2	-	7
SAEL300/76/2	74	76	127	168		112	84	41.5	86	2	16	-	4	8
SAEL340/76/2	74	76	147	198		132	84	41.5	86	2	20	-	4	10
SAE380/76/2	74	76	167	228		152	84	41.5	86	2	22	-	4	12
SAE440/76/2	74	76	197	273		182	84	41.5	86	2	28	-	4	15
SAE500/76/2	74	76	227	318	212	84	41.5	86	2	34	-	6	18	
SAE200/80/2	78	80	75	90	80	60	84	41.5	86	2	8	2	-	5
SAE250/80/2	78	80	95	128		85	84	41.5	86	2	12	2	-	7
SAEL300/80/2	78	80	125	165		110	84	41.5	86	2	16	-	4	8
SAEL340/80/2	78	80	145	195		130	84	41.5	86	2	20	-	4	10
SAE380/80/2	78	80	165	225		150	84	41.5	86	2	22	-	4	12
SAE440/80/2	78	80	195	270		180	84	41.5	86	2	28	-	4	15
SAE500/80/2	78	80	225	315		210	84	41.5	86	2	34	-	6	18
SAE380/90/2	88	90	160	218	90	145	84	41.5	86	2	22	-	4	12
SAE440/90/2	88	90	190	263		175	84	41.5	86	2	28	-	4	15
SAE500/90/2	88	90	220	308		205	84	41.5	86	2	34	-	6	18
SAE380/92/2	90	92	159	216	92	144	84	41.5	86	2	22	-	4	12
SAE440/95/2	93	95	188	259	95	172.5	84	41.5	86	2	28	-	4	15
SAE500/95/2	93	95	218	304		202.5	84	41.5	86	2	34	-	6	18
SAEL300/100/2	98	100	115	150	100	100	84	41.5	86	2	16	-	4	8
SAE380/100/2	98	100	155	210		140	84	41.5	86	2	22	-	4	12
SAE440/100/2	98	100	185	255		170	84	41.5	86	2	28	-	4	15
SAE500/100/2	98	100	215	300		200	84	41.5	86	2	34	-	6	18
SAEL500/115/2	113	115	208	289	115	192.5	84	41.5	86	2	32	-	6	16
SAEL380/120/2	118	120	145	195	120	130	84	41.5	86	2	20	-	4	10

Modelo	Dimensiones de la viga [mm]				Dimensiones y Valores Característicos [mm]							Agujeros soporte			Agujeros viga
	Anchura		Altura		A	B	C	D	F	t	Ø5	Ø11	Ø13	Ø5	
	Min.	Máx.	Min.	Máx.											
SAEL440/120/2	118	120	175	240		160	84	41.5	86	2	26	-	4	13	
SAEL500/120/2	118	120	205	285		190	84	41.5	86	2	32	-	4	16	
SAEL440/136/2	134	136	167	228	136	152	84	41.5	86	2	26	-	4	13	
SAEL500/140/2	138	140	195	270	140	180	84	41.5	86	2	32	-	6	16	
SAEL500/150/2	148	150	190	263	150	175	84	41.5	86	2	32	-	6	16	

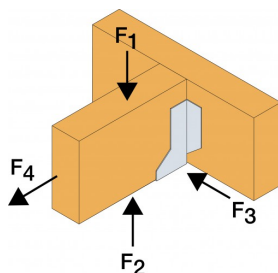
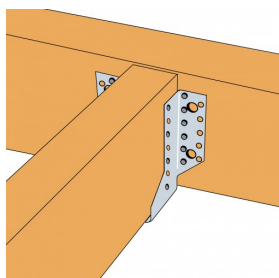
Valores Característicos - Viga sobre viga - Clavado total



Modelo	Valores Característicos - Madera sobre madera - Clavado total										
	A	Fijaciones		Valores Característicos - Madera C24 [kN]							
		Soporte	Viga secundaria	R <sub>1,k</sub>		R <sub>2,k</sub>		R <sub>3,k</sub>		R <sub>4,k</sub>	
		Cdad	Cdad	CNA4,0x35	CNA4,0x50	CNA4,0x35	CNA4,0x50	CNA4,0x35	CNA4,0x50	CNA4,0x35	CNA4,0x50
SAE200/32/2	32	8	5	6.3	-	3.3	-	0.9	-	2.5	-
SAE250/32/2		12	7	9.8	-	6	-	1.5	-	3.7	-
SAE300/32/2		18	10	16.1	-	11.3	-	3.3	-	5.5	-
SAE200/38/2	38	8	5	6	-	3.3	-	0.9	-	2.5	-
SAE250/38/2		12	7	9.4	-	6	-	1.5	-	3.7	-
SAE300/38/2		18	10	15.6	-	11.3	-	3.3	-	5.5	-
SAE340/38/2		22	12	20.2	-	15.6	-	4.3	-	6.7	-
SAE440/38/2		28	15	28.5	-	22.9	-	5	-	8.6	-
SAE200/40/2	40	8	5	5.9	-	3.3	-	0.9	-	2.5	-
SAE250/40/2		12	7	9.3	-	6	-	1.5	-	3.7	-
SAE300/40/2		18	10	15.4	-	11.3	-	3.3	-	5.5	-
SAE340/40/2		22	12	20	-	15.6	-	4.4	-	6.7	-
SAE200/46/2	46	8	5	5.5	-	3.3	-	0.9	-	2.5	-
SAE250/46/2		12	7	8.9	-	6	-	1.5	-	3.7	-
SAE340/46/2		22	12	19.5	-	15.6	-	4.4	-	6.7	-
SAE500/46/2		34	18	33.5	-	30.2	-	6.2	-	10.4	-
SAE200/50/2	50	8	5	5.3	-	3.3	-	0.9	-	2.5	-
SAE250/50/2		12	7	8.6	-	6	-	1.5	-	3.7	-
SAE300/50/2		18	10	14.5	-	11.3	-	3.3	-	5.5	-
SAE340/50/2		22	12	19.1	-	15.6	-	4.4	-	6.7	-
SAE500/50/2		34	18	33.5	-	30.2	-	6.6	-	10.4	-
SAE200/60/2	60	8	5	4.7	7.4	3.3	5.3	0.9	1.3	2.5	3.9
SAE250/60/2		12	7	7.8	12.1	6	9.4	1.5	2.1	3.7	5.9
SAE300/60/2		18	10	13.6	20.8	11.3	17.6	3.3	4.4	5.5	8.8
SAE340/60/2		22	12	18.1	27.4	15.6	24	4.4	5.9	6.7	10.8
SAE200/64/2	64	8	5	4.5	7	3.3	5.3	0.9	1.3	2.5	3.9
SAE250/64/2		12	7	7.5	11.7	6	9.4	1.5	2.1	3.7	5.9
SAE300/64/2		18	10	13.2	20.3	11.3	17.6	3.4	4.4	5.5	8.8
SAE340/64/2		22	12	17.7	26.9	15.6	24	4.5	5.9	6.7	10.8
SAE380/64/2		22	12	21.5	31	15.6	24	3.8	5.1	6.7	10.8
SAE380/66/2	66	22	12	21.3	31	15.6	24	3.8	5.1	6.7	10.8

Modelo	Valores Característicos - Madera sobre madera - Clavado total										
	A	Fijaciones		Valores Característicos - Madera C24 [kN]							
		Soporte	Viga secundaria	R <sub>1,k</sub>		R <sub>2,k</sub>		R <sub>3,k</sub>		R <sub>4,k</sub>	
		Cdad	Cdad	CNA4,0x35	CNA4,0x50	CNA4,0x35	CNA4,0x50	CNA4,0x35	CNA4,0x50	CNA4,0x35	CNA4,0x50
SAE440/66/2		28	15	28.5	37.7	22.9	33.2	5.5	7.2	8.6	13.7
SAE200/70/2	70	8	5	4.1	6.5	3.3	5.3	0.9	1.3	2.5	3.9
SAE250/70/2		12	7	7.1	11	6	9.4	1.5	2.1	3.7	5.9
SAE300/70/2		18	10	12.7	19.5	11.3	17.6	3.4	4.4	5.5	8.8
SAE340/70/2		22	12	17.1	26	15.6	24	3.8	5.9	6.7	10.8
SAE380/70/2		22	12	21	31	15.6	24	3.8	5.1	6.7	10.8
SAE440/70/2		28	15	28.5	37.7	22.9	33.2	5.5	7.2	8.6	13.7
SAEL300/72/2		72	16	8	12.4	18.9	9.4	14.6	2.6	3.4	4.9
SAEL340/72/2	20		10	16.7	25.3	13.4	20.7	3.6	4.8	6.1	9.8
SAE380/72/2	22		12	20.8	31	15.6	24	3.8	5.1	6.7	10.8
SAE440/72/2	28		15	28.5	37.7	22.9	33.2	5.5	7.3	8.6	13.7
SAE200/76/2	76	8	5	3.8	5.9	3.3	5.3	0.9	1.4	2.5	3.9
SAE250/76/2		12	7	6.6	10.3	6	9.4	1.5	2.1	3.7	5.9
SAEL300/76/2		16	8	12	18.4	9.4	14.6	2.6	3.4	4.9	7.8
SAEL340/76/2		20	10	16.3	24.7	13.4	20.7	3.6	4.8	6.1	9.8
SAE380/76/2		22	12	20.4	30.5	15.6	24	3.8	5.1	6.7	10.8
SAE440/76/2		28	15	28.1	37.7	22.9	33.2	5.5	7.3	8.6	13.7
SAE500/76/2		34	18	33.5	44.3	30.2	39.9	6.6	9.5	10.4	16.7
SAE200/80/2	80	8	5	3.5	5.6	3.3	5.3	0.9	1.4	2.5	3.9
SAE250/80/2		12	7	6.3	9.9	6	9.4	1.5	2.1	3.7	5.9
SAEL300/80/2		16	8	11.7	17.9	9.4	14.6	2.6	3.4	4.9	7.8
SAEL340/80/2		20	10	15.9	24.2	13.4	20.7	3.6	4.8	6.1	9.8
SAE380/80/2		22	12	20	30	15.6	24	3.8	5.1	6.7	10.8
SAE440/80/2		28	15	27.7	37.7	22.9	33.2	5.5	7.3	8.6	13.7
SAE500/80/2		34	18	33.5	44.3	30.2	39.9	6.6	9.5	10.4	16.7
SAE380/90/2	90	22	12	19.1	28.8	15.6	24	3.8	5.2	6.7	10.8
SAE440/90/2		28	15	26.7	37.7	22.9	33.2	5.6	7.3	8.6	13.7
SAE500/90/2		34	18	33.5	44.3	30.2	39.9	6.6	9.6	10.4	16.7
SAE380/92/2	92	22	12	18.9	28.5	15.6	24	3.8	5.2	6.7	10.8
SAE440/95/2	95	28	15	26.2	37.7	22.9	33.2	5.6	7.4	8.6	13.7
SAE500/95/2		34	18	33.5	44.3	30.2	39.9	6.6	9.6	10.4	16.7
SAEL300/100/2	100	16	8	9.9	15.3	9.4	14.6	2.6	3.5	4.9	7.8
SAE380/100/2		22	12	18.1	27.4	15.6	24	3.8	5.2	6.7	10.8
SAE440/100/2		28	15	25.7	37.7	22.9	33.2	5.6	7.4	8.6	13.7
SAE500/100/2		34	18	33.5	44.3	30.2	39.9	6.6	9.6	10.4	16.7
SAEL500/115/2	115	32	16	30.2	39.9	26.8	35.5	6.6	8.5	10.4	15.7
SAEL380/120/2	120	20	10	15.9	24.2	13.4	20.7	3.8	4.2	6.7	9.8
SAEL440/120/2		26	13	23.1	33.2	20.4	28.8	4.7	6.3	8	12.7
SAEL500/120/2		32	16	30.2	39.9	26.8	35.5	6.6	8.5	10.4	15.7
SAEL440/136/2	136	26	13	21.4	32.5	20.4	28.8	4.8	6.3	8	12.7
SAEL500/140/2	140	32	16	29	39.9	26.8	35.5	6.6	8.5	10.4	15.7
SAEL500/150/2	150	32	16	27.8	39.9	26.8	35.5	6.6	8.5	10.4	15.7

Valores Característicos - Madera sobre madera - Clavado parcial



Modelo	Valores Característicos - Madera sobre madera - Clavado parcial									
	Fijaciones		Valores Característicos - Madera C24 [kN]							
	Soporte	Viga secundaria	R <sub>1,k</sub>		R <sub>2,k</sub>		R <sub>3,k</sub>		R <sub>4,k</sub>	
	Cdad	Cdad	CNA4,0x35	CNA4,0x50	CNA4,0x35	CNA4,0x50	CNA4,0x35	CNA4,0x50	CNA4,0x35	CNA4,0x50
SAE200/32/2	4	4	3.7	-	1.8	-	0.4	-	1.2	-
SAE250/32/2	6	4	5.8	-	2.5	-	0.8	-	1.8	-
SAE300/32/2	10	6	9.1	-	6.5	-	1.1	-	3.1	-
SAE200/38/2	4	4	3.5	-	1.8	-	0.5	-	1.2	-
SAE250/38/2	6	4	5.6	-	2.5	-	0.8	-	1.8	-
SAE300/38/2	10	6	8.8	-	6.5	-	1.1	-	3.1	-
SAE340/38/2	12	6	11.9	-	8.7	-	1.8	-	3.7	-
SAE440/38/2	14	8	16.8	-	11	-	1.9	-	4.3	-
SAE200/40/2	4	4	3.5	-	1.8	-	0.5	-	1.2	-
SAE250/40/2	6	4	5.6	-	2.5	-	0.8	-	1.8	-
SAE300/40/2	10	6	8.7	-	6.5	-	1.1	-	3.1	-
SAE340/40/2	12	6	11.8	-	8.7	-	1.9	-	3.7	-
SAE200/46/2	4	4	3.3	-	1.8	-	0.5	-	1.2	-
SAE250/46/2	6	4	5.4	-	2.5	-	0.8	-	1.8	-
SAE340/46/2	12	6	11.5	-	8.7	-	2.1	-	3.7	-
SAE500/46/2	18	10	20.1	-	16.8	-	2.3	-	5.5	-
SAE200/50/2	4	4	3.2	-	1.8	-	0.5	-	1.2	-
SAE250/50/2	6	4	5.2	-	2.5	-	0.8	-	1.8	-
SAE300/50/2	10	6	8.2	-	6.5	-	1.1	-	3.1	-
SAE340/50/2	12	6	11.3	-	8.7	-	2.2	-	3.7	-
SAE500/50/2	18	10	20.1	-	16.8	-	2.5	-	5.5	-
SAE200/60/2	4	4	2.9	4.5	1.8	2.8	0.5	0.7	1.2	2
SAE250/60/2	6	4	4.9	7.4	2.5	3.9	0.8	1.1	1.8	2.9
SAE300/60/2	10	6	7.7	11.7	6.5	10	1.2	1.5	3.1	4.9
SAE340/60/2	12	6	10.8	16.2	8.7	13.3	2.5	3.6	3.7	5.9
SAE200/64/2	4	4	2.8	4.3	1.8	2.8	0.5	0.7	1.2	2
SAE250/64/2	6	4	4.7	7.2	2.5	3.9	0.8	1.1	1.8	2.9
SAE300/64/2	10	6	7.4	11.4	6.5	10	1.2	1.5	3.1	4.9
SAE340/64/2	12	6	10.5	15.9	8.7	13.3	2.6	3.7	3.7	5.9
SAE380/64/2	12	6	12.6	17.7	8.7	13.3	2.4	3.2	3.7	5.9
SAE380/66/2	12	6	12.5	17.7	8.7	13.3	2.4	3.2	3.7	5.9
SAE440/66/2	14	8	15.9	22.2	11	16.8	2.8	3.7	4.3	6.9
SAE200/70/2	4	4	2.6	4.1	1.8	2.8	0.5	0.7	1.2	2
SAE250/70/2	6	4	4.5	6.9	2.5	3.9	0.8	1.1	1.8	2.9
SAE300/70/2	10	6	7.1	10.9	6.5	10	1.2	1.5	3.1	4.9
SAE340/70/2	12	6	10.2	15.4	8.7	13.3	2.7	3.7	3.7	5.9
SAE380/70/2	12	6	12.3	17.7	8.7	13.3	2.4	3.2	3.7	5.9
SAE440/70/2	14	8	15.7	22.2	11	16.8	2.8	3.7	4.3	6.9
SAEL300/72/2	8	4	7.5	11.2	4.6	7.1	1.3	1.8	2.5	3.9
SAEL340/72/2	10	6	9.5	14.2	6.4	10	1.9	2.5	3.1	4.9
SAE380/72/2	12	6	12.2	17.7	8.7	13.3	2.4	3.2	3.7	5.9



Modelo	Valores Característicos - Madera sobre madera - Clavado parcial									
	Fijaciones		Valores Característicos - Madera C24 [kN]							
	Soporte	Viga secundaria	R <sub>1,k</sub>		R <sub>2,k</sub>		R <sub>3,k</sub>		R <sub>4,k</sub>	
	Cdad	Cdad	CNA4,0x35	CNA4,0x50	CNA4,0x35	CNA4,0x50	CNA4,0x35	CNA4,0x50	CNA4,0x35	CNA4,0x50
SAE440/72/2	14	8	15.6	22.2	11	16.8	2.8	3.7	4.3	6.9
SAE200/76/2	4	4	2.5	3.8	1.8	2.8	0.5	0.7	1.2	2
SAE250/76/2	6	4	4.2	6.5	2.5	3.9	0.8	1.1	1.8	2.9
SAEL300/76/2	8	4	7.3	10.9	4.6	7.1	1.3	1.8	2.5	3.9
SAEL340/76/2	10	6	9.3	14	6.4	10	1.9	2.5	3.1	4.9
SAE380/76/2	12	6	12	17.7	8.7	13.3	2.4	3.2	3.7	5.9
SAE440/76/2	14	8	15.4	22.2	11	16.8	2.8	3.7	4.3	6.9
SAE500/76/2	18	10	20.1	26.6	16.8	22.2	3.2	4.3	5.5	8.8
SAE200/80/2	4	4	2.3	3.6	1.8	2.8	0.6	0.7	1.2	2
SAE250/80/2	6	4	4.1	6.3	2.5	3.9	0.8	1.1	1.8	2.9
SAEL300/80/2	8	4	7.1	10.7	4.6	7.1	1.4	1.8	2.5	3.9
SAEL340/80/2	10	6	9.1	13.7	6.4	10	1.9	2.5	3.1	4.9
SAE380/80/2	12	6	11.8	17.5	8.7	13.3	2.4	3.2	3.7	5.9
SAE440/80/2	14	8	15.2	22.2	11	16.8	2.8	3.8	4.3	6.9
SAE500/80/2	18	10	20.1	26.6	16.8	22.2	3.3	4.3	5.5	8.8
SAE380/90/2	12	6	11.3	16.9	8.7	13.3	2.5	3.2	3.7	5.9
SAE440/90/2	14	8	14.8	21.7	11	16.8	2.9	3.8	4.3	6.9
SAE500/90/2	18	10	20.1	26.6	16.8	22.2	3.3	4.3	5.5	8.8
SAE380/92/2	12	6	11.2	16.7	8.7	13.3	2.5	3.3	3.7	5.9
SAE440/95/2	14	8	14.5	21.4	11	16.8	2.9	3.8	4.3	6.9
SAE500/95/2	18	10	20.1	26.6	16.8	22.2	3.3	4.4	5.5	8.8
SAEL300/100/2	8	4	6.2	9.5	4.6	7.1	1.4	1.8	2.5	3.9
SAE380/100/2	12	6	10.8	16.2	8.7	13.3	2.5	3.3	3.7	5.9
SAE440/100/2	14	8	14.2	21.1	11	16.8	2.9	3.8	4.3	6.9
SAE500/100/2	18	10	20	26.6	16.8	22.2	3.3	4.4	5.5	8.8
SAEL500/115/2	16	8	16.8	22.2	13.4	17.7	3.3	4.4	4.9	7.8
SAEL380/120/2	10	6	9.1	13.7	6.4	10	1.6	2.2	3.1	4.9
SAEL440/120/2	12	8	12.4	18.3	11.1	16.7	2	2.7	3.7	5.9
SAEL500/120/2	16	8	16.8	22.2	13.4	17.7	3.3	4.4	4.9	7.8
SAEL440/136/2	12	8	11.7	17.3	11.1	16.7	2.1	2.7	3.7	5.9
SAEL500/140/2	16	8	16.1	22.2	13.4	17.7	3.3	4.4	4.9	7.8
SAEL500/150/2	16	8	15.5	22.2	13.4	17.7	3.3	4.4	4.9	7.8

Valores Característicos - Madera sobre soporte rígido



Modelo	Valores Característicos - Madera sobre hormigón o acero											
	Fijaciones				Valores característicos - Madera C24 [kN]							
	Soporte		Viga secundaria		R <sub>1,k</sub>		R <sub>2,k</sub>		R <sub>3,k</sub>		R <sub>4,k</sub>	
	Cdad	Tipo	Cdad	Tipo	CNA4,0x35	CNA4,0x50	CNA4,0x35	CNA4,0x50	CNA4,0x35	CNA4,0x50	CNA4,0x35	CNA4,0x50
SAE200/32/2	2	Ø10*	5	CNA**	11.7	-	8.4	-	2.1	-	5	-
SAE250/32/2	2	Ø10*	7	CNA**	15.1	-	11.7	-	2.8	-	5	-
SAE300/32/2	4	Ø12*	10	CNA**	20.1	-	16.8	-	3.6	-	10	-
SAE200/38/2	2	Ø10*	5	CNA**	11.7	-	8.4	-	2.2	-	5	-

Modelo	Valores Característicos - Madera sobre hormigón o acero											
	Fijaciones				Valores característicos - Madera C24 [kN]							
	Soporte		Viga secundaria		R <sub>1,k</sub>		R <sub>2,k</sub>		R <sub>3,k</sub>		R <sub>4,k</sub>	
	Cdad	Tipo	Cdad	Tipo	CNA4,0x38	CNA4,0x50	CNA4,0x38	CNA4,0x50	CNA4,0x38	CNA4,0x50	CNA4,0x38	CNA4,0x60
SAE250/38/2	2	Ø10*	7	CNA**	15.1	-	11.7	-	3	-	5	-
SAE300/38/2	4	Ø12*	10	CNA**	20.1	-	16.8	-	4	-	10	-
SAE340/38/2	4	Ø12*	12	CNA**	23.5	-	20.1	-	4.5	-	10	-
SAE440/38/2	4	Ø12*	15	CNA**	28.5	-	25.1	-	5	-	10	-
SAE200/40/2	2	Ø10*	5	CNA**	11.7	-	8.4	-	2.3	-	5	-
SAE250/40/2	2	Ø10*	7	CNA**	15.1	-	11.7	-	3.1	-	5	-
SAE300/40/2	4	Ø12*	10	CNA**	20.1	-	16.8	-	4.1	-	10	-
SAE340/40/2	4	Ø12*	12	CNA**	23.5	-	20.1	-	4.6	-	10	-
SAE200/46/2	2	Ø10*	5	CNA**	11.7	-	8.4	-	2.4	-	5	-
SAE250/46/2	2	Ø10*	7	CNA**	15.1	-	11.7	-	3.3	-	5	-
SAE340/46/2	4	Ø12*	12	CNA**	23.5	-	20.1	-	5	-	10	-
SAE500/46/2	4	Ø12*	18	CNA**	33.5	-	30.2	-	6.2	-	10	-
SAE200/50/2	2	Ø10*	5	CNA**	11.7	-	8.4	-	2.5	-	5	-
SAE250/50/2	2	Ø10*	7	CNA**	15.1	-	11.7	-	3.4	-	5	-
SAE300/50/2	4	Ø12*	10	CNA**	20.1	-	16.8	-	4.6	-	10	-
SAE340/50/2	4	Ø12*	12	CNA**	23.5	-	20.1	-	5.2	-	10	-
SAE500/50/2	4	Ø12*	18	CNA**	33.5	-	30.2	-	6.6	-	10	-
SAE200/60/2	2	Ø10*	5	CNA**	11.7	15.5	8.4	11.1	2.6	4	5	-
SAE250/60/2	2	Ø10*	7	CNA**	15.1	19	11.7	15.5	3.6	5.4	5	-
SAE300/60/2	4	Ø12*	10	CNA**	20.1	26.6	16.8	22.2	4.9	7.3	10	-
SAE340/60/2	4	Ø12*	12	CNA**	23.5	31	20.1	26.6	5.7	8.3	10	-
SAE200/64/2	2	Ø10*	5	CNA**	11.7	15.5	8.4	11.1	2.7	4.1	5	5
SAE250/64/2	2	Ø10*	7	CNA**	15.1	19	11.7	15.5	3.7	5.6	5	5
SAE300/64/2	4	Ø12*	10	CNA**	20.1	26.6	16.8	22.2	5	7.5	10	10
SAE340/64/2	4	Ø12*	12	CNA**	23.5	31	20.1	26.6	5.8	8.6	10	10
SAE380/64/2	4	Ø12*	12	CNA**	23.5	31	20.1	26.6	5.8	8.6	10	10
SAE380/66/2	4	Ø12*	12	CNA**	23.5	31	20.1	26.6	5.9	8.7	10	10
SAE440/66/2	4	Ø12*	15	CNA**	28.5	37.7	25.1	33.2	6.9	10.1	10	10
SAE200/70/2	2	Ø10*	5	CNA**	11.7	15.5	8.4	11.1	2.7	4.2	5	5
SAE250/70/2	2	Ø10*	7	CNA**	15.1	19	11.7	15.5	3.8	5.7	5	5
SAE300/70/2	4	Ø12*	10	CNA**	20.1	26.6	16.8	22.2	5.2	7.8	10	10
SAE340/70/2	4	Ø12*	12	CNA**	23.5	31	20.1	26.6	6	8.9	10	10
SAE380/70/2	4	Ø12*	12	CNA**	23.5	31	20.1	26.6	6	8.9	10	10
SAE440/70/2	4	Ø12*	15	CNA**	28.5	37.7	25.1	33.2	7.1	10.4	10	10
SAEL300/72/2	4	Ø12*	8	CNA**	16.8	22.2	13.4	17.7	4.2	6.4	10	10
SAEL340/72/2	4	Ø12*	10	CNA**	20.1	26.6	16.8	22.2	5.1	7.7	10	10
SAE380/72/2	4	Ø12*	12	CNA**	23.5	31	20.1	26.6	6.1	9	10	10
SAE440/72/2	4	Ø12*	15	CNA**	28.5	37.7	25.1	33.2	7.1	10.5	10	10
SAE200/76/2	2	Ø10*	5	CNA**	11.7	15.5	8.4	11.1	2.8	4.3	5	5
SAE250/76/2	2	Ø10*	7	CNA**	15.1	19	11.7	15.5	3.8	5.9	5	5
SAEL300/76/2	4	Ø12*	8	CNA**	16.8	22.2	13.4	17.7	4.3	6.5	10	10
SAEL340/76/2	4	Ø12*	10	CNA**	20.1	26.6	16.8	22.2	5.2	7.8	10	10
SAE380/76/2	4	Ø12*	12	CNA**	23.5	31	20.1	26.6	6.2	9.2	10	10
SAE440/76/2	4	Ø12*	15	CNA**	28.5	37.7	25.1	33.2	7.3	10.8	10	10
SAE500/76/2	4	Ø12*	18	CNA**	33.5	38	30.2	37.6	8.2	12	10	10
SAE200/80/2	2	Ø10*	5	CNA**	11.7	15.5	8.4	11.1	2.8	4.3	5	5
SAE250/80/2	2	Ø10*	7	CNA**	15.1	19	11.7	15.5	3.9	5.9	5	5
SAEL300/80/2	4	Ø12*	8	CNA**	16.8	22.2	13.4	17.7	4.3	6.6	10	10
SAEL340/80/2	4	Ø12*	10	CNA**	20.1	26.6	16.8	22.2	5.3	8	10	10
SAE380/80/2	4	Ø12*	12	CNA**	23.5	31	20.1	26.6	6.2	9.4	10	10
SAE440/80/2	4	Ø12*	15	CNA**	28.5	37.7	25.1	33.2	7.4	11	10	10
SAE500/80/2	4	Ø12*	18	CNA**	33.5	38	30.2	37.7	8.4	12.3	10	10
SAE380/90/2	4	Ø12*	12	CNA**	23.5	31	20.1	26.6	6.4	9.8	10	10
SAE440/90/2	4	Ø12*	15	CNA**	28.5	37.7	25.1	33.2	7.7	11.6	10	10
SAE500/90/2	4	Ø12*	18	CNA**	33.5	38	30.2	37.7	8.8	13.1	10	10
SAE380/92/2	4	Ø12*	12	CNA**	23.5	31	20.1	26.6	6.5	9.8	10	10



Modelo	Valores Característicos - Madera sobre hormigón o acero											
	Fijaciones				Valores característicos - Madera C24 [kN]							
	Soporte		Viga secundaria		R <sub>1,k</sub>		R <sub>2,k</sub>		R <sub>3,k</sub>		R <sub>4,k</sub>	
	Cdad	Tipo	Cdad	Tipo	CNA4,0x38	CNA4,0x50	CNA4,0x38	CNA4,0x50	CNA4,0x38	CNA4,0x50	CNA4,0x38	CNA4,0x60
SAE440/95/2	4	Ø12*	15	CNA**	28.5	37.7	25.1	33.2	7.8	11.8	10	10
SAE500/95/2	4	Ø12*	18	CNA**	33.5	38	30.2	37.7	9	13.4	10	10
SAEL300/100/2	4	Ø12*	8	CNA**	16.8	22.2	13.4	17.7	4.5	7	10	10
SAE380/100/2	4	Ø12*	12	CNA**	23.5	31	20.1	26.6	6.6	10.1	10	10
SAE440/100/2	4	Ø12*	15	CNA**	28.5	37.7	25.1	33.2	7.9	12	10	10
SAE500/100/2	4	Ø12*	18	CNA**	33.5	38	30.2	37.7	9.1	13.7	10	10
SAEL500/115/2	4	Ø12*	16	CNA**	30.2	38	26.8	35.5	8.6	13	10	10
SAEL380/120/2	4	Ø12*	10	CNA**	20.1	26.6	16.8	22.2	5.7	8.9	10	10
SAEL440/120/2	4	Ø12*	13	CNA**	25.1	33.2	21.8	28.8	7.2	11.1	10	10
SAEL500/120/2	4	Ø12*	16	CNA**	30.2	38	26.8	35.5	8.6	13.2	10	10
SAEL440/136/2	4	Ø12*	13	CNA**	25.1	33.2	21.8	28.8	7.4	11.4	10	10
SAEL500/140/2	4	Ø12*	16	CNA**	30.2	38	26.8	35.5	8.9	13.7	10	10
SAEL500/150/2	4	Ø12*	16	CNA**	30.2	38	26.8	35.5	9	13.9	10	10

\* Consulte la gama de anclajes Simpson Strong-Tie para encontrar el producto correcto. Las soluciones de anclajes típicas son BOAXII, SET-XP, WA, AT-HP y dependen del tipo de hormigón, la distancia entre anclajes y las distancias a los bordes. Los valores dados en esta tabla corresponden a una instalación en losa completa. Para todas las demás condiciones de instalación (cerca de los bordes,...), el diseñador debe verificar los anclajes por separado (nuestro software gratuito Anchor Designer está disponible en nuestra página Web).

\*\* Consulte las columnas de resistencia a la carga para conocer las fijaciones que se pueden utilizar en la viga. Los valores dependen del tipo de fijación utilizado.

**Valores Característicos - Viga sobre viga - con tornillo para connector SSH**

SAE200/38/2
SAE200
SAE250
SAEL300
SAEL340
SAEL380
SAEL440
SAEL500

La tensión transversal debe estar verificada por el usuario y puede ser preponderante.

## INSTALACIÓN

## Fijaciones

**Sobre el elemento secundario :**

- Puntas anilladas CNA Ø 4.0x50 mm,
- Puntas anilladas CNA Ø 4.0x35 mm para espesores inferiores a 64 mm,
- Tornillos CSA Ø 5.0x40 mm,
- Tornillos CSA Ø 5.0x35 mm para espesores inferiores a 60 mm.

**Sobre el elemento principal :****Elemento de soporte de madera :**

- Puntas anilladas CNA Ø 4.0x50 mm,
- Puntas anilladas CNA Ø 4.0x35 mm para espesores inferiores a 64 mm,
- Tornillos CSA Ø 5.0x40 mm,
- Tornillos CSA Ø 5.0x35 mm para espesores inferiores a 60 mm.

**Elemento de soporte de acero :**

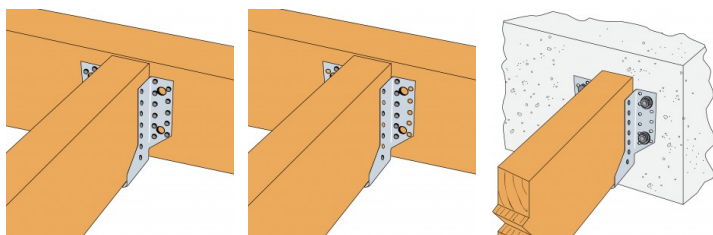
- Pernos de Ø12 o Ø 10 mm, en función del desarrollo (el diámetro del perno no debe ser inferior en más de 2 mm al del agujero).

**Elemento de soporte de hormigón :**

- Anclaje mecánico : pasador WA M10-78/5 (para los estribos SAE200 y 250) o WA M12-104/5 (para los estribos SAE 300, 340, 380, 440 y 500),
- Anclaje químico : resina AT-HP con varilla roscada LMAS M10-120/25 (para los estribos SAE200 y 250) o LMAS M12-150/35 (para los estribos SAE300, 340, 380, 440 y 500).

**Elemento de soporte de mampostería hueca :**

- Resina AT-HP o POLY-GP + varilla roscada LMAS M10-120/25 + tamiz SH M16-130 (para los estribos SAE200 y 250),
- Resina AT-HP o POLY-GP + varilla roscada LMAS M12-150/35 + tamiz SH M20-85 para los estribos SAE300, 340, 380, 440 y 500).

Clouage total  
sur boisClouage partiel  
sur boisFixation sur  
support rigide

## NOTAS TÉCNICAS