LOCK T TIMBER







CONCEALED HOOK TIMBER-TO-TIMBER CONNECTOR

PRACTICAL

Easy and quick to install, it can be fastened with a single type of screw. Joint that can be easily disassembled, ideal for the construction of temporary structures.

SLENDER STRUCTURES

It can also be used concealed in timber elements having small cross-section. Ideal for structures, gazebos and furnishings.

VERSATILE

It provides excellent assembly tolerance. It can be integrated with side locking plates and vertical anti-slip screw.



LOCK T FLOOR

CHARACTERISTICS

FOCUS	joints that can be disassembled					
TIMBER SECTIONS	from 35 x 80 mm to 200 x 440 mm					
TIMBER SECTIONS	from 1 3/8 x 3 1/8 inches to 8 x 17 1/4 inches					
STRENGTH	R _{v,k} up to 65 kN					
	Z' up to 8736 lbs					
FASTENERS	LBS					

VIDEO

Scan the QR Code and watch the video on our YouTube channel





MATERIAL

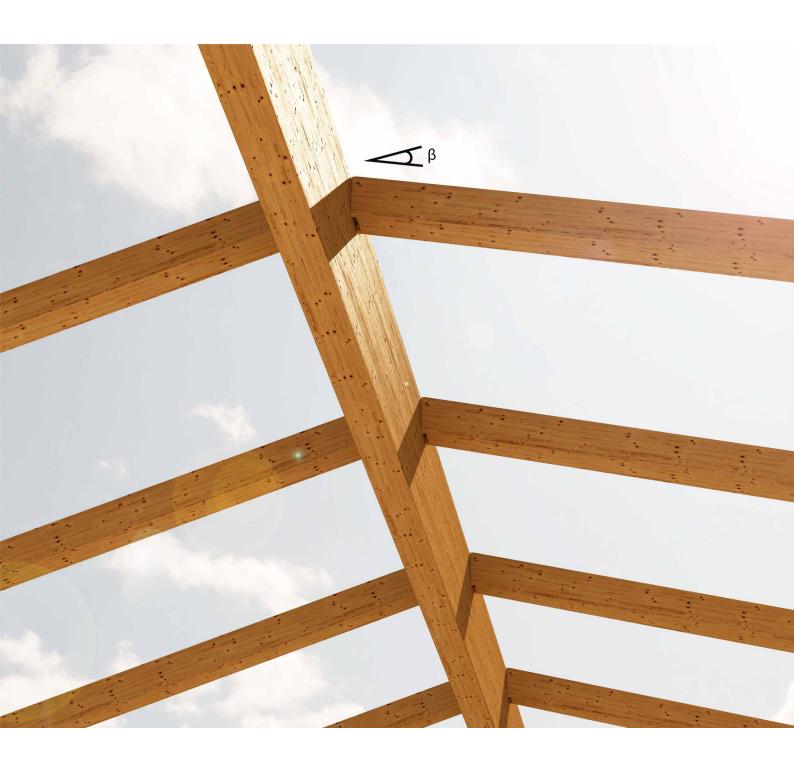
Aluminium alloy three dimensional perforated plate.

FIELDS OF USE

Timber-to-timber shear joint

- solid timber and glulam
- CLT, LVL









AESTHETICS

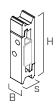
Completely concealed joint; satisfies fire safety requirements. Thanks to the assembly with only one type of screw, installation is quick and easy.

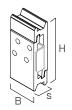
CLT FLOORS

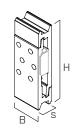
The rod version is specially designed for fastening CLT panel floors. Innovative joint with exceptional strength values.

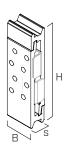
CODES AND DIMENSIONS

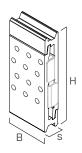
LOCK T Ø5 | 0.20 inch











LOCKT1880

LOCKT3580

LOCKT35100

LOCKT35120

LOCKT53120

CODE	Е	3	F	ł	\$	5	n _{screws} - Ø	n _{LOCKSTOP} - type	pcs *
	[mm]	[in]	[mm]	[in]	[mm]	[in]			
LOCKT1880	17,5	0.69	80	3.15	20	0.79	4-Ø5 0.20	1 LOCKSTOP5U	50
LOCKT3580	35	1.38	80	3.15	20	0.79	8-Ø5 0.20	2 LOCKSTOP5	50
LOCKT35100	35	1.38	100	3.94	20	0.79	12-Ø5 0.20	2 LOCKSTOP5	50
LOCKT35120	35	1.38	120	4.72	20	0.79	16-Ø5 0.20	4 LOCKSTOP5	25
LOCKT53120	52,5	2.07	120	4.72	20	0.79	24-Ø5 0.20	4 LOCKSTOP5	25

Screws and LOCK STOP not included in the package.

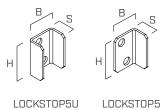
LOCK STOP Ø5 | 0.20 inch

CODE	В		F	1	S		pcs
	[mm]	[in]	[mm]	[in]	[mm]	[in]	
LOCKSTOP5U	21,5	0.85	27,5	1.08	13	0.51	50
LOCKSTOP5	19	0.75	27,5	1.08	13	0.51	100



LOCKSTOP5 for use with other models.

The use of LOCK STOP is optional and does not affect structural performance.



LBS

CODE	d_1			L		b		pcs
	[mm]	[in]	[mm]	[in]	[mm]	[in]		
LBS550	5	0.20	50	1 15/16	46	1 13/16	TX20	200
LBS570	5	0.20	70	2 3/4	66	2 5/8	TX20	200



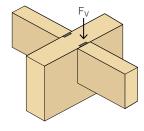
MATERIAL AND DURABILITY

LOCK T: EN AW-6005A aluminium alloy To be used in dry service conditions.

FIELD OF USE

 Timber-to-timber joints between solid timber, glulam, LVL and CLT structural elements

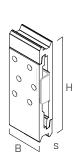
EXTERNAL LOADS

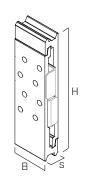


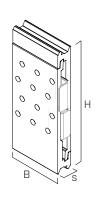
^{*} number of connector pairs

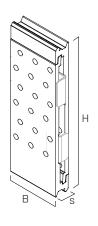
CODES AND DIMENSIONS

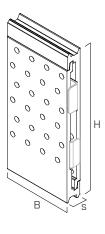
LOCK T Ø7 | 0.28 inch











LOCKT50135	5
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LOCKT50175

LOCKT75175

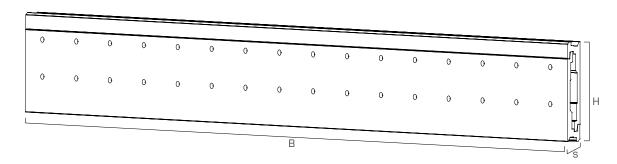
LOCKT75215

LOCKT100215

CODE	E	3	ŀ	4	:	5	n _{screws} - Ø	n _{LOCKSTOP} - type	pcs*
	[mm]	[in]	[mm]	[in]	[mm]	[in]			
LOCKT50135	50	1.97	135	5.31	22	0.86	12-Ø7 0.28	2 LOCKSTOP7	25
LOCKT50175	50	1.97	175	6.89	22	0.86	16-Ø7 0.28	4 LOCKSTOP7	18
LOCKT75175	75	2.95	175	6.89	22	0.86	24-Ø7 0.28	4 LOCKSTOP7	12
LOCKT75215	75	2.95	215	8.46	22	0.86	36-Ø7 0.28	4 LOCKSTOP7	12
LOCKT100215	100	3.94	215	8.46	22	0.86	48-Ø7 0.28	4 LOCKSTOP7	8

Screws and LOCK STOP not included in the package.

LOCK T FLOOR Ø7 | 0.28 inch



CODE	E	3	F	Н		S	n _{screws} - Ø	pcs*
	[mm]	[in]	[mm]	[in]	[mm]	[in]		
LOCKTFLOOR135	1200	47.24	135	5.31	22	0.87	64-Ø7 0.28	1

Screws not included in the box.
* number of connector pairs

LOCK STOP Ø7 | 0.28 inch

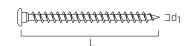
CODE	В		F	I	5	s	
	[mm]	[in]	[mm]	[in]	[mm]	[in]	
LOCKSTOP7	26,5	10.43	38	9.37	15	0.59	50



The use of LOCK STOP is optional and does not affect structural performance.

LBS

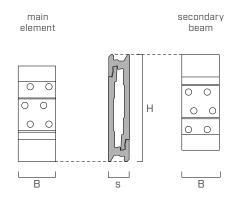
CODE	d	1	I	-		b	TX	pcs
	[mm]	[in]	[mm]	[in]	[mm]	[in]		
LBS780	7	0.28	80	3 1/8	75	2 15/16	TX30	100





^{*} number of connector pairs

■ GEOMETRY | LOCK T Ø5 | 0.20 inch



SINGLE CONNECTOR

LOCK T CON	LOCKTCONNECTOR		MAIN EI	LEMENT	SECONDARY BEAM		
		LBS	column	beam			
type	BxHxs	n _H +n _j - ØxL	B _{S,min} x H _{S,min}	B _{H,min} x H _{H,min}	b _{J,min}	x h _{j,min}	
	[in]	[in]	[in]	[in]	[i	n]	
			with pre-drilled hole	without pre-drilled hole	with pre-drilled hole	without pre-drilled hole	
LOCKT1880	0.69 x 3.15 x 0.79	2+2 - Ø0.20 x 1 15/16	1.38 x 1.97	1.97 x 3.74	1.38 x 3.15	1.69 x 3.15	
LOCKTIOOO	0.09 X 3.13 X 0.79	2+2 - Ø0.20 x 2 3/4	1.38 x 2.75	2.75 x 3.74	1.30 × 3.13	1.09 \ 3.13	
LOCKT3580	1.38 x 3.15 x 0.79	4+4 - Ø0.20 x 1 15/16	2.08 x 1.97	1.97 x 3.74	2.08 x 3.15	2.40 x 3.15	
1001(13300	1.30 X 3.13 X 0.73	4+4 - Ø0.20 x 2 3/4	2.08 x 2.75	2.75 x 3.74	2.00 X 3.13	2.10 X 3.13	
LOCKT35100	1.38 x 3.93 x 0.79	6+6 - Ø0.20 x 1 15/16	2.08 x 1.97	1.97 x 4.53	2.08 x 3.98	2.40 x 3.98	
10 011 100100	1.50 X 5.55 X 5.75	6+6 - Ø0.20 x 2 3/4	2.08 x 2.75	2.75 x 4.53	2.00 x 3.30	2.10 X 3.30	
LOCKT35120	1.38 x 4.72 x 0.79	8+8 - Ø0.20 x 1 15/16	2.08 x 1.97	1.97 x 5.31	2.08 x 4.72	2.40 x 4.72	
LOCKIDOLLO	1.30 X 1.72 X 0.73	8+8 - Ø0.20 x 2 3/4	2.08 x 2.75	2.75 x 5.31	2.00 X 1.72	2.10 X 1.72	
LOCKT53120	2.06 x 120 x 0.79	06 x 120 x 0.79 12+12 - Ø0.20 x 1 15/16 2.75 x 1.97 1.97 x 5.31 2.75		2.75 x 4.72	3.07 x 4.72		
10 CIV 30110	2.00 X 120 X 0.75	12+12 - Ø0.20 x 2 3/4	2.75 x 2.75	2.75 x 5.31	2.75 X 4.72	3.07 X 4.72	

COUPLED CONNECTORS

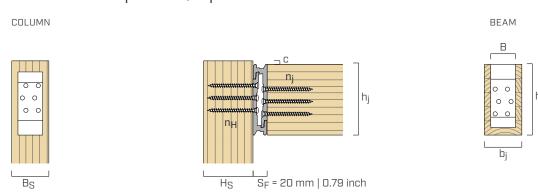
LOCK T CONNECTOR		SCREWS	MAIN EI	EMENT	SECONDARY BEAM	
		LBS	column	beam		
type	BxHxs	B x H x s n _H +n _j - ØxL		B _{H,min} x H _{H,min}	b _{J,min} x h _{j,min}	
	[in]	[in]	[in]	[in]	[i	n]
			with pre-drilled hole	without pre-drilled hole	with pre-drilled hole	without pre-drilled hole
LOCKT 35100 + 35100	2.75 x 3.94 x 0.79	12+12 - Ø0.20 x 1 15/16	3.46 x 1.97	1.97 x 4.53	3.46 x 3.98	3.78 x 3.98
LOCK 33100 + 33100	2.73 X 3.94 X 0.79	12+12 - Ø0.20 x 2 3/4	3.46 x 2.75	2.75 x 4.53	3.40 X 3.90	3.76 X 3.96
LOCKT 35120 +35120	2.75 x 3.94 x 0.79	16+16 - Ø0.20 x 1 15/16	3.46 x 1.97	1.97 x 4.53	3.46 x 4.72	3.78 x 4.72
LOCK 33120 +33120	2.73 x 3.94 x 0.79	16+16 - Ø0.20 x 2 3/4	3.46 x 2.75	2.75 x 4.53	3.40 X 4.72	3.76 X 4.72
LOCKT 35120 + 53120	3.44 x 4.72 x 0.79	20+20 - Ø0.20 x 1 15/16	4.13 x 1.97	1.97 x 5.31	4.13 x 4.72	4.45 x 4.72
LOCK 1 33120 + 33120	3.44 x 4./2 x 0./9	20+20 - Ø0.20 x 2 3/4	4.13 x 2.75	2.75 x 5.31	4.13 X 4.72	4.40 X 4.72



■ INSTALLATION ON BEAM | LOCK T Ø5 | 0.20 inch

The H_F dimension refers to the minimum height of the grooving at constant width. The rounded part must be taken into account when grooving.

■ INSTALLATION ON COLUMN | LOCK T Ø5 | 0.20 inch



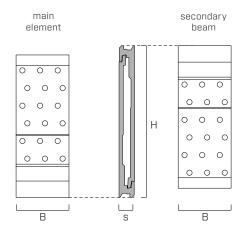
■ CONNECTOR POSITIONING | LOCK T Ø5 | 0.20 inch

connector		C _{min}
	[mm]	[in]
LOCKT1880	7,5	0.29
LOCKT3580	7,5	0.29
LOCKT35100	5,0	0.20
LOCKT35120	2,5	0.98
LOCKT53120	2,5	0.98

For installation on column, respecting the minimum distance of the screw from the unloaded end of the column, requires to lower the connector by a quantity c, compared to the end of the column. This can be achieved either by raising the column with respect to the to the top of the beam (as in the image) or by lowering the connector with respect to the top of the beam by a c amount.



■ GEOMETRY | LOCK T Ø7 | 0.28 inch



SINGLE CONNECTOR

LOCK T CONNECTOR		SCREWS	MAIN ELEMENT		SECONDARY BEAM		
		LBS	column	beam			
type	BxHxs		B _{S,min} x H _{S,min}	B _{H,min} x H _{H,min}	b _{J,min} x h _{j,min}		
	[in]	[in]	[in] [in] with without pre-drilled hole pre-drilled hole		[in]		
					with pre-drilled hole	without pre-drilled hole	
LOCKT50135	1.97 x 5.31 x 0.86	6+6 - Ø0.28 x 3 1/8	2.91 x 3.15	3.15 x 6.10	2.91 x 5.31	3.15 x 5.51 ⁽¹⁾	
LOCKT50175	1.97 x 6.89 x 0.86	8+8 - Ø0.28 x 3 1/8	2.91 x 3.15	3.15 x 7.48	2.91 x 6.89	3.15 x 6.89	
LOCKT75175	2.95 x 6.89 x 0.86	12+12 - Ø0.28 x 3 1/8	3.90 x 3.15	3.15 x 7.48	3.90 x 6.89	4.13 x 6.89	
LOCKT75215	2.95 x 8.46 x 0.86	18+18 - Ø0.28 x 3 1/8	3.90 x 3.15	3.15 x 9.06	3.90 x 6.89	4.13 x 8.46	
LOCKT100215	3.94 x 8.46 x 0.86	24+24 - Ø0.28 x 3 1/8	4.88 x 3.15	3.15 x 9.06	4.88 x 8.46	5.19 x 8.46	

COUPLED CONNECTORS

LOCK T CONNECTOR		SCREWS	MAIN ELEMENT		SECONDARY BEAM		
		LBS	column	beam			
type	BxHxs	n _H +n _j - ØxL B _{S,min} x H _{S,}		B _{H,min} x H _{H,min}	b _{J,min} x h _{j,min}		
	[in]	[in]	[in] [in] with without pre-drilled hole pre-drilled hole		[in]		
					with pre-drilled hole	without pre-drilled hole	
LOCKT 50135 + 50135	3.94 x 5.31 x 0.86	12+12 - Ø0.28 x 3 1/8	4.88 x 3.15	3.15 x 5.90	4.88 x 5.31	5.19 x 5.51 ⁽¹⁾	
LOCKT 50175 + 50175	3.94 x 6.89 x 0.86	16+16 - Ø0.28 x 3 1/8	4.88 x 3.15	3.15 x 7.48	4.88 x 6.88	5.19 x 6.88	
LOCKT 50175 + 75175	4.92 x 6.89 x 0.86	20+20 - Ø0.28 x 3 1/8	5.86 x 3.15	3.15 x 7.48	5.86 x 6.88	6.10 x 6.88	
LOCKT 75215 + 75215	5.90 x 8.46 x 0.86	36+36 - Ø0.28 x 3 1/8	6.85 x 3.15	3.15 x 9.05	6.85 x 8.46	7.08 x 8.46	
LOCKT 75215 + 100215	6.89 x 8.46 x 0.86	42+42 - Ø0.28 x 3 1/8	7.83 x 3.15	3.15 x 9.05	7.83 x 8.46	8.07 x 8.46	

NOTES:

 $^{^{(1)}}$ In case of installation without pre-drilled hole, the LOCKT50135 connector must be installed 5 mm | 0.20 inch lower than the upper face of the secondary beam, in order to respect the minimum distances of the screws.

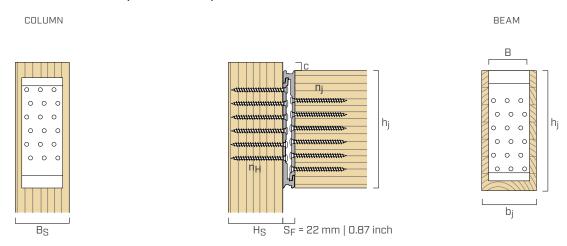


■ INSTALLATION ON BEAM | LOCK T Ø7 | 0.28 inch

MAIN BEAM SECONDARY BEAM В B_F≥B nį 0 0 0 0 ummummun 0 0 0 0 0 0 0 0 HF≥H 0 hį H_{H} H_H 0 0 0 0 0 0 0 0 0 0 0 0 0 0 bį S_F = 22 mm | 0.87 inch Вн

The H_F dimension refers to the minimum height of the grooving at constant width. The rounded part must be taken into account when grooving.

■ INSTALLATION ON COLUMN | LOCK T Ø7 | 0.28 inch



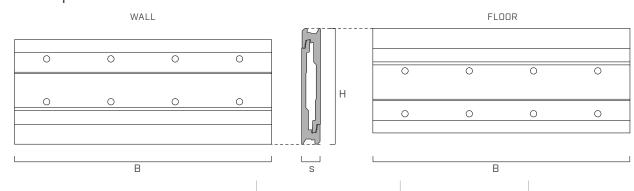
■ CONNECTOR POSITIONING | LOCK T Ø7 | 0.28 inch

connector		c _{min}					
	[mm]	[in]					
LOCKT50135	15	0.59					
LOCKT50175	5	0.20					
LOCKT75175	5	0.20					
LOCKT75215	15	0.59					
LOCKT100215	15	0.59					

For installation on column, respecting the minimum distance of the screw from the unloaded end of the column, requires to lower the connector by a quantity c, compared to the end of the column. This can be achieved either by raising the column with respect to the to the top of the beam (as in the image) or by lowering the connector with respect to the top of the beam by a c amount.

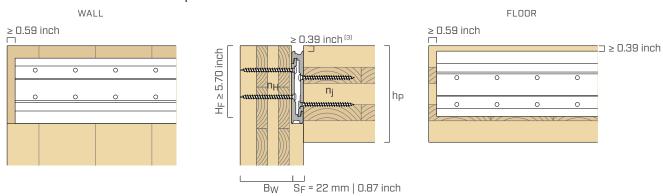


■ GEOMETRY | LOCKTFLOOR

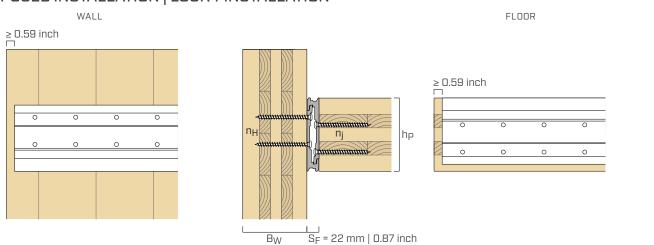


CONNECTOR LOCK I FLOOR			SUREWS	WALL	FLUUR	
			LBS			
type	no. of modules ⁽²⁾	BxHxs	n _H +n _j - ØxL	B _{W,min}	h _{p,min}	
		[in]	[in]	[in]	[in]	
LOCKTFLOOR135	1	11.81 x 5.31 x 0.86	8+8 - Ø0.28 x 3 1/8			
LOCKTFLOOR135	2	23.62 x 5.31 x 0.86	16+16 - Ø0.28 x 3 1/8	7 15	5.15 ⁽³⁾	
LOCKTFLOOR135	CKTFLOOR135 3		24+24 - Ø0.28 x 3 1/8	3.15	5.13	
LOCKTFLOOR135	4	47.24 x 5.31 x 0.86	32+32 - Ø0.28 x 3 1/8			

■ CONCEALED INSTALLATION | LOCK T FLOOR



■ EXPOSED INSTALLATION | LOCK T INSTALLATION



NOTES:



 $^{^{\}rm (2)}$ The connector with 1200 mm | 47.24 $\,$ inch length can be cut into modules with 300 mm | 11.81 inch width.

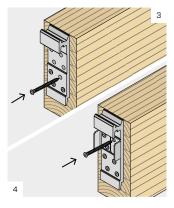
 $^{^{(3)}}$ In case of installation with the floor aligned to the upper side of the wall, the connector should be installed 10 mm | 0.39 inch from the top edge of the CLT floor. This allows the minimum distance between the screws in the wall with respect to the top of the panel. In this case, the minimum thickness of the h_{p} floor is 145 mm | 5.70 inch.

INSTALLATION

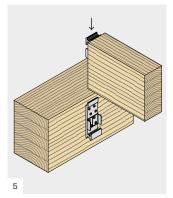
EXPOSED INSTALLATION WITH LOCK STOP



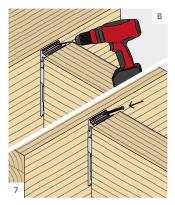
Place the connector on the main element and fasten the first screws. When using LOCK STOP (optional) position LOCK STOP and fasten the remaining screws.



Place the connector on the secondary beam and fasten the first screws. When using LOCK STOP (optional) position LOCK STOP and fasten the remaining screws.

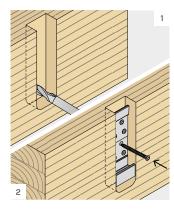


Hook the secondary beam fitting it from the top to the bottom.

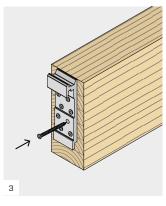


It is possible to insert antislip screws without structural function, by drilling one hole \emptyset 5 | 0.20 inch inclined at 45° in the upper part of the connector. A \emptyset 5 | 0.20 inch screw must be inserted in the hole.

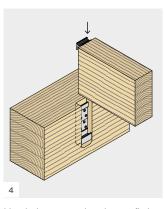
CONCEALED INSTALLATION



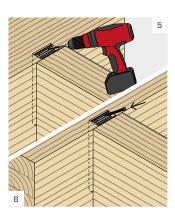
Carry out the grooving on the main element. Place the connector on the main element and fasten all screws.



Place the connector on the secondary beam and fasten all screws.

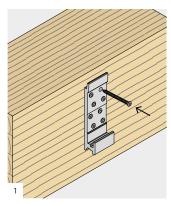


Hook the secondary beam fitting it from the top to the bottom.

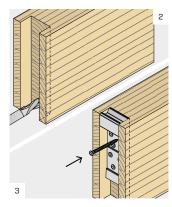


It is possible to insert anti-slip screws without structural function, by drilling one or more holes Ø5 | 0.20 inch inclined at 45° in the upper part of the connector. A Ø5 | 0.20 inch screw must be inserted in the holes.

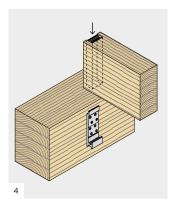
SEMI-CONCEALED INSTALLATION



Place the connector on the main element and fasten all screws.



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



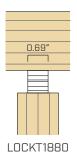
Hook the secondary beam fitting it from the top to the bottom.

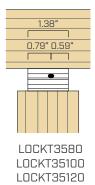


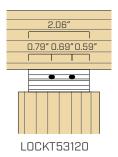
It is possible to insert anti-slip screws without structural function, by drilling one or more holes $\emptyset 5 \mid 0.20$ inch inclined at 45° in the upper part of the connector. A $\emptyset 5 \mid 0.20$ inch screw must be inserted in the holes.

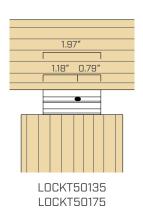
OPTIONAL INCLINED SCREWS

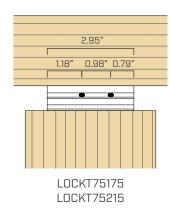
The holes inclined at 45° must be drilled on site using a drill and iron drill bit with a diameter of 5 mm | 0.20 inch. The image shows the positions for the optional inclined holes.

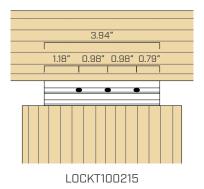




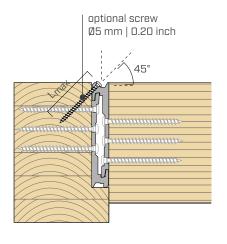




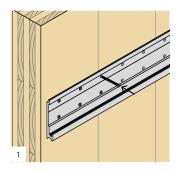




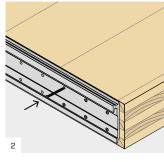
type	optional screws Ø5 0.20"					
	L _{max} [mm]	L _{max} [in]				
LOCKT1880						
LOCKT3580						
LOCKT35100	50	1.97				
LOCKT35120						
LOCKT53120						
LOCKT50135						
LOCKT50175						
LOCKT75175	80	3.15				
LOCKT75215						
LOCKT100215						



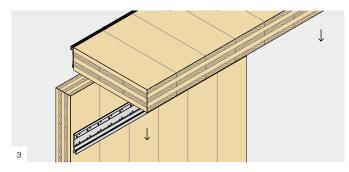
■ LOCK T FLOOR INSTALLATION ON CLT



Place the connector on the wall and fasten all screws.



Place the connector on the floor and fasten all screws.



Hook the floor fitting it from the top to the bottom.

■ STRUCTURAL VALUES | ADJUSTED LATERAL DESIGN VALUES

LOCK T Ø5 | 0.20 inch

LOCK T CONNECTOR		TIMBER					ALUMINIUM
type	BxHxs	LBS screws $n_H + n_j - \emptyset x L$	Z'				Z′ _{alu} *
	[in]	[in]		[lbs]			[lbs]
			G=0.35	G=0.42	G=0.49	G=0.55	
LOCKT1880	0.69 x 3.15 x 0.79	2+2 - Ø0.20 x 1 15/16 2+2 - Ø0.20 x 2 3/4	159	187	214	237	1798
LOCKT3580	1.38 x 3.15 x 0.79	4+4 - Ø0.20 x 1 15/16 4+4 - Ø0.20 x 2 3/4	318	375	429	474	3597
LOCKT35100	1.38 x 3.94 x 0.79	6+6 - Ø0.20 x 1 15/16 6+6 - Ø0.20 x 2 3/4	478	562	644	712	3597
LOCKT35120	1.38 x 4.72 x 0.79	8+8 - Ø0.20 x 1 15/16 8+8 - Ø0.20 x 2 3/4	637	750	859	949	3597
LOCKT53120	20.07 x 4.72 x 0.79	12+12 - Ø0.20 x 1 15/16 12+12 - Ø0.20 x 2 3/4	956	1125	1288	1424	5395
LOCKT 35100 + 35100	2.75 x 3.94 x 0.79	12+12 - Ø0.20 x 1 15/16 12+12 - Ø0.20 x 2 3/4	956	1125	1288	1424	7193
LOCKT 35120 +35120	2.75 x 4.72 x 0.79	16+16 - Ø0.20 x 1 15/16 16+16 - Ø0.20 x 2 3/4	1275	1500	1718	1899	7193
LOCKT 35120 + 53120	3.44 x 4.72 x 0.79	20+20 - Ø0.20 x 1 15/16 20+20 - Ø0.20 x 2 3/4	1594	1875	2147	2374	8992

^{*} Values according to ETA-19/0831.

LOCK T Ø7 | 0.28 inch

LOCK T CONNECTOR		TIMBER					ALUMINIUM
		LBS screws					
type	BxHxs	n _H +n _j - ØxL	Z'				Z′ _{alu} *
	[in]	[in]	[lbs]			[lbs]	
			G=0.35	G=0.42	G=0.49	G=0.55	
LOCKT50135	1.97 x 5.31 x 0.87	6+6 - Ø0.28 x 3 1/8	837	985	1128	1247	5395
LOCKT50175	1.97 x 6.89 x 0.87	8+8 - Ø0.28 x 3 1/8	1116	1313	1504	1663	7194
LOCKT75175	2.95 x 6.89 x 0.87	12+12 - Ø0.28 x 3 1/8	1675	1970	2257	2495	10791
LOCKT75215	2.95 x 8.46 x 0.87	18+18 - Ø0.28 x 3 1/8	2513	2956	3385	3743	10791
LOCKT100215	3.93 x 8.46 x 0.87	24+24 - Ø0.28 x 3 1/8	3350	3941	4514	4991	14388
LOCKT 50135 + 50135	3.93 x 5.31 x 0.87	12+12 - Ø0.28 x 3 1/8	1675	1970	2257	2495	10791
LOCKT 50175 + 50175	3.93x 6.89 x 0.87	16+16 - Ø0.28 x 3 1/8	2233	2627	3009	3327	14388
LOCKT 50175 + 75175	4.92 x 6.89 x 0.87	20+20 - Ø0.28 x 3 1/8	2792	3284	3475	4159	17985
LOCKT 75215 + 75215	5.90 x 8.46 x 0.87	36+36 - Ø0.28 x 3 1/8	5026	5912	6771	7487	21582
LOCKT 75215 + 100215	6.89 x 8.46 x 0.87	42+42 - Ø0.28 x 3 1/8	5863	6897	7900	8735	25179

^{*} Values according to ETA-19/0831.



STRUCTURAL VALUES | ADJUSTED LATERAL DESIGN VALUES

LOCK T FLOOR FOR CLT

CONNECTOR LOCK T FLOOR		TIMBER					ALUMINIUM
		LBS screws					
type	BxHxs	n _H +n _j - ØxL	Z'				Z′ _{alu} *
	[in]	[in]	[lbs]			[lbs]	
			G=0.35	G=0.42	G=0.49	G=0.55	
LOCKTFLOOR135	11.81 x 5.31 x 0.86	8+8 - Ø0.28 x 3 1/8	1116	1313	2504	1663	43164
LOCKTFLOOR135	23.62 x 5.31 x 0.86	16+16 - Ø0.28 x 3 1/8	2233	2627	3009	3327	86327
LOCKTFLOOR135	35.43 x 5.31 x 0.86	24+24 - Ø0.28 x 3 1/8	3350	3941	4514	4991	129491
LOCKTFLOOR135	47.24 x 5.31 x 0.86	32+32 - Ø0.28 x 3 1/8	4467	5255	6019	6655	172654

^{*} Values according to ETA-19/0831.

GENERAL PRINCIPLES:

- Values calculated according to the NDS (2018) for screws without predrilled holes and according to the design model reported in ETA-19/0831.
 The strength value can be accepted as valid, on the safety side, even in the presence of pre-drill.
- The resistance of the aluminium connector is according to the ETA 19/0831. In the calculation of the aluminium resistance it was used the coefficient γ_{M2} , the partial safety factor for aluminium sections subject to tension. According to EN 1999-1-1, it was considered equal to γ_{M2} =1.25.
- Dimensioning and verification of the timber elements must be carried out separately. In particular, for loads perpendicular to the beam axis, it is recommended to perform a splitting check in both wooden elements.
- If coupled connectors are used, special care must be taken in alignment during installation to avoid different stresses in the two connectors.
- Screws with the same length must be used in all holes, separately for each side of the connector. It is possible to use screws of different length in the two connectors, main element side and secondary beam side.

- The connector must always be fully fastened using all the holes.
- The pre-drilled hole is not required for screws on main or secondary beam, with characteristic density $\rho_k \le 420 \, \text{kg/m}^3$. The pre-drilled hole is mandatory on main or secondary beam with characteristic density $\rho_k > 420 \, \text{kg/m}^3$ (G=0.47).
- For screws on column, pre-drilling is always mandatory.
- For the LOCKTFLOOR135 connector installed on CLT panels no pre-drilled hole is required.
- The end grain factor is $C_{eg} = 0.67$, according to the NDS (2018).
- The factors used to calculate the adjusted design values are the following: C M=1, C t=1, C D=1, C G=1, C =1.
- It is up to the engineer to understand the calculation procedure and to verify it.
- The resistences of the connection is calculated considering the same specific gravity for the primary and secondary beam.



