

Product data sheet – KonstruX fully threaded screws

Product description

KonstruX fully threaded screws maximise a joint's load-bearing capacity with a high thread-extraction resistance in both components. If partially threaded screws are used, the joint's load-bearing capacity is limited by the considerably lower head pull-through resistance in the attached part.

KonstruX fully threaded screws are a cost-saving alternative to traditional connections or timber joints such as joist hangers and beams.

Advantages

ST drill tip:

- Reduced screwing torque
- High extraction resistance

AG screw tip:

- Faster and easier screwing
- Reduced splitting effect



KonstruX ST cylinder head

KonstruX ST, countersunk head

KonstruX AG, countersunk head

Approvals

- European Technical Assessment ETA 11/0024



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Product table

KonstruX ST fully threaded screw, Cylinder head, galvanised			
Art. no.	Dimensions [mm]	Drive	PU
Ø 6,5 mm			
904808	6,5 x 80	TX30 ●	100
904809	6,5 x 100	TX30 ●	100
904810	6,5 x 120	TX30 ●	100
904811	6,5 x 140	TX30 ●	100
904812	6,5 x 160	TX30 ●	100
904813	6,5 x 195	TX30 ●	100
Ø 8,0 mm			
904825	8,0 x 155	TX40 ●	50
904826	8,0 x 195	TX40 ●	50
904827	8,0 x 220	TX40 ●	50
904828	8,0 x 245	TX40 ●	50
904829	8,0 x 295	TX40 ●	50
904830	8,0 x 330	TX40 ●	50
904831	8,0 x 375	TX40 ●	50
904832	8,0 x 400	TX40 ●	50
944804	8,0 x 430	TX40 ●	50
944805	8,0 x 480	TX40 ●	50
Ø 10,0 mm			
904815	10,0 x 300	TX50 ●	25
904816	10,0 x 330	TX50 ●	25
904817	10,0 x 360	TX50 ●	25
904818	10,0 x 400	TX50 ●	25
904819	10,0 x 450	TX50 ●	25
904820	10,0 x 500	TX50 ●	25
904821	10,0 x 550	TX50 ●	25
904822	10,0 x 600	TX50 ●	25

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KonstruX ST fully threaded screw, Countersunk head, galvanised			
Art. no.	Dimensions [mm]	Drive	PU
Ø 8,0 mm			
904790	8,0 x 95	TX40 ●	50
904791	8,0 x 125	TX40 ●	50
904792	8,0 x 155	TX40 ●	50
904793	8,0 x 195	TX40 ●	50
904794	8,0 x 220	TX40 ●	50
904795	8,0 x 245	TX40 ●	50
904796	8,0 x 270	TX40 ●	50
904797	8,0 x 295	TX40 ●	50
904798	8,0 x 330	TX40 ●	50
904799	8,0 x 375	TX40 ●	50
904800	8,0 x 400	TX40 ●	50
904801	8,0 x 430	TX40 ●	50
904802	8,0 x 480	TX40 ●	50
Ø 10,0 mm			
904770	10,0 x 125	TX50 ●	25
904771	10,0 x 155	TX50 ●	25
904772	10,0 x 195	TX50 ●	25
904773	10,0 x 220	TX50 ●	25
904774	10,0 x 245	TX50 ●	25
904775	10,0 x 270	TX50 ●	25
904776	10,0 x 300	TX50 ●	25
904777	10,0 x 330	TX50 ●	25
904778	10,0 x 360	TX50 ●	25
904779	10,0 x 400	TX50 ●	25
904780	10,0 x 450	TX50 ●	25
904781	10,0 x 500	TX50 ●	25
904782	10,0 x 550	TX50 ●	25
904783	10,0 x 600	TX50 ●	25

Product data sheet – KonstruX fully threaded screws

KonstruX AG fully threaded screw, Countersunk head, galvanised			
Art. no.	Dimensions [mm]	Drive	PU
905737	11,3 x 300	TX50 •	20
905738	11,3 x 340	TX50 •	20
905739	11,3 x 380	TX50 •	20
905740	11,3 x 420	TX50 •	20
905741	11,3 x 460	TX50 •	20
905742	11,3 x 500	TX50 •	20
905743	11,3 x 540	TX50 •	20
905744	11,3 x 580	TX50 •	20
905745	11,3 x 620	TX50 •	20
905746	11,3 x 660	TX50 •	20
905747	11,3 x 700	TX50 •	20
905748	11,3 x 750	TX50 •	20
905749	11,3 x 800	TX50 •	20
904750	11,3 x 900	TX50 •	20
904751	11,3 x 000	TX50 •	20

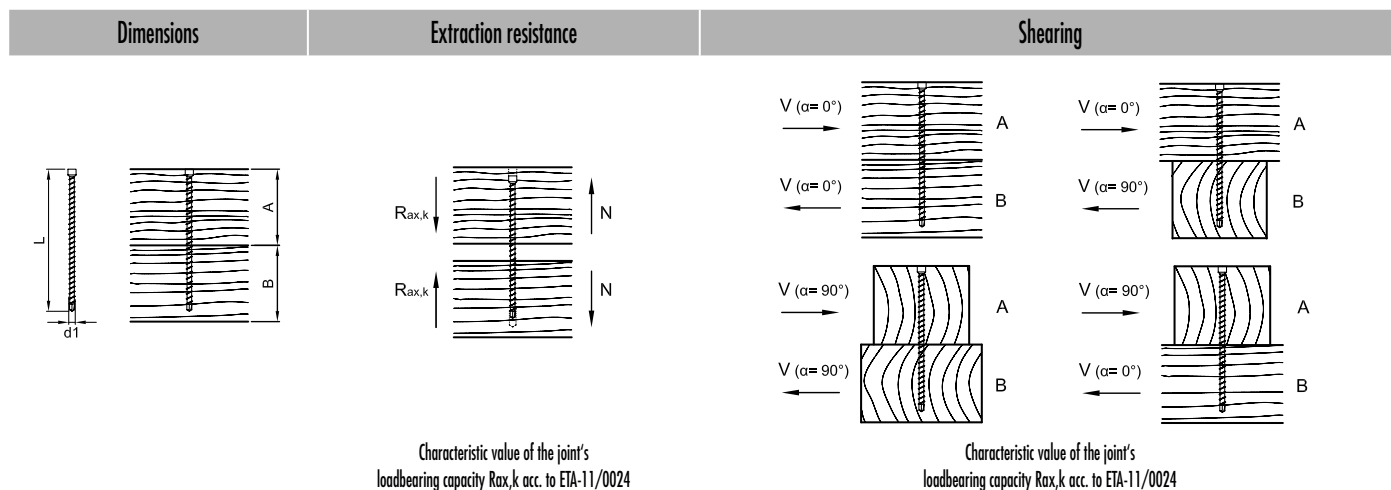
Product data sheet – KonstruX fully threaded screws

Example applications		Cylinder head			Countersunk head			
		Ø 6,5 [mm]	Ø 8,0 [mm]	Ø 10,0 [mm]	Ø 6,5 [mm]	Ø 8,0 [mm]	Ø 10,0 [mm]	Ø 11,3 [mm]
<p>Timber-timber tensile loading</p>	<p>Timber-timber shearing</p>	X	X	X	X	X	X	X
<p>Timber-timber under tension at 45°</p>	<p>Timber-timber under tension at 45°</p>	X	X	X	X	X	X	X
<p>Steel-timber tensile loading</p>	<p>Steel-timber shearing</p>	-	-	-	X	X	X	X
<p>Timber-timber under tension at 45°</p>	<p>Timber-timber under tension at 45°</p>	-	-	-	X	X	X	X
<p>Main-secondary beam connection</p>	<p>Post-crosspiece connection</p>	X	X	X	X	X	X	-
<p>Support reinforcement</p>	<p>Support reinforcement</p>	X	X	X	X	X	X	X
<p>Transverse-shear reinforcement at notch</p>	<p>Transverse-shear reinforcement at hole</p>	X	X	X	X	X	X	X
<p>Joist doubling</p>		-	X	X	-	X	X	X
<p>Transverse-shear reinforcement of building trusses</p>		-	-	X	-	-	X	X

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Product data sheet – KonstruX fully threaded screws

KonstruX ST with cylinder head and new drill point 6,5 to 10,0 mm: timber/timber joints



Characteristic value of the joint's
loadbearing capacity $R_{ax,k}$ acc. to ETA-11/0024

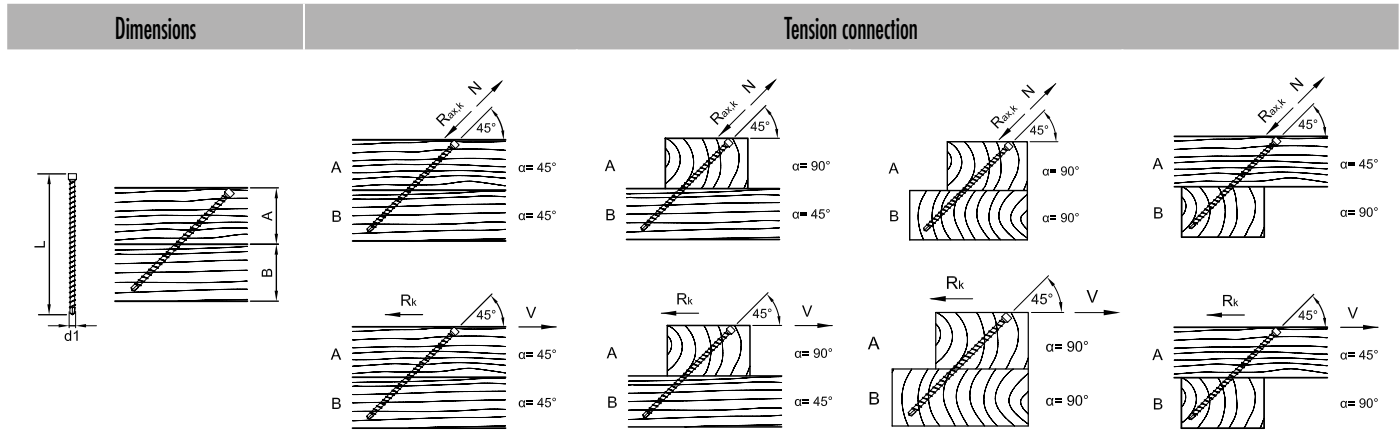
Characteristic value of the joint's
loadbearing capacity $R_{ax,k}$ acc. to ETA-11/0024

d1 x L [mm]	A [mm]	B [mm]	$R_{ax,k}^{a)}$ - [kN]	$R_k^{a)}$ - [kN]		$R_k^{a)}$ - [kN]	
				$\alpha = 0^\circ$	$\alpha = 90^\circ$	$\alpha_A = 0^\circ$	$\alpha_B = 90^\circ$
						$\alpha_A = 90^\circ$	$\alpha_B = 0^\circ$
6,5 x 120	60	80	4,75	3,93	3,47	3,93	3,47
6,5 x 140	80	80	4,75	3,93	3,47	3,47	3,93
6,5 x 160	80	100	6,33	4,32	3,86	4,32	3,86
6,5 x 195	100	100	7,52	4,62	4,16	4,16	4,62
8,0 x 155	80	80	7,11	5,67	4,99	4,99	5,67
8,0 x 195	100	100	9,01	6,15	5,46	5,46	6,15
8,0 x 220	120	120	9,48	6,27	5,58	5,58	6,27
8,0 x 245	120	140	11,38	6,74	6,06	6,74	6,06
8,0 x 295	140	160	13,28	7,21	6,42	7,21	6,42
8,0 x 330	160	180	15,17	7,69	6,42	7,69	6,42
8,0 x 375	180	200	17,07	7,79	6,42	7,79	6,42
8,0 x 400	200	220	18,97	7,79	6,42	7,79	6,42
8,0 x 430	220	220	19,92	7,79	6,42	6,42	7,79
8,0 x 480	240	260	22,76	7,79	6,42	7,79	6,42
10,0 x 300	160	160	16,15	9,48	8,48	8,48	9,48
10,0 x 330	160	180	18,46	10,06	8,90	10,06	8,90
10,0 x 360	180	200	20,76	10,64	8,90	10,64	8,90
10,0 x 400	200	220	23,07	10,89	8,90	10,89	8,90
10,0 x 450	220	240	25,38	10,89	8,90	10,89	8,90
10,0 x 500	240	280	27,68	10,89	8,90	10,89	8,90
10,0 x 550	260	300	29,99	10,89	8,90	10,89	8,90
10,0 x 600	300	320	33,00	10,89	8,90	10,89	8,90

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KonstruX ST with cylinder head and new drill point 6,5 to 10,0 mm: timber/timber joints

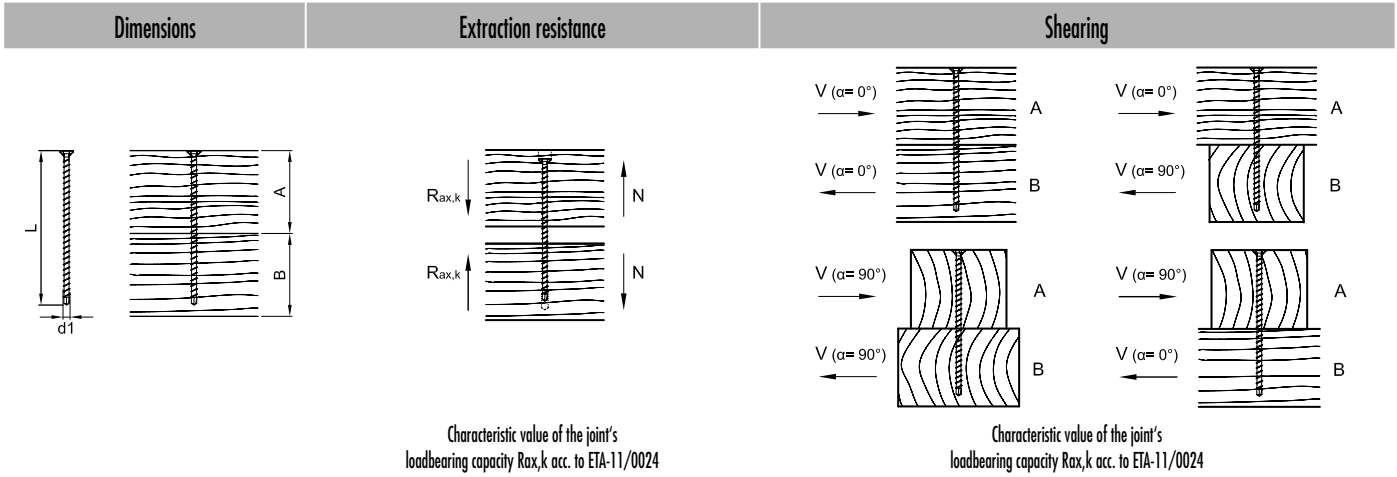


Characteristic value of the joint's load-bearing capacity $R_{ax,k}$ bzw. R_k acc. to ETA-11/0024

d1 x L [mm]	A [mm]	B [mm]	$\alpha = 45^\circ$		$\alpha_A = 90^\circ$ $\alpha_B = 45^\circ$		$\alpha_A = 90^\circ$ $\alpha_B = 90^\circ$		$\alpha_A = 45^\circ$ $\alpha_B = 90^\circ$	
			$R_{ax,k}^{aj}$ - [kN]	R_k^{aj} - [kN]	$R_{ax,k}^{aj}$ - [kN]	R_k^{aj} - [kN]	$R_{ax,k}^{aj}$ - [kN]	R_k^{aj} - [kN]	$R_{ax,k}^{aj}$ - [kN]	R_k^{aj} - [kN]
6,5 x 160	60	80	5,95	4,21	5,95	4,21	5,95	4,21	5,95	4,21
6,5 x 195	80	80	6,48	4,58	6,48	4,58	6,48	4,58	6,48	4,58
8,0 x 155	60	60	6,65	4,70	6,65	4,70	6,65	4,70	6,65	4,70
8,0 x 195	80	80	7,76	5,49	7,76	5,49	7,76	5,49	7,76	5,49
8,0 x 220	80	100	10,13	7,17	10,13	7,17	10,13	7,17	10,13	7,17
8,0 x 245	100	100	9,82	6,95	9,82	6,95	9,82	6,95	9,82	6,95
8,0 x 295	120	100	11,88	8,40	11,88	8,40	11,88	8,40	11,88	8,40
8,0 x 330	120	140	15,20	10,75	15,20	10,75	15,20	10,75	15,20	10,75
8,0 x 375	140	140	16,79	11,87	16,79	11,87	16,79	11,87	16,79	11,87
8,0 x 400	160	140	16,48	11,65	16,48	11,65	16,48	11,65	16,48	11,65
8,0 x 430	160	160	19,32	13,66	19,32	13,66	19,32	13,66	19,32	13,66
8,0 x 480	180	180	21,38	15,12	21,38	15,12	21,38	15,12	21,38	15,12
10,0 x 300	120	120	15,03	10,63	15,03	10,63	15,03	10,63	15,03	10,63
10,0 x 330	120	140	18,49	13,07	18,49	13,07	18,49	13,07	18,49	13,07
10,0 x 360	140	140	18,69	13,21	18,69	13,21	18,69	13,21	18,69	13,21
10,0 x 400	160	140	20,04	14,17	20,04	14,17	20,04	14,17	20,04	14,17
10,0 x 450	160	180	25,81	18,25	25,81	18,25	25,81	18,25	25,81	18,25
10,0 x 500	180	200	28,31	20,02	28,31	20,02	28,31	20,02	28,31	20,02
10,0 x 550	200	200	30,82	21,79	30,82	21,79	30,82	21,79	30,82	21,79
10,0 x 600	220	220	33,00	23,33	33,00	23,33	33,00	23,33	33,00	23,33

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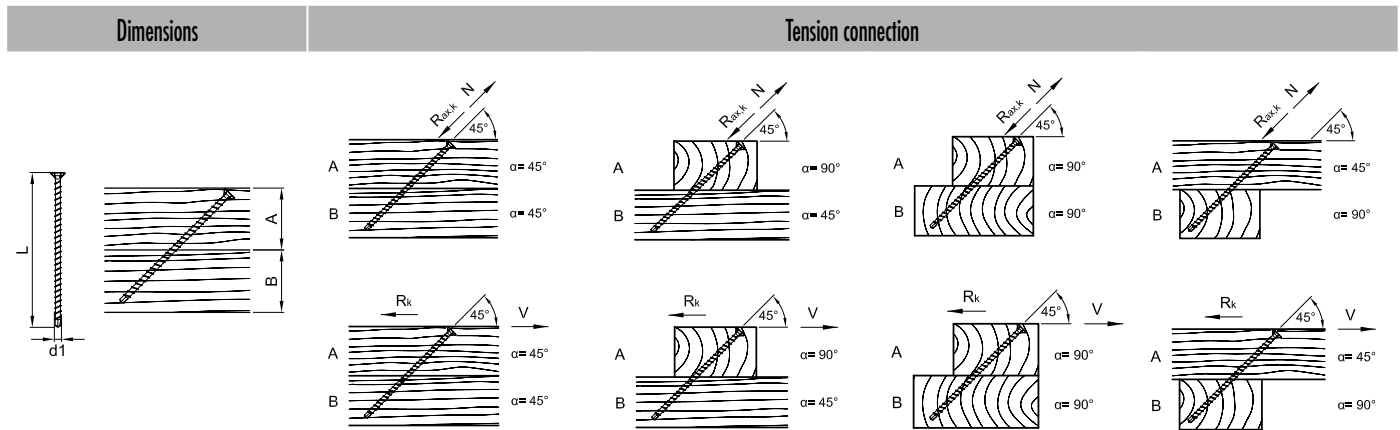
KonstruX ST with countersunk head and new drill point 6,5 and 10,0 mm: timber/timber joints



d1 x L [mm]	A [mm]	B [mm]	$R_{ax,k}^{aj}$ - [kN]	R_k^{aj} - [kN]			
				$\alpha = 0^\circ$	$\alpha = 90^\circ$	$\alpha_A = 0^\circ$	$\alpha_B = 90^\circ$
						$\alpha_A = 90^\circ$	$\alpha_B = 0^\circ$
6,5 x 120	60	80	4,75	3,93	3,47	3,93	3,47
6,5 x 120	80	80	4,75	3,93	3,47	3,47	3,93
8,0 x 95	40	60	3,08	4,61	3,57	4,61	3,57
8,0 x 125	60	80	4,61	5,05	4,37	5,05	4,37
8,0 x 155	80	80	7,11	5,67	4,99	4,99	5,67
8,0 x 195	100	100	9,01	6,15	5,46	5,46	6,15
8,0 x 220	120	120	9,48	6,27	5,58	5,58	6,27
8,0 x 245	120	140	11,38	6,74	6,06	6,74	6,06
8,0 x 270	140	140	12,33	6,98	6,29	6,29	6,98
8,0 x 295	140	160	13,28	7,21	6,42	7,21	6,42
8,0 x 330	160	180	15,17	7,69	6,42	7,69	6,42
8,0 x 375	180	200	17,07	7,79	6,42	7,79	6,42
8,0 x 400	200	220	18,97	7,79	6,42	7,79	6,42
8,0 x 430	220	220	19,92	7,79	6,42	6,42	7,79
8,0 x 480	240	260	22,76	7,79	6,42	7,79	6,42
10,0 x 125	60	80	6,92	7,18	6,18	7,18	6,18
10,0 x 155	80	80	8,65	7,61	6,61	6,61	7,61
10,0 x 195	100	100	10,96	8,19	7,19	7,19	8,19
10,0 x 220	120	120	11,53	8,33	7,33	7,33	8,33
10,0 x 245	120	140	13,84	8,91	7,91	8,91	7,91
10,0 x 270	140	140	14,99	9,20	8,20	8,20	9,20
10,0 x 300	160	160	16,15	9,48	8,48	8,48	9,48
10,0 x 330	160	180	18,46	10,06	8,90	10,06	8,90
10,0 x 360	180	200	20,76	10,64	8,90	10,64	8,90
10,0 x 400	200	220	23,07	10,89	8,90	10,89	8,90
10,0 x 450	220	240	25,38	10,89	8,90	10,89	8,90
10,0 x 500	240	280	27,68	10,89	8,90	10,89	8,90
10,0 x 550	260	300	29,99	10,89	8,90	10,89	8,90
10,0 x 600	300	320	33,00	10,89	8,90	10,89	8,90

Product data sheet – KonstruX fully threaded screws

KonstruX ST with countersunk head and new drill point 8,0 and 10,0 mm: timber/timber joints

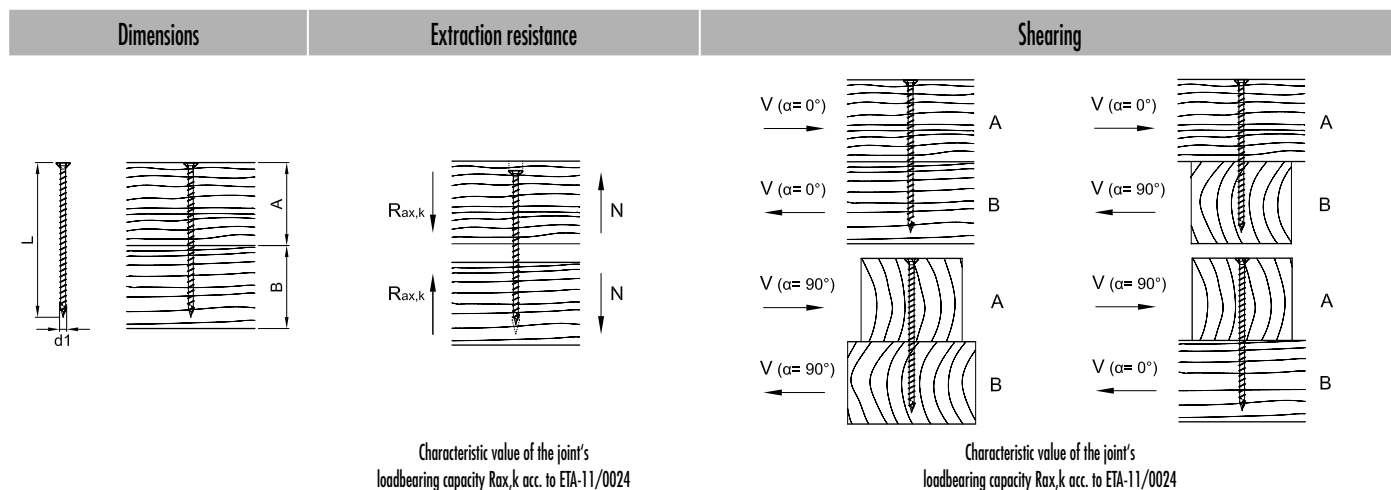


Characteristic value of the joint's load-bearing capacity $R_{ox,k}$ or R_k acc. to ETA-11/0024

$d1 \times L$ [mm]	A [mm]	B [mm]	$R_{ox,k}^{aj}$ - [kN]	R_k^{aj} - [kN]	$R_{ox,k}^{aj}$ - [kN]	R_k^{aj} - [kN]	$R_{ox,k}^{aj}$ - [kN]	R_k^{aj} - [kN]	$R_{ox,k}^{aj}$ - [kN]	R_k^{aj} - [kN]
			$\alpha = 45^\circ$		$\alpha_A = 90^\circ$ $\alpha_B = 45^\circ$		$\alpha_A = 90^\circ$ $\alpha_B = 90^\circ$		$\alpha_A = 45^\circ$ $\alpha_B = 90^\circ$	
8,0 x 155	60	60	6,65	4,70	6,65	4,70	6,65	4,70	6,65	4,70
8,0 x 195	80	80	7,76	5,49	7,76	5,49	7,76	5,49	7,76	5,49
8,0 x 220	80	100	10,13	7,17	10,13	7,17	10,13	7,17	10,13	7,17
8,0 x 245	100	100	9,82	6,95	9,82	6,95	9,82	6,95	9,82	6,95
8,0 x 270	100	120	12,19	8,62	12,19	8,62	12,19	8,62	12,19	8,62
8,0 x 295	120	100	11,88	8,40	11,88	8,40	11,88	8,40	11,88	8,40
8,0 x 330	120	140	15,20	10,75	15,20	10,75	15,20	10,75	15,20	10,75
8,0 x 375	140	140	16,79	11,87	16,79	11,87	16,79	11,87	16,79	11,87
8,0 x 400	160	140	16,48	11,65	16,48	11,65	16,48	11,65	16,48	11,65
8,0 x 430	160	160	19,32	13,66	19,32	13,66	19,32	13,66	19,32	13,66
8,0 x 480	180	180	21,38	15,12	21,38	15,12	21,38	15,12	21,38	15,12
10,0 x 220	80	100	12,33	8,72	12,33	8,72	12,33	8,72	12,33	8,72
10,0 x 245	100	100	11,95	8,45	11,95	8,45	11,95	8,45	11,95	8,45
10,0 x 270	100	120	14,83	10,49	14,83	10,49	14,83	10,49	14,83	10,49
10,0 x 300	120	120	15,03	10,63	15,03	10,63	15,03	10,63	15,03	10,63
10,0 x 330	120	140	18,49	13,07	18,49	13,07	18,49	13,07	18,49	13,07
10,0 x 360	140	140	18,69	13,21	18,69	13,21	18,69	13,21	18,69	13,21
10,0 x 400	160	140	20,04	14,17	20,04	14,17	20,04	14,17	20,04	14,17
10,0 x 450	160	180	25,81	18,25	25,81	18,25	25,81	18,25	25,81	18,25
10,0 x 500	180	200	28,31	20,02	28,31	20,02	28,31	20,02	28,31	20,02
10,0 x 550	200	200	30,82	21,79	30,82	21,79	30,82	21,79	30,82	21,79
10,0 x 600	220	220	33,00	23,33	33,00	23,33	33,00	23,33	33,00	23,33

Product data sheet – KonstruX fully threaded screws

KonstruX with countersunk head and AG tip 11,3 mm: timber / timber connection



Characteristic value of the joint's
loadbearing capacity $R_{ax,k}$ acc. to ETA-11/0024

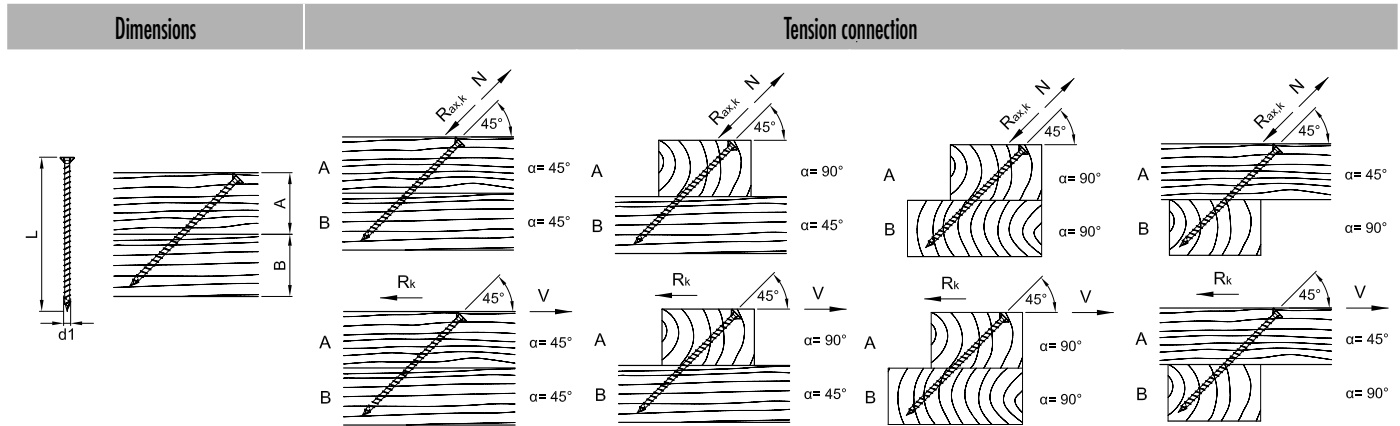
Characteristic value of the joint's
loadbearing capacity $R_{ax,k}$ acc. to ETA-11/0024

d1 x L [mm]	A [mm]	B [mm]	$R_{ax,k}^{aj}$ - [kN]	R_k^{aj} - [kN]		R_k^{aj} - [kN]	
				$\alpha = 0^\circ$		$\alpha = 90^\circ$	
				$\alpha_A = 0^\circ$	$\alpha_B = 90^\circ$	$\alpha_A = 90^\circ$	$\alpha_B = 0^\circ$
11,3 x 300	160	160	18,25	12,17	10,73	10,73	12,17
11,3 x 340	180	180	20,85	12,82	11,38	11,38	12,82
11,3 x 380	200	200	23,46	13,47	12,03	12,03	13,47
11,3 x 420	220	220	26,07	14,12	12,34	12,34	14,12
11,3 x 460	240	240	26,67	14,77	12,34	12,34	14,77
11,3 x 500	260	260	31,28	15,21	12,34	12,34	15,21
11,3 x 540	280	280	33,89	15,21	12,34	12,34	15,21
11,3 x 580	300	300	36,49	15,21	12,34	12,34	15,21
11,3 x 620	320	320	39,10	15,21	12,34	12,34	15,21
11,3 x 660	340	340	41,71	15,21	12,34	12,34	15,21
11,3 x 700	360	360	44,32	15,21	12,34	12,34	15,21
11,3 x 750	380	380	48,23	15,21	12,34	12,34	15,21
11,3 x 800	400	420	50,00	15,21	12,34	15,21	12,34
11,3 x 900	460	460	50,00	15,21	12,34	12,34	15,21
11,3 x 1000	500	520	50,00	15,21	12,34	15,21	12,34

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KonstruX with countersunk head and AG tip 11,3 mm: timber / timber connection

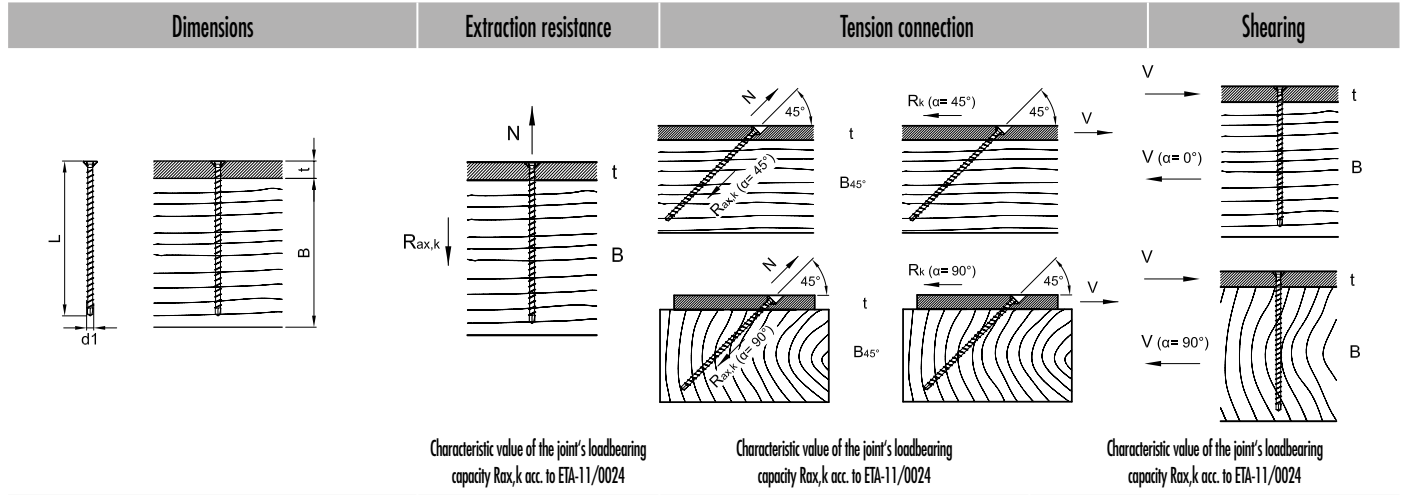


Characteristic value of the joint's load-bearing capacity $R_{ax,k}$ or R_k acc. to ETA-11/0024

d1 x L [mm]	A [mm]	B [mm]	$R_{ax,k}^{a)}$ - [kN]	$R_k^{a)}$ - [kN]	$R_{ax,k}^{a)}$ - [kN]	$R_k^{a)}$ - [kN]	$R_{ax,k}^{a)}$ - [kN]	$R_k^{a)}$ - [kN]	$R_{ax,k}^{a)}$ - [kN]	$R_k^{a)}$ - [kN]
			$\alpha = 45^\circ$		$\alpha_A = 90^\circ$ $\alpha_B = 45^\circ$		$\alpha_A = 90^\circ$ $\alpha_B = 90^\circ$		$\alpha_A = 45^\circ$ $\alpha_B = 90^\circ$	
11,3 x 300	120	120	16,98	12,01	16,98	12,01	16,98	12,01	16,98	12,01
11,3 x 340	140	120	18,51	13,09	18,51	13,09	18,51	13,09	18,51	13,09
11,3 x 380	140	140	23,72	16,77	23,72	16,77	23,72	16,77	23,72	16,77
11,3 x 420	160	160	25,25	17,85	25,25	17,85	25,25	17,85	25,25	17,85
11,3 x 460	180	160	26,78	18,93	26,78	18,93	26,78	18,93	26,78	18,93
11,3 x 500	180	200	31,99	22,62	31,99	22,62	31,99	22,62	31,99	22,62
11,3 x 540	200	200	33,52	23,70	33,52	23,70	33,52	23,70	33,52	23,70
11,3 x 580	220	220	35,04	24,78	35,04	24,78	35,04	24,78	35,04	24,78
11,3 x 620	220	240	40,26	28,47	40,26	28,47	40,26	28,47	40,26	28,47
11,3 x 660	240	240	41,79	29,55	41,79	29,55	41,79	29,55	41,79	29,55
11,3 x 700	260	260	43,31	30,63	43,31	30,63	43,31	30,63	43,31	30,63
11,3 x 750	280	280	46,14	32,63	46,14	32,63	46,14	32,63	46,14	32,63
11,3 x 800	300	280	48,97	34,63	48,97	34,63	48,97	34,63	48,97	34,63
11,3 x 900	320	340	50,00	35,36	50,00	35,36	50,00	35,36	50,00	35,36
11,3 x 1000	360	360	50,00	35,36	50,00	35,36	50,00	35,36	50,00	35,36

Product data sheet – KonstruX fully threaded screws

KonstruX ST with countersunk head and new drill point
6,5 and 10,0 mm: steel/timber joints

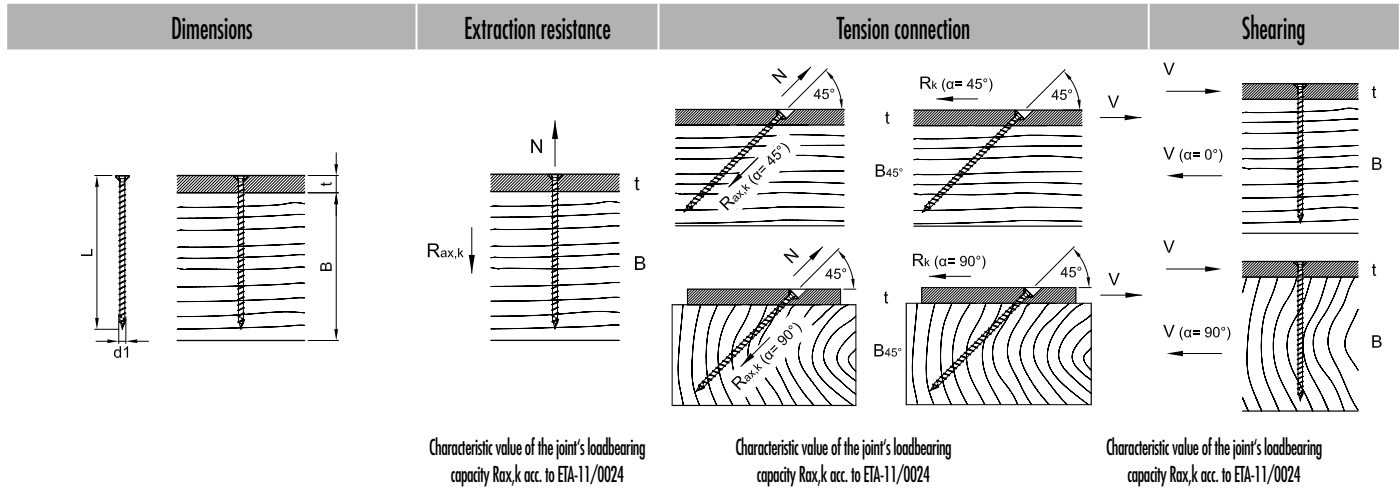


d1 x L [mm]	t [mm]	B [mm]	B _{45°} [mm]	R _{ax,k} ^{a)} - [kN]	Characteristic value of the joint's loadbearing capacity R _{ax,k} acc. to ETA-11/0024		Characteristic value of the joint's loadbearing capacity R _k acc. to ETA-11/0024		Characteristic value of the joint's loadbearing capacity R _k acc. to ETA-11/0024	
					R _{ax,k} ^{a)} - [kN]	R _{ax,k} ^{a)} - [kN]	R _k ^{a)} - [kN]	R _k ^{a)} - [kN]	R _k ^{a)} - [kN]	R _k ^{a)} - [kN]
					$\alpha = 45^\circ$	$\alpha = 90^\circ$	$\alpha = 45^\circ$	$\alpha = 90^\circ$	$\alpha = 0^\circ$	$\alpha = 90^\circ$
6,5 x 80	15	80	60	5,14	4,65	4,65	3,29	3,29	4,17	3,52
6,5 x 100	15	100	80	6,73	6,24	6,24	4,41	4,41	4,17	3,52
6,5 x 120	15	120	80	8,31	7,82	7,82	5,53	5,53	4,17	3,52
6,5 x 140	15	140	100	9,89	9,40	9,4	6,65	6,65	4,17	3,52
8,0 x 95	15	100	80	7,59	7,00	7,00	4,95	4,95	6,18	5,22
8,0 x 125	15	120	100	10,43	9,84	9,84	6,96	6,96	6,18	5,22
8,0 x 155	15	160	120	13,28	12,69	12,69	8,97	8,97	6,18	5,22
8,0 x 195	15	200	140	17,07	16,48	16,48	11,65	11,65	6,18	5,22
8,0 x 220	15	220	160	19,44	18,85	18,85	13,33	13,33	6,18	5,22
8,0 x 245	15	240	180	21,81	21,22	21,22	15,01	15,01	6,18	5,22
8,0 x 270	15	280	200	24,18	23,59	23,59	16,68	16,68	6,18	5,22
8,0 x 295	15	300	220	25,00	25,00	25,00	17,68	17,68	6,18	5,22
8,0 x 330	15	340	240	25,00	25,00	25,00	17,68	17,68	6,18	5,22
8,0 x 375	15	380	280	25,00	25,00	25,00	17,68	17,68	6,18	5,22
8,0 x 400	15	400	280	25,00	25,00	25,00	17,68	17,68	6,18	5,22
8,0 x 430	15	440	300	25,00	25,00	25,00	17,68	17,68	6,18	5,22
8,0 x 480	15	480	340	25,00	25,00	25,00	17,68	17,68	6,18	5,22
10,0 x 125	15	120	100	12,69	11,97	11,97	8,46	8,46	8,72	7,30
10,0 x 155	15	160	120	16,15	15,43	15,43	10,91	10,91	8,72	7,30
10,0 x 195	15	200	140	20,76	20,05	20,05	14,17	14,17	8,72	7,30
10,0 x 220	15	220	160	23,65	22,93	22,93	16,21	16,21	8,72	7,30
10,0 x 245	15	240	180	26,53	25,81	25,81	18,25	18,25	8,72	7,30
10,0 x 270	15	280	200	29,41	28,70	28,70	20,29	20,29	8,72	7,30
10,0 x 300	15	300	220	32,87	32,16	32,16	22,74	22,74	8,72	7,30
10,0 x 330	15	340	240	33,00	33,00	33,00	23,33	23,33	8,72	7,30
10,0 x 360	15	360	260	33,00	33,00	33,00	23,33	23,33	8,72	7,30
10,0 x 400	15	400	280	33,00	33,00	33,00	23,33	23,33	8,72	7,30
10,0 x 450	15	460	320	33,00	33,00	33,00	23,33	23,33	8,72	7,30
10,0 x 500	15	500	360	33,00	33,00	33,00	23,33	23,33	8,72	7,30
10,0 x 550	15	560	400	33,00	33,00	33,00	23,33	23,33	8,72	7,30
10,0 x 600	15	600	420	33,00	33,00	33,00	23,33	23,33	8,72	7,30

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Product data sheet – KonstruX fully threaded screws

KonstruX with countersunk head and AG tip 11,3 mm: steel/timber connection

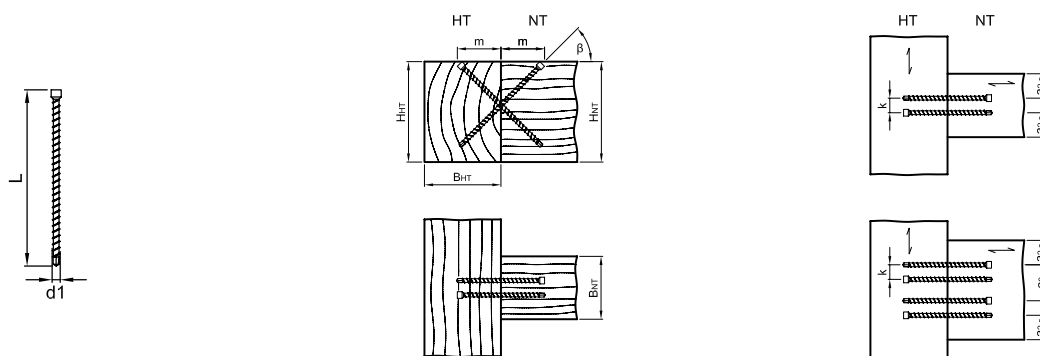


d1 x L [mm]	t [mm]	B [mm]	B _{45°} [mm]	Characteristic value of the joint's loadbearing capacity R _{ax,k} acc. to ETA-11/0024		Characteristic value of the joint's loadbearing capacity R _{ax,k} acc. to ETA-11/0024				Characteristic value of the joint's loadbearing capacity R _{ax,k} acc. to ETA-11/0024	
				R _{ax,k} ⁰ - [kN]	R _{ax,k} ⁰ - [kN]	R _{ax,k} ⁰ - [kN]	R _k ⁰ - [kN]	R _k ⁰ - [kN]	R _k ⁰ - [kN]	R _k ⁰ - [kN]	
				α= 45°		α= 90°		α= 45°		α= 90°	
11,3 x 300	20	300	220	36,49	35,42	35,42	25,04	25,04	11,79	9,76	
11,3 x 340	20	340	240	41,71	40,63	40,63	28,73	28,73	11,79	9,76	
11,3 x 380	20	380	260	46,92	45,84	45,84	32,42	32,42	11,79	9,76	
11,3 x 420	20	420	300	50,00	50,00	50,00	35,36	35,36	11,79	9,76	
11,3 x 460	20	460	320	50,00	50,00	50,00	35,36	35,36	11,79	9,76	
11,3 x 500	20	500	360	50,00	50,00	50,00	35,36	35,36	11,79	9,76	
11,3 x 540	20	540	380	50,00	50,00	50,00	35,36	35,36	11,79	9,76	
11,3 x 580	20	580	420	50,00	50,00	50,00	35,36	35,36	11,79	9,76	
11,3 x 620	20	620	440	50,00	50,00	50,00	35,36	35,36	11,79	9,76	
11,3 x 660	20	660	460	50,00	50,00	50,00	35,36	35,36	11,79	9,76	
11,3 x 700	20	700	500	50,00	50,00	50,00	35,36	35,36	11,79	9,76	
11,3 x 750	20	740	540	50,00	50,00	50,00	35,36	35,36	11,79	9,76	
11,3 x 800	20	800	560	50,00	50,00	50,00	35,36	35,36	11,79	9,76	
11,3 x 900	20	900	640	50,00	50,00	50,00	35,36	35,36	11,79	9,76	
11,3 x 1000	20	1000	700	50,00	50,00	50,00	35,36	35,36	11,79	9,76	

Product data sheet – KonstruX fully threaded screws

KonstruX ST with cylinder head and new drill point 6,5 mm: main/secondary beam joints

Dimensions Main / secondary beam connection



$a_2 = \text{min. } 33 \text{ mm}, a_{2,1} = \text{min. } 20 \text{ mm}, k = \text{min. } 10 \text{ mm}$

Characteristic value of the joint's loadbearing capacity $R_{ax,k}$ acc. to ETA-11/0024

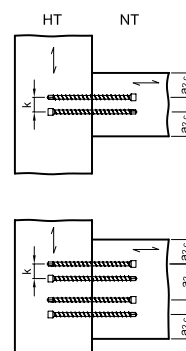
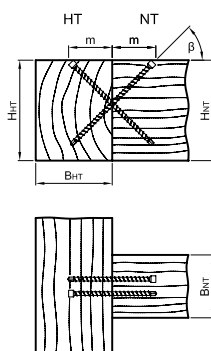
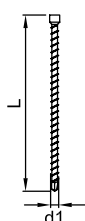
$d1 \times L$ [mm]	min. B_{HT} [mm]	min. H_{HT} [mm]	min. B_{HT} [mm]	min. H_{HT} [mm]	m [mm]	β °	$R_{v,k}^{a) b)}$ - [kN]	Pair (s)
6,5 x 195	60	160	80	160	69	45	10,91	1
	100						20,36	2
	120						29,33	3
	160						38,00	4

Product data sheet – KonstruX fully threaded screws

KonstruX ST with cylinder head and new drill point 8,0 mm: main/ secondary beam joint

Dimensions

Main / secondary beam connection



$a_2 = \text{min. } 40 \text{ mm}$, $a_{2,C} = \text{min. } 24 \text{ mm}$, $k = \text{min. } 12 \text{ mm}$

Characteristic value of the joint's loadbearing capacity $R_{v,k}$ acc. to ETA-11/0024

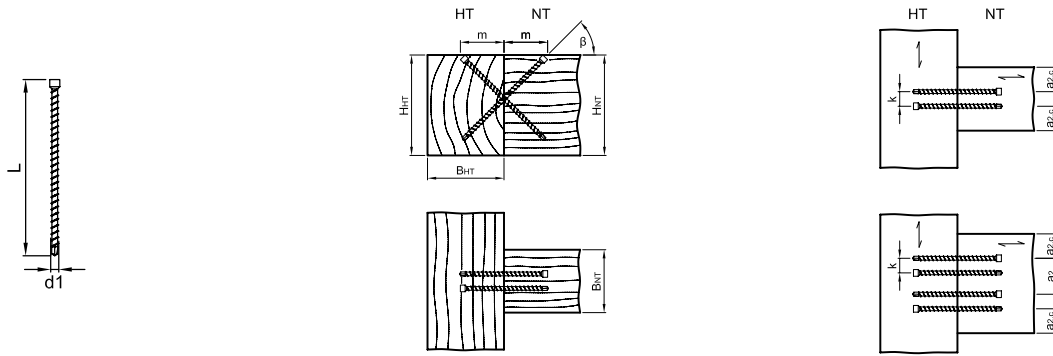
$d1 \times L$ [mm]	min. B_{NT} [mm]	min. H_{NT} [mm]	min. B_{HT} [mm]	min. H_{HT} [mm]	m [mm]	β °	$R_{v,k}^{a) b)}$ - [kN]	Pair (s)
8,0 x 245	80	200	100	200	87	45	16,43	1
	100						30,66	2
	140						44,16	3
	180						57,21	4
8,0 x 295	80	220	120	220	104	45	17,44	1
	100						32,55	2
	140						46,88	3
	180						60,74	4
8,0 x 330	80	260	140	260	117	45	17,44	1
	100						32,55	2
	140						46,88	3
	180						60,74	4
8,0 x 375	80	280	160	280	133	45	17,44	1
	100						32,55	2
	140						46,88	3
	180						60,74	4
8,0 x 400	80	300	160	300	141	45	17,44	1
	100						32,55	2
	140						46,88	3
	180						60,74	4
8,0 x 430	80	320	180	320	152	45	17,44	1
	100						32,55	2
	140						46,88	3
	180						60,74	4
8,0 x 480	80	360	180	360	170	45	17,44	1
	100						32,55	2
	140						46,88	3
	180						60,74	4

Product data sheet – KonstruX fully threaded screws

KonstruX ST with cylinder head and new drill point

10,0 mm: main/secondary beam joints

Dimensions Main / secondary beam connection



$a_2 = \text{min. } 50 \text{ mm}$, $a_2c = \text{min. } 30 \text{ mm}$, $k = \text{min. } 15 \text{ mm}$

Characteristic value of the joint's loadbearing capacity $R_{v,k}$ acc. to EIA-11/0024

$d1 \times L$ [mm]	min. B_{HT} [mm]	min. H_{HT} [mm]	min. B_{HT} [mm]	min. H_{HT} [mm]	m [mm]	β °	$R_{v,k}^{a) b)}$ - [kN]	Pair (s)
10,0 x 300	80	240	120	240	106	45	23,67	1
	140						44,18	2
	180						63,63	3
	240						82,44	4
10,0 x 330	80	260	140	260	117	45	23,67	1
	140						44,18	2
	180						63,63	3
	240						82,44	4
10,0 x 360	80	280	140	280	127	45	23,67	1
	140						44,18	2
	180						63,63	3
	240						82,44	4
10,0 x 400	80	300	160	300	141	45	23,67	1
	140						44,18	2
	180						63,63	3
	240						82,44	4
10,0 x 450	80	340	180	340	159	45	23,67	1
	140						44,18	2
	180						63,63	3
	240						82,44	4
10,0 x 500	80	380	200	380	177	45	23,67	1
	140						44,18	2
	180						63,63	3
	240						82,44	4
10,0 x 550	80	400	220	400	194	45	23,67	1
	140						44,18	2
	180						63,63	3
	240						82,44	4
10,0 x 600	80	440	240	440	212	45	23,67	1
	140						44,18	2
	180						63,63	3
	240						82,44	4

Product data sheet – KonstruX fully threaded screws

Calculation according to ETA-11/0024. Wood density $\rho_k = 380 \text{ kg/m}^3$. All mechanical values provided should be viewed as subject to the assumptions that have been made and represent example calculations.

All values are calculated minimum values and are subject to typographical and printing errors.

a) The characteristic values of the load-bearing capacity R_k cannot be treated as equivalent to the max. possible load (the max. force). Characteristic values of the load-bearing capacity R_k should be reduced to dimensioning values R_d

with regard to the usage class and class of the load duration: $R_d = R_k \cdot k_{mod} / \gamma_M$. The dimensioning values of the load-bearing capacity R_d should be contrasted with the dimensioning values of the loads ($R_d \geq E_d$).

Example:

Characteristic value for constant load (dead weight) $G_k = 2,00 \text{ kN}$ and variable load (e. g. snow load) $Q_k = 3,00 \text{ kN}$. $k_{mod} = 0,9$. $\gamma_M = 1,3$.

→ Dimensioning value of the load $E_d = 2,00 \cdot 1,35 + 3,00 \cdot 1,5 = 7,20 \text{ kN}$.

The load-bearing capacity of the joint is therefore considered to have been demonstrated if $R_d \geq E_d$. → $\min R_k = R_d \cdot \gamma_M / k_{mod}$

i.e. the characteristic minimum value is calculated based on: $\min R_k = R_d \cdot \gamma_M / k_{mod}$ → $R_k = 7,20 \text{ kN} \cdot 1,3 / 0,9 = 10,40 \text{ kN}$ → comparison with table values.

b) estimated with an efficient quantity of pairs of screws: $n_{0,9}$.

Please note: These are planning aids. Projects must only be calculated by authorised persons.

Instructions for use

KonstruX fully threaded screws do not require pilot drilling when used in softwood. However, for longer screws and for KonstruX AG 11.3 mm it is recommended to drill a pilot hole of approx. $\frac{1}{3}$ the screw length in order to prevent the (long) screws from running too far into the wood.

The pilot-drilling diameters in softwood $d_{0, NH}$ are:

- KonstruX ST 6,5 mm → rarely required in softwood
- KonstruX ST 8,0 mm → $d_{0, NH} = 5,0 \text{ mm}$
- KonstruX ST 10,0 mm → $d_{0, NH} = 6,0 \text{ mm}$
- KonstruX AG 11,3 mm → $d_{0, NH} = 8,0 \text{ mm}$

Pilot-drilling is mandatory for use in hardwood. The pilot-drilling diameters in softwood $d_{0, LH}$ are:

- KonstruX ST 6,5 mm → $d_{0, LH} = 5,0 \text{ mm}$
- KonstruX ST 8,0 mm → $d_{0, LH} = 6,0 \text{ mm}$
- KonstruX ST 10,0 mm → $d_{0, LH} = 8,0 \text{ mm}$
- KonstruX AG 11,3 mm → not approved in hardwood

If you are not familiar with how this product is used, and particularly with the product's intended use, please contact our Application Technology department (Technik@eurotec.team).