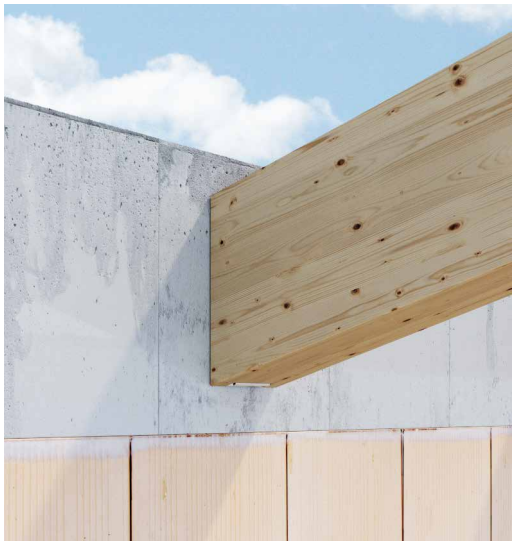
LOCK C

CE ETA-19/0831

CONCEALED HOOK TIMBER-TO-CONCRETE CONNECTOR

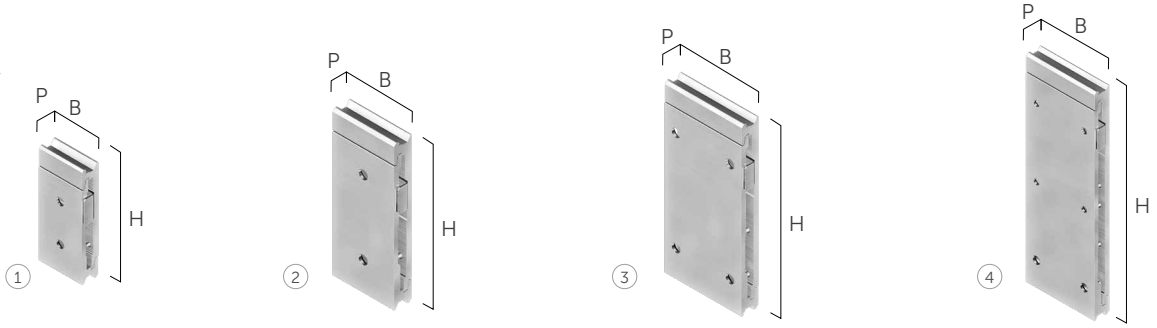
- Quick installation on concrete. Easy to hook system with screw-in anchors on concrete and self-drilling screws on timber
- Fastening on concrete is concealed. When installed without grooving, it generates an aesthetically pleasing joint shadow
- The timber beams can be easily removed for seasonal requirements



CALCULATION TOOL | VIDEO

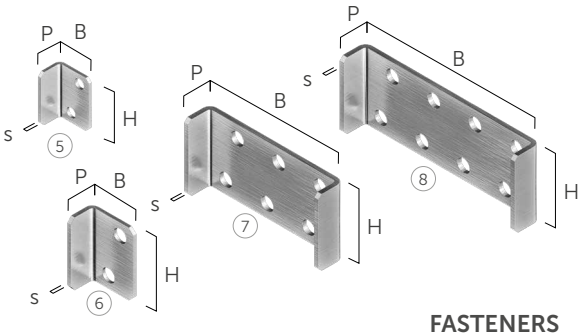
SERVICE CLASS	MATERIAL
SC3	alu 6005A

LOCK STOP not included!



CODE		B x H x P [mm]	B x H x P [in]	n_{screws} - Ø(1) [pcs]	n_{screws} - Ø(1) [pcs]	$n_{anchors}$ - Ø(1) [pcs]	$n_{anchors}$ - Ø(1) [pcs]	$n_{LOCKSTOP}$ - type			pcs(2)
LOCKC53120	1	52,5 x 120 x 20	*2 1/16 x 4 3/4 x 0.79*	12 - Ø5	*12 - Ø0.20*	2 - Ø8	*2 - Ø0.32*	2 - LOCKSTOP5	●	●	25
LOCKC75175	2	75 x 175 x 22	*2 15/16 x 6 7/8 x 0.87*	12 - Ø7	*12 - Ø0.20*	2 - Ø10	*2 - Ø0.40*	2 - LOCKSTOP7 / 1 x LOCKSTOP75	●	●	12
LOCKC100215	3	100 x 215 x 22	*4 x 8 7/16 x 0.87*	24 - Ø7	*24 - Ø0.20*	4 - Ø10	*4 - Ø0.40*	2 - LOCKSTOP7 / 1 x LOCKSTOP100	●	●	8
LOCKC100290	4	100 x 290 x 22	*4 x 11 7/16 x 0.87*	36 - Ø7	*36 - Ø0.20*	6 - Ø10	*6 - Ø0.40*	2 - LOCKSTOP7 / 1 x LOCKSTOP100	●	●	10

Screws and LOCK STOP are not included in the package.
(1) Number of screws and anchors for connector pair.
(2) Number of connector pairs.

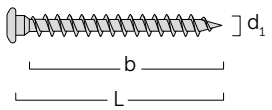


LOCK STOP | LOCKING DEVICE FOR F_{lat}

CODE		B x H x P x s [mm]	B x H x P x s [in]	pcs
LOCKSTOP5*	5	19 x 27,5 x 13 x 1,5	*3/4 x 1 1/16 x 1/2 x 0.06*	100
LOCKSTOP7*	6	26,5 x 38 x 15 x 1,5	*1 1/16 x 1 1/2 x 9/16 x 0.06*	50
LOCKSTOP75	7	81 x 40 x 15,5 x 2,5	*3 3/16 x 1 9/16 x 5/8 x 0.1*	20
LOCKSTOP100	8	106 x 40 x 15,5 x 2,5	*4 3/16 x 1 9/16 x 5/8 x 0.1*	20

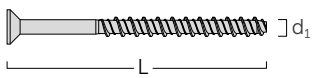
* Without CE marking.

FASTENERS



SBL | ROUND-HEAD SCREW AND FLAT UNDERHEAD

d_1 [mm] *[in]*	CODE	L [mm]	L *[in]*	b [mm]	b *[in]*	pcs
5 *0.20* TX 20	SBL570	70	*2 3/4*	66	*2 5/8*	200
7 *0.28* TX 30	SBL780	80	*3 1/8*	75	*2 15/16*	100



SKS | SCREW-IN ANCHOR WITH COUNTERSUNK HEAD

d_1 [mm] *[in]*	CODE	L [mm]	L *[in]*	$d_{0\ concrete}$ [mm]	$d_{0\ concrete}$ *[in]*	T_{inst} [Nm]	T_{inst} *[ft lbs]*	pcs
8 *0.32* TX 30	SKS8100	100	*4*	6	*0.24*	20	*14.8*	50
10 *0.40* TX 40	SKS10100	100	*4*	8	*0.32*	50	*36.9*	50

STRUCTURAL VALUES

TIMBER-TO-CONCRETE JOINT | F_v

CODE	UNCRACKED CONCRETE			TIMBER				
	anchors			secondary beam		screws	CHARACTERISTIC VALUES (EN 1995:2014)	
	B_C	SKS n_c - Ø x L	$R_{v,d,concrete}$	b_J	h_J	SBL n_J - Ø x L	$R_{v,k,timber}$ C24	$R_{v,k,timber}$ GL24h
	[mm]	[mm]	[kN]	[mm]	[mm]	[mm]	[kN]	[kN]
LOCKC53120	120	2 - Ø8 x 100	**9,2**	78	120	12 - Ø5 x 70	**17,1**	**17,9**
LOCKC75175	120	2 - Ø10 x 100	**19,6**	105	175	12 - Ø7 x 80	**30,2**	**32,2**
LOCKC100215	120	4 - Ø10 x 100	**33,3**	130	215	24 - Ø7 x 80	**60,5**	**64,5**
LOCKC100290	120	6 - Ø10 x 100	**42,8**	130	290	36 - Ø7 x 80	**90,7**	**96,7**

GENERAL PRINCIPLES

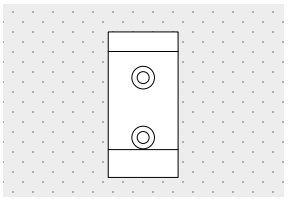
- Characteristic values are consistent with EN 1995-1-1:2014, in accordance with ETA-19/0831 and ETA-11/0030 for screws without pre-drilling hole. The published characteristic resistances are conservative for screws installed in pre-drilled holes. The design values of the anchors for concrete are calculated in accordance with the respective European Technical Assessments.
- Design values can be obtained from characteristic values as follows:

$$R_{V,d} = \frac{R_{V,k\ timber} \cdot k_{mod}}{\gamma_M}$$

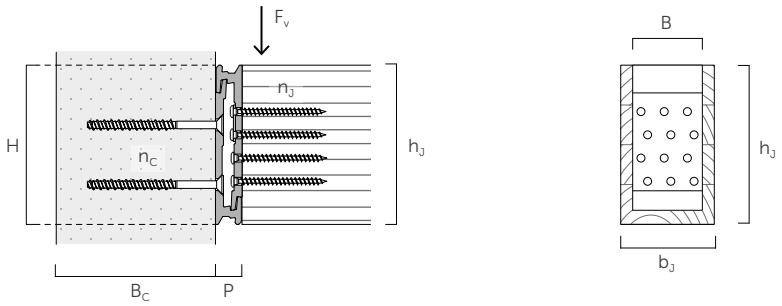
  The coefficients k_{mod} and γ_M should be taken according to the current regulations used for the calculation.
- In the calculation phase, a strength class of C25/30 concrete with thin reinforcement was considered, in the absence of spacing and distances from the edge and B_C thickness indicated in the table.
- The calculation process used a timber characteristic density of ρk=350 kg/m^3 for C24 and ρk=385 kg/m^3 for GL24h.
- Wood and concrete elements must be sized and checked separately.
- The connector must always be fully fastened on both the timber side and the concrete side, using screws and anchors of the same length respectively, with all holes utilised.

INSTALLATION

wall



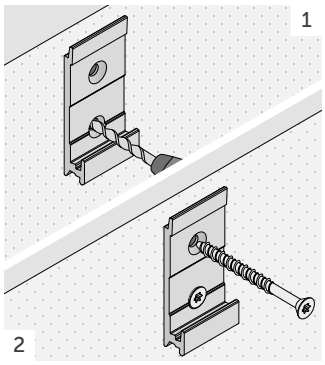
secondary beam



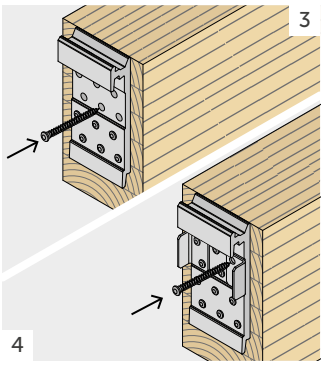
INSTALLATION

VIDEO

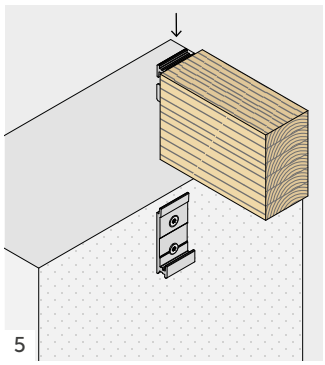
EXPOSED INSTALLATION WITH LOCK STOP



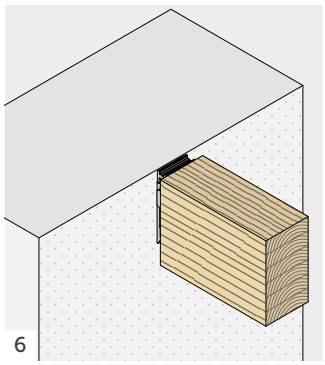
Place the connector on concrete and fasten the anchors according to the installation instructions.



Place the connector on the secondary beam and fasten the lower screws. When using LOCK STOP, position LOCK STOP and fasten the remaining screws.

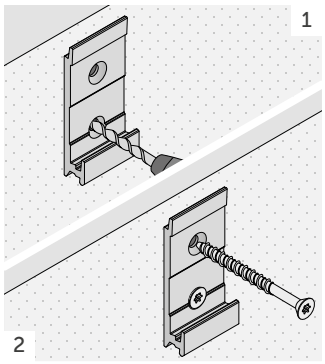


Hang the secondary beam from the main member by lowering it into place.

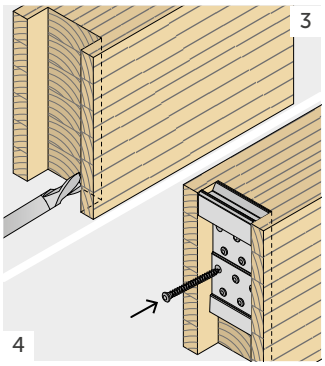


Make sure that the two LOCK C connectors are parallel to each other and avoid subjecting them to excessive strain during installation.

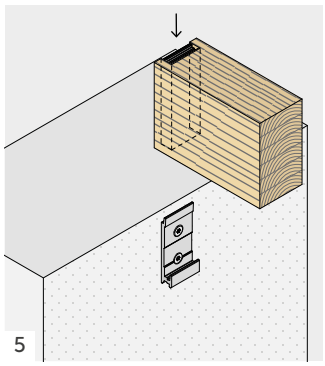
SEMI-CONCEALED INSTALLATION



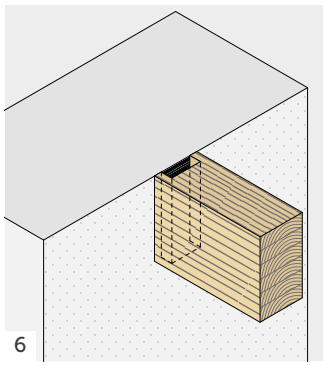
Place the connector on concrete and fasten the anchors according to the installation instructions.



Perform full routing on the secondary beam. Position the connector and fasten all screws.



Hang the secondary beam from the main member by lowering it into place.



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