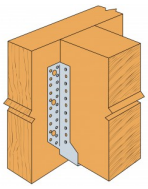
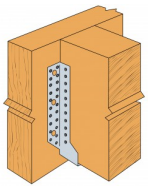
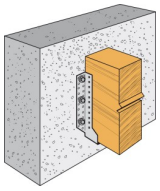
Technical data sheet

GSE 4 - BIG FACE FIX HANGERS EXTERIOR FLANGE 4 MM







Big face hangers external or internal flange are recommended in a number of applications. They are used to assemble a structure effectively without custom machining and thus enhance structural reliability. Similarly, with a large number of applications, these versatile products have today become essential in construction. This new profile allows greater versatility particularly in terms of bending width.

ETA-06/0270, UK-DoP-e06/0270

FEATURES

R 30 INDOOR Z275

Material

- S250GD + Z275 according to NF EN 10346.
- Thickness: 4 mm.

Benefits

- Quick and simple installation
- Joist hangers with 4 mm thickness comply with R30 conditions acc. to Eurocode 5
- Choice of widths according to the ranges indicated

APPLICATIONS

Header member

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

When to Use

- Joists, purlins.
- Cladding plates and uprights.
- Rafter ends.
- Refurbishment of existing assemblies,etc.

TECHNICAL DATA

Product Dimensions

References	Joist Size [mm]			Product Dimensions [mm]						Header holes		Joist holes
	Width	Height		A	B	C	D	F	t	Ø5	Ø13	Ø5
		Min	Max.									
GSE380/80/4	80	160	225	80	150	110	45.5	118	4	16	4	8
GSE440/80/4	80	190	270	80	180	110	45.5	118	4	22	4	12
GSE500/80/4	80	220	315	80	210	110	45.5	118	4	28	4	14
GSE540/80/4	80	240	345	80	230	110	45.5	118	4	32	4	16
GSE600/80/4	80	270	390	80	260	110	45.5	118	4	38	4	20
GSE660/80/4	80	300	435	80	290	110	45.5	118	4	44	6	22
GSE720/80/4	80	330	480	80	320	110	45.5	118	4	50	6	26
GSE780/80/4	80	360	525	80	350	110	45.5	118	4	56	6	28
GSE840/80/4	80	390	570	80	380	110	45.5	118	4	62	6	32
GSE900/80/4	80	420	615	80	410	110	45.5	118	4	68	6	36
GSE960/80/4	80	450	660	80	440	110	45.5	118	4	74	6	38
GSE1020/80/4	80	480	705	80	470	110	45.5	118	4	80	6	40
GSE380/100/4	100	150	210	100	140	110	45.5	118	4	16	2	8
GSE440/100/4	100	180	255	100	170	110	45.5	118	4	22	4	12
GSE500/100/4	100	210	300	100	200	110	45.5	118	4	28	4	14
GSE540/100/4	100	230	330	100	220	110	45.5	118	4	32	4	16
GSE600/100/4	100	260	375	100	250	110	45.5	118	4	38	4	20
GSE660/100/4	100	290	420	100	280	110	45.5	118	4	44	6	22
GSE720/100/4	100	320	465	100	310	110	45.5	118	4	50	6	26
GSE780/100/4	100	350	510	100	340	110	45.5	118	4	56	6	28
GSE840/100/4	100	380	555	100	370	110	45.5	118	4	62	6	32
GSE900/100/4	100	410	600	100	400	110	45.5	118	4	68	6	36
GSE960/100/4	100	440	645	100	430	110	45.5	118	4	74	6	38
GSE1020/100/4	100	470	690	100	460	110	45.5	118	4	80	6	40
GSE540/120/4	120	220	315	120	210	110	45.5	118	4	32	4	16
GSE600/120/4	120	250	360	120	240	110	45.5	118	4	38	4	20
GSE660/120/4	120	280	405	120	270	110	45.5	118	4	44	6	22
GSE720/120/4	120	310	450	120	300	110	45.5	118	4	50	6	26
GSE780/120/4	120	340	495	120	330	110	45.5	118	4	56	6	28
GSE840/120/4	120	370	540	120	360	110	45.5	118	4	62	6	32
GSE900/120/4	120	400	585	120	390	110	45.5	118	4	68	6	36
GSE960/120/4	120	430	630	120	420	110	45.5	118	4	74	6	38
GSE1020/120/4	120	460	675	120	450	110	45.5	118	4	80	6	40
GSE500/140/4	140	190	270	140	180	110	45.5	118	4	28	2	14
GSE540/140/4	140	210	300	140	200	110	45.5	118	4	32	4	16
GSE600/140/4	140	240	345	140	230	110	45.5	118	4	38	4	20
GSE660/140/4	140	270	390	140	260	110	45.5	118	4	44	4	22
GSE720/140/4	140	300	435	140	290	110	45.5	118	4	50	6	26
GSE780/140/4	140	330	480	140	320	110	45.5	118	4	56	6	28
GSE840/140/4	140	360	525	140	350	110	45.5	118	4	62	6	32
GSE900/140/4	140	390	570	140	380	110	45.5	118	4	68	6	36
GSE960/140/4	140	420	615	140	410	110	45.5	118	4	74	6	38
GSE1020/140/4	140	450	660	140	440	110	45.5	118	4	80	6	40
GSE500/160/4	160	180	255	160	170	110	45.5	118	4	28	2	14
GSE540/160/4	160	200	285	160	190	110	45.5	118	4	32	4	16
GSE600/160/4	160	230	330	160	220	110	45.5	118	4	38	4	20
GSE660/160/4	160	260	375	160	250	110	45.5	118	4	44	4	22
GSE720/160/4	160	290	420	160	280	110	45.5	118	4	50	6	26

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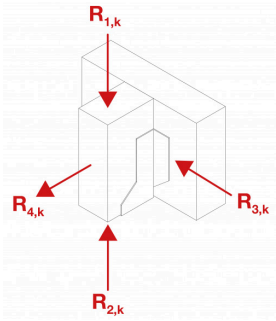
References	Joist Size [mm]			Product Dimensions [mm]						Header holes		Joist holes
	Width	Height		A	B	C	D	F	t	Ø5	Ø13	Ø5
		Min	Max.									
GSE780/160/4	160	320	465	160	310	110	45.5	118	4	56	6	28
GSE840/160/4	160	350	510	160	340	110	45.5	118	4	62	6	32
GSE900/160/4	160	380	555	160	370	110	45.5	118	4	68	6	36
GSE960/160/4	160	410	600	160	400	110	45.5	118	4	74	6	38
GSE1020/160/4	160	440	645	160	430	110	45.5	118	4	80	6	40
GSE500/180/4	180	170	240	180	160	110	45.5	118	4	28	2	14
GSE540/180/4	180	190	270	180	180	110	45.5	118	4	32	4	16
GSE600/180/4	180	220	315	180	210	110	45.5	118	4	38	4	20
GSE660/180/4	180	250	360	180	240	110	45.5	118	4	44	4	22
GSE720/180/4	180	280	405	180	270	110	45.5	118	4	50	6	26
GSE780/180/4	180	310	450	180	300	110	45.5	118	4	56	6	28
GSE840/180/4	180	340	495	180	330	110	45.5	118	4	62	6	32
GSE900/180/4	180	370	540	180	360	110	45.5	118	4	68	6	36
GSE960/180/4	180	400	585	180	390	110	45.5	118	4	74	6	38
GSE1020/180/4	180	430	630	180	420	110	45.5	118	4	80	6	40
GSE500/200/4	200	160	225	200	150	110	45.5	118	4	28	2	14
GSE540/200/4	200	180	255	200	170	110	45.5	118	4	32	4	16
GSE600/200/4	200	210	300	200	200	110	45.5	118	4	38	4	20
GSE660/200/4	200	240	345	200	230	110	45.5	118	4	44	4	22
GSE720/200/4	200	270	390	200	260	110	45.5	118	4	50	6	26
GSE780/200/4	200	300	435	200	290	110	45.5	118	4	56	6	28
GSE840/200/4	200	330	480	200	320	110	45.5	118	4	62	6	32
GSE900/200/4	200	360	525	200	350	110	45.5	118	4	68	6	36
GSE960/200/4	200	390	570	200	380	110	45.5	118	4	74	6	38
GSE1020/200/4	200	420	615	200	410	110	45.5	118	4	80	6	40

Product Capacities



References	Characteristic capacities - Timber to timber - Full nailing						
	Number of Fasteners		Product characteristic capacities - Timber C24 [kN]				
	Header	Joist	$R_{1,k}$	$R_{2,k}$	$R_{3,k}$	$R_{4,k}$	Fire resistance $R_{1,k}$
	Qty	Qty	CNA4,0x50	CNA4,0x50	CNA4,0x50	CNA4,0x50	CNA4.0x75
GSE380/80/4	16	8	16.9	6.9	6.1	7.8	-
GSE440/80/4	22	12	24.1	11.9	8.8	11.8	-
GSE500/80/4	28	14	31.9	18.1	9.7	13.7	-
GSE540/80/4	32	16	35.9	22.7	10.6	15.7	-
GSE600/80/4	38	20	43.9	30.5	12.4	19.6	-
GSE660/80/4	44	22	47.9	39	12.8	21.6	-
GSE720/80/4	50	26	55.8	46.1	14.1	25.5	-
GSE780/80/4	56	28	59.8	49.6	14.2	27.4	-
GSE840/80/4	62	32	67.8	56.7	15.2	31.4	-

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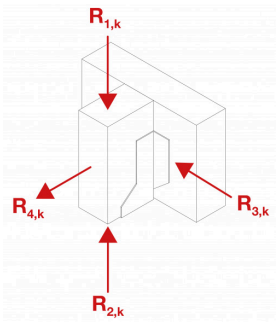
References	Characteristic capacities - Timber to timber - Full nailing						
	Number of Fasteners		Product characteristic capacities - Timber C24 [kN]				
	Header	Joist	$R_{1,k}$	$R_{2,k}$	$R_{3,k}$	$R_{4,k}$	Fire resistance $R_{1,k}$
	Qty	Qty	CNA4,0x50	CNA4,0x50	CNA4,0x50	CNA4,0x50	CNA4.0x75
GSE900/80/4	68	36	75.8	63.8	16.1	33.3	-
GSE960/80/4	74	38	79.8	67.4	15.9	37.2	-
GSE1020/80/4	80	40	83.8	70.9	15.8	39.2	-
GSE380/100/4	16	8	15.4	6.9	6.6	7.8	1,0*
GSE440/100/4	22	12	22.3	11.9	9.6	11.8	2,5*
GSE500/100/4	28	14	30.5	18.1	10.7	13.7	3,6*
GSE540/100/4	32	16	35.9	22.7	11.8	15.7	4,7*
GSE600/100/4	38	20	43.9	30.5	14	19.6	7,3*
GSE660/100/4	44	22	47.9	39	14.6	21.6	8,6*
GSE720/100/4	50	26	55.8	46.1	16.3	25.5	11,4*
GSE780/100/4	56	28	59.8	49.6	16.6	27.4	12,8*
GSE840/100/4	62	32	67.8	56.7	17.9	31.4	15,4*
GSE900/100/4	68	36	75.8	63.8	19	33.3	18,0*
GSE960/100/4	74	38	79.8	67.4	19	37.2	19,3*
GSE1020/100/4	80	40	83.8	70.9	18.9	39.2	20,6*
GSE540/120/4	32	16	34	22.7	12.7	15.7	4,7*
GSE600/120/4	38	20	43.1	30.5	15.2	19.6	7,3*
GSE660/120/4	44	22	47.9	39	16	21.6	8,6*
GSE720/120/4	50	26	55.8	46.1	18	25.5	11,4*
GSE780/120/4	56	28	59.8	49.6	18.5	27.4	12,8*
GSE840/120/4	62	32	67.8	56.7	20.1	31.4	15,4*
GSE900/120/4	68	36	75.8	63.8	21.5	33.3	18,0*
GSE960/120/4	74	38	79.8	67.4	21.6	37.2	19,3*
GSE1020/120/4	80	40	83.8	70.9	21.6	39.2	20,6*
GSE500/140/4	28	14	24.1	11.9	10.5	11.8	2,5*
GSE540/140/4	32	16	29.5	15.9	12	11.8	3,5*
GSE600/140/4	38	20	38.2	22.7	15	15.7	5,9*
GSE660/140/4	44	22	43.9	30.5	16.1	19.6	7,3*
GSE720/140/4	50	26	51.9	39	18.6	23.5	10,0*
GSE780/140/4	56	28	55.8	46.1	19.3	25.5	11,4*
GSE840/140/4	62	32	63.8	53.2	21.4	29.4	14,1*
GSE900/140/4	68	36	67.8	56.7	21.8	31.4	15,4*
GSE960/140/4	74	38	71.8	60.3	22.2	33.3	16,7*
GSE1020/140/4	80	40	79.8	67.4	23.8	39.2	19,3*
GSE500/160/4	28	14	22.3	11.9	10.7	11.8	2,5*
GSE540/160/4	32	16	27.6	15.9	12.3	11.8	3,5*
GSE600/160/4	38	20	36.1	22.7	15.5	15.7	5,9*
GSE660/160/4	44	22	43.9	30.5	16.8	19.6	7,3*
GSE720/160/4	50	26	51.9	39	19.5	23.5	10,0*
GSE780/160/4	56	28	55.8	46.1	20.4	25.5	11,4*
GSE840/160/4	62	32	63.8	53.2	22.7	29.4	14,1*
GSE900/160/4	68	36	67.8	56.7	23.3	31.4	15,4*
GSE960/160/4	74	38	71.8	60.3	23.8	33.3	16,7*
GSE1020/160/4	80	40	79.8	67.4	25.6	39.2	19,3*
GSE500/180/4	28	14	20.3	11.9	10.9	11.8	2,5*
GSE540/180/4	32	16	25.4	15.9	12.6	11.8	3,5*
GSE600/180/4	38	20	33.8	22.7	15.9	15.7	5,9*
GSE660/180/4	44	22	43.1	30.5	17.3	19.6	7,3*
GSE720/180/4	50	26	51.9	39	20.1	23.5	10,0*
GSE780/180/4	56	28	55.8	46.1	21.2	25.5	11,4*
GSE840/180/4	62	32	63.8	53.2	23.7	29.4	14,1*
GSE900/180/4	68	36	67.8	56.7	24.5	31.4	15,4*
GSE960/180/4	74	38	71.8	60.3	25.1	33.3	16,7*
GSE1020/180/4	80	40	79.8	67.4	27.2	37.2	19,3*

References	Characteristic capacities - Timber to timber - Full nailing						
	Number of Fasteners		Product characteristic capacities - Timber C24 [kN]				
	Header	Joist	$R_{1,k}$	$R_{2,k}$	$R_{3,k}$	$R_{4,k}$	Fire resistance $R_{1,k}$
	Qty	Qty	CNA4,0x50	CNA4,0x50	CNA4,0x50	CNA4,0x50	CNA4.0x75
GSE500/200/4	28	14	18.3	11.9	11.1	11.8	2,5*
GSE540/200/4	32	16	23.2	15.9	12.8	11.8	3,5*
GSE600/200/4	38	20	31.3	22.7	16.2	15.7	5,9*
GSE660/200/4	44	22	40.6	30.5	17.6	19.6	7,3*
GSE720/200/4	50	26	50.3	39	20.7	23.5	10,0*
GSE780/200/4	56	28	55.8	46.1	21.8	25.5	11,4*
GSE840/200/4	62	32	63.8	53.2	24.5	29.4	14,1*
GSE900/200/4	68	36	67.8	56.7	25.4	31.4	15,4*
GSE960/200/4	74	38	71.8	60.3	26.2	33.3	16,7*
GSE1020/200/4	80	40	79.8	67.4	28.5	37.2	19,3*

Product capacities - Timber to timber - Partial nailing



References	Characteristic capacities - Timber to timber - Partial nailing					
	Number of Fasteners		Product characteristic capacities - Timber C24 [kN]			
	Header	Joist	$R_{1,k}$	$R_{2,k}$	$R_{3,k}$	$R_{4,k}$
	Qty	Qty	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
GSE500/80/4	14	8	17.8	8.8	5.5	6.9
GSE540/80/4	16	8	19.9	11.1	5.3	7.8
GSE600/80/4	20	10	23.9	16.3	6.2	9.8
GSE660/80/4	22	12	27.9	19.2	7	10.8
GSE720/80/4	26	14	31.9	24.8	7.6	12.7
GSE780/80/4	28	14	31.9	24.8	7.1	13.7
GSE840/80/4	32	16	35.9	28.4	7.6	15.7
GSE900/80/4	34	18	39.9	31.9	8	16.7
GSE960/80/4	38	20	43.9	35.5	8.4	18.6
GSE1020/80/4	40	20	43.9	35.5	7.9	19.6
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
GSE660/100/4	22	12	27.9	19.2	8	10.8
GSE720/100/4	26	14	31.9	24.8	8.8	12.7
GSE780/100/4	28	14	31.9	24.8	8.3	13.7
GSE840/100/4	32	16	35.9	28.4	8.9	15.7
GSE900/100/4	34	18	39.9	31.9	9.5	16.7

References	Characteristic capacities - Timber to timber - Partial nailing					
	Number of Fasteners		Product characteristic capacities - Timber C24 [kN]			
	Header	Joist	$R_{1,k}$	$R_{2,k}$	$R_{3,k}$	$R_{4,k}$
	Qty	Qty	CNA4,0x50	CNA4,0x50	CNA4,0x50	CNA4,0x50
GSE960/100/4	38	20	43.9	35.5	10	18.6
GSE1020/100/4	40	20	43.9	35.5	9.5	19.6
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
GSE660/120/4	22	12	27.9	19.2	8.7	10.8
GSE720/120/4	26	14	31.9	24.8	9.7	12.7
GSE780/120/4	28	14	31.9	24.8	9.2	13.7
GSE840/120/4	32	16	35.9	28.4	10	15.7
GSE900/120/4	34	18	39.9	31.9	10.7	16.7
GSE960/120/4	38	20	43.9	35.5	11.4	18.6
GSE1020/120/4	40	20	43.9	35.5	10.8	19.6
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	14	31.9	24.8	10.4	12.7
GSE840/140/4	30	16	35.9	28.4	11.4	14.7
GSE900/140/4	32	16	35.9	28.4	10.9	15.7
GSE960/140/4	34	18	39.9	31.9	11.8	16.7
GSE1020/140/4	38	20	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	20	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	14	31.9	24.8	11	12.7
GSE840/160/4	30	16	35.9	28.4	12.1	14.7
GSE900/160/4	32	16	35.9	28.4	11.7	15.7
GSE960/160/4	34	18	39.9	31.9	12.6	16.7
GSE1020/160/4	38	20	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	20	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	14	31.9	24.8	11.4	12.7
GSE840/180/4	30	16	35.9	28.4	12.6	14.7
GSE900/180/4	32	16	35.9	28.4	12.2	15.7
GSE960/180/4	34	18	39.9	31.9	13.3	16.7
GSE1020/180/4	38	20	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	20	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	14	31.9	24.8	11.8	12.7
GSE840/200/4	30	16	35.9	28.4	13.1	14.7
GSE900/200/4	32	16	35.9	28.4	12.7	15.7
GSE960/200/4	34	18	39.9	31.9	13.9	16.7
GSE1020/200/4	38	20	43.9	35.5	15	18.6

Values given in the table above are valid for a joist to joist and joist to column application, subject to respecting the partial nailing plans specific to each configuration given in our ETA-06/0270 page 17.

INSTALLATION

Fasteners

The capacities are given for the use of hangers with fasteners from ETA-04/0013. On rigid support fasterners must be CE marked.

On supported member:

- CNA annular ring-shank nails dia. 4.0 x 50 mm.
- CNA annular ring-shank nails dia. 4.0 x 35 mm for thickness less than 64 mm.
- CSA screws dia. 5.0 x 40 mm.
- CSA screws dia. 5.0 x 35 mm for thickness less than 60 mm.
- **underR30 condition:** CNA Ø4.0 x 75 mm nails or CSA 5,0 x 80-DE screws

On supporting member:

Wood substrate:

- CNA annular ring-shank nails dia. 4.0 x 50 mm.
- CNA annular ring-shank nails dia. 4.0 x 35 mm for thickness less than 64 mm.
- CSA screws dia. 5.0 x 40 mm.
- CSA screws dia. 5.0 x 35 mm for thickness less than 60 mm.
- **under R30 condition**: CNA Ø4.0 x 75 mm nails or CSA 5,0 x 80-DE screws

Steel substrate:

- Bolts dia. 12 mm (bolt diameter cannot be more than 2 mm smaller than the drill hole diameter).

Concrete substrate:

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

Hollow masonry substrate:

- Chemical anchor: AT-HP or POLY-GP resin + LMAS M12-150/35 + SH 20-130 screen.

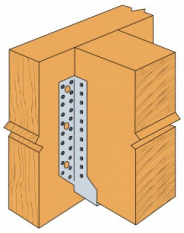
Installation

Sur Bois :

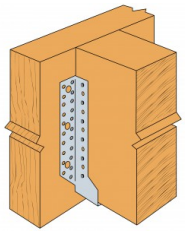
1. Tracer l'emplacement de la poutre portée sur le porteur,
2. Présenter le sabot et préfixer les ailes de chaque côté,
3. Ajuster le sabot par rapport aux tracés : le sabot doit être légèrement plus ouvert en haut que en bas pour faciliter l'installation de la poutre portée,
4. Finaliser la fixation sur chaque aile,
5. Présenter la poutre portée dans le sabot et la fixer en clouage partiel ou total.

Sur Béton :

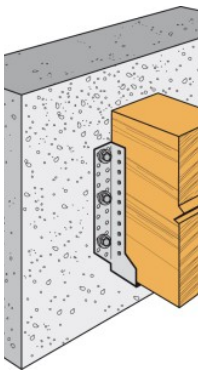
1. Méthode 1 : Tracer l'emplacement des perçages en appliquant le sabot sur la poutre,
2. Méthode 2 : Tracer l'emplacement de la poutre sur le support, présenter le sabot et repérer les centres des perçages,
3. Percer le support avec un forêt adapté,
4. Présenter le sabot et fixer le sur le support avec des goujons d'ancrages,
5. Présenter la poutre portée dans le sabot avant de la fixer.



Clouage total sur support bois.



Clouage partiel sur support bois.



Fixation sur support rigide.

TECHNICAL NOTES