DB CON

CONSTRUCTION SCREW

Fast mounting with low installation force

Strong connection with high clamping force

Eurocode 5: EN 1995-1 - CE-MARKED according to: EN 14592 - Approved for corrosive class: C4

NKT FASTENERS

We have **YOU** in mind.

NKT FASTENERS

NKT Fasteners construction screw DB CON developed in close collaboration with the end user securing painless and fast installation speed achieving some of the strongest connections invisible connections without using connector brackets.

The DB CON is ideal for wood beam connection and reinforcements. The two parted thread contracts the wood providing split free connection. The DB CON has a C4 surface treatment for outdoor use and is CE-marked according to EN14592

DB CON

CONSTRUCTION SCREW

The uniquely designed sawpoint tip has opposing threadparts that lifts the wood fibers creating optimal placement for the cutting points to break the fibers. At the same time the sawpoint creates a frictionfree channel that the rest of the screw hazzle free can pass in. The natural properties of the wood ensures that the wooden fibers closes around the screw again and locks the connection.

Hereby even very large screws can be mounted in the wood with very low installationforce and without the risk of splitting the wood.

DB CON
CONSTRUCTION SCREW

Fast Mounting

The tip and thread of this screw is designed for a fast fastening expe-rience. You do not need to pre-drill.

High Bearing Loads

The DB Con is able to withstand high bearing loads making it the perfect screw for construction purposes.

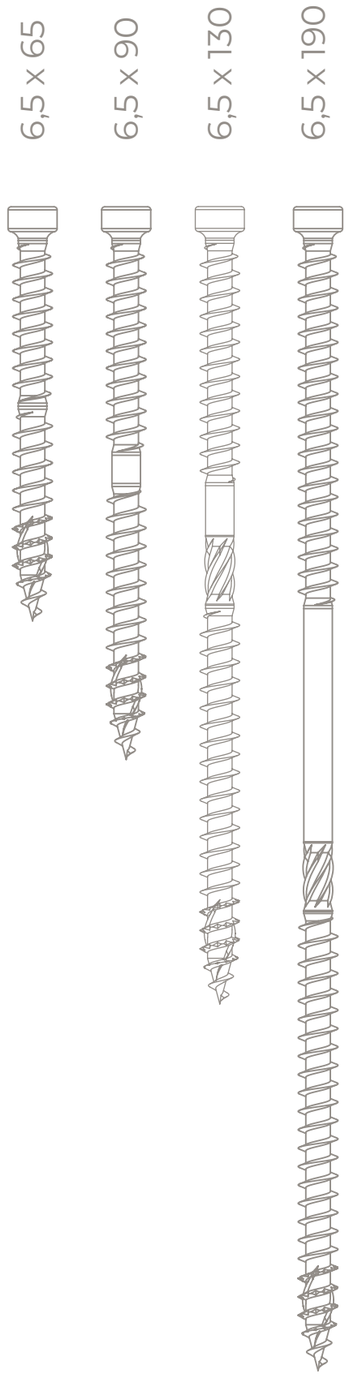
Reliable Materials

The DB Con is made from reliable materials which offers a great solution to construction projects. A screw which you can rely on.

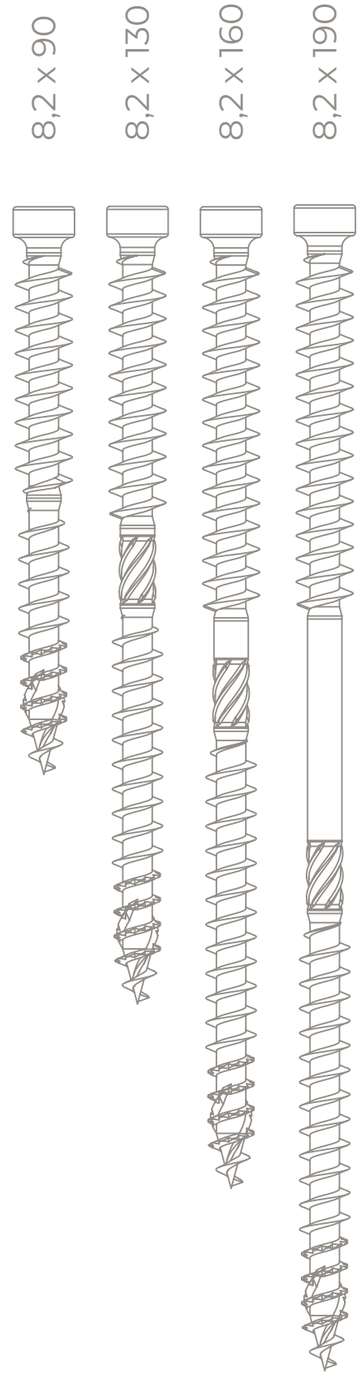
Weather Resistant

The DB Con is coated in a service class - 3. Fit for outdoor use which can withstand the harshest of Nordic winters.

6,5

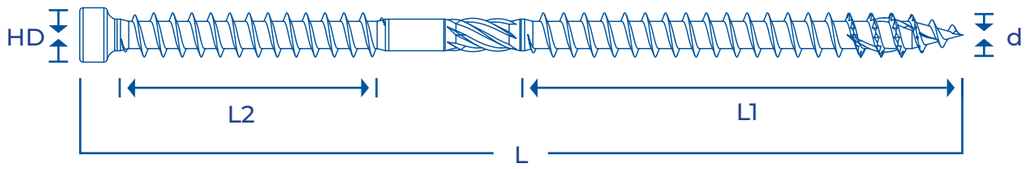


8,2

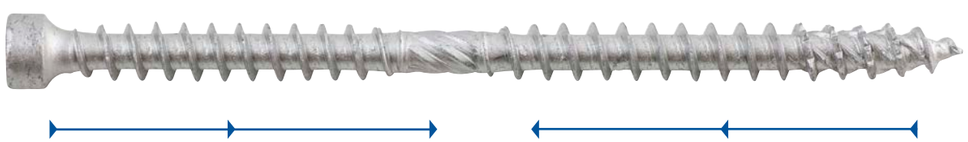


DB CON ASSORTMENT

CONSTRUCTION SCREW



ITW NO	Dimension d x L [mm]	Recess	HD [mm]	L2 [mm]	L1 [mm]	milling	QTY BOX	Colli	Colli/box-es pallet
151980	6,5x65	TX30	8.2	24	32	no	100	8	45/360
151981	6,5x90	TX30	8.2	38	43	no	100	8	45/360
151982	6,5x130	TX30	8.2	45	65	yes	100	8	30/240
151983	6,5x160	TX30	8.2	60	65	yes	50	8	30/240
151990	6,5x190	TX30	8.2	60	65	yes	50	8	24/192
152051	6,5x220	TX30	8.2	60	65	yes	50	4	36/144
152052	8,2x90	TX30	10.2	38	43	no	50	8	30/240
152053	8,2x130	TX30	10.2	38	65	yes	50	8	30/240
152054	8,2x160	TX30	10.2	60	65	yes	50	8	24/192
152055	8,2x190	TX30	10.2	60	65	yes	50	4	36/144
152056	8,2x220	TX30	10.2	60	65	yes	50	4	36/144



Strong clamping-effect

The DB CON screws are created with different pitch sizes on the two parted thread.
This provides a strong clamping force pulling the wood together durring installation for a air tight connection.

Loadcarring capacities

The design value R_d of a resistance (load-carrying capacity) shall be calculated as:

$$R_d = K_{mod} \frac{F_k}{Y_m}$$

F_k = The characteristic value of load-carrying capacity stated in this document;
Y_m = The partial factor for a material property*
K_{mod} = is a modification factor taking into account the effect of the duration of load and moisture content. (Eurocode 5, table 3.1)

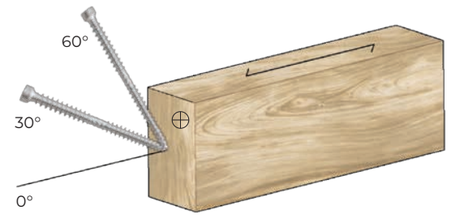
*The recommended partial factors for material properties are given in (Eurocode 5, table 2.3). Information on the National choice may be found in the National annex.

Additional information

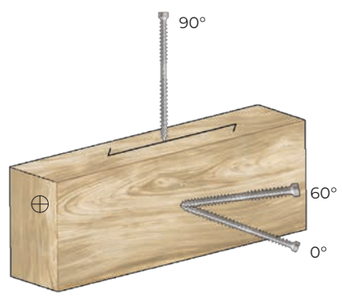
Reported characteristic load-bearing capacity applies to approved structural timber with the strength class C24. The basis applies to climate class 1-2 (Eurocode 5, 2.3)
Corrosionresistance approved for C4 according to EN 12944.
The influence of dynamic loads is not covered by this data

Installation orientation

Values for DB CON screw apply to angles α in the range 30 <α> 60 degrees where α is the angle between the screw and the wooden surface. This also applies to the endgrain.

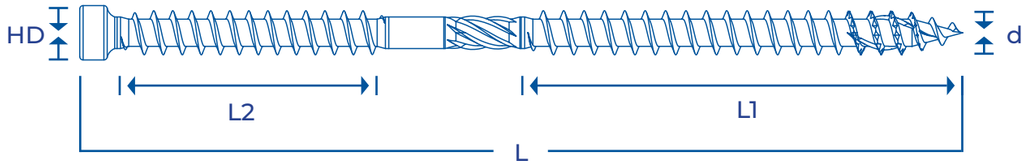


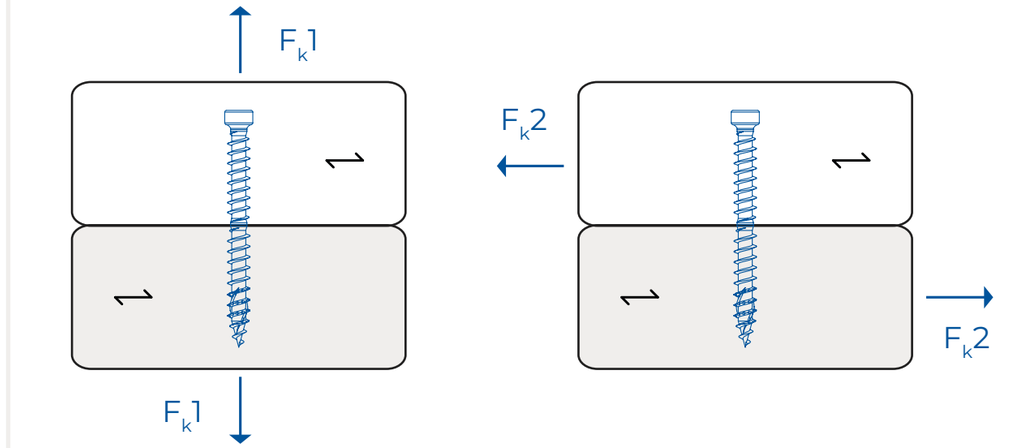
Endgrain



Side Of Wood

CAPACITY AND REQUIRED DISTANCES FOR AXIAL AND LATERAL LOADED SCREW

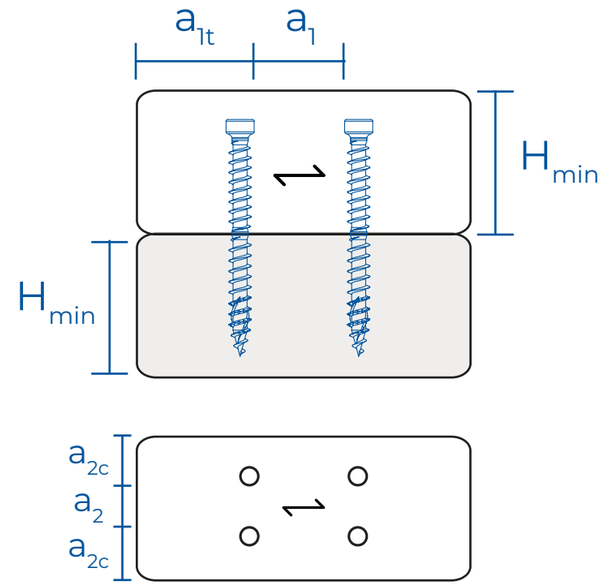




Dimension d x L [mm]	L2 [mm]	L1 [mm]	H_{min} [mm]	Pullout and pullthough	Share
				F_k1 [kN]	F_k2 [kN]
6,5x65	24	32	52	3,02*	0.93
6,5x90	38	43	53	4,03*	2.52
6,5x130	45	65	73	6.13	3.04
6,5x160	60	65	88	6.13	3.04
6,5x190	60	65	103	7.07	3.28
6,5x220	60	65	118	7.07	3.28
8,2x90	38	43	66	5.79	2.47
8,2x130	38	65	73	8.75	4.45
8,2x160	60	65	88	8.75	4.45
8,2x190	60	65	103	10.09	4.78
8,2x220	60	65	118	10.09	4.78

* stated values is not according with EN 1995-1-1:2004/A1:2008 since it do not respect the minimum point side penetration length of the thread part.

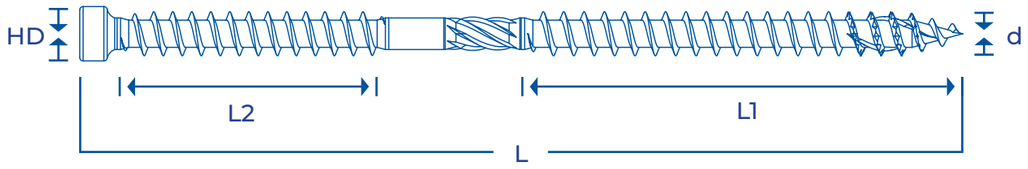
INTERNAL SPACING

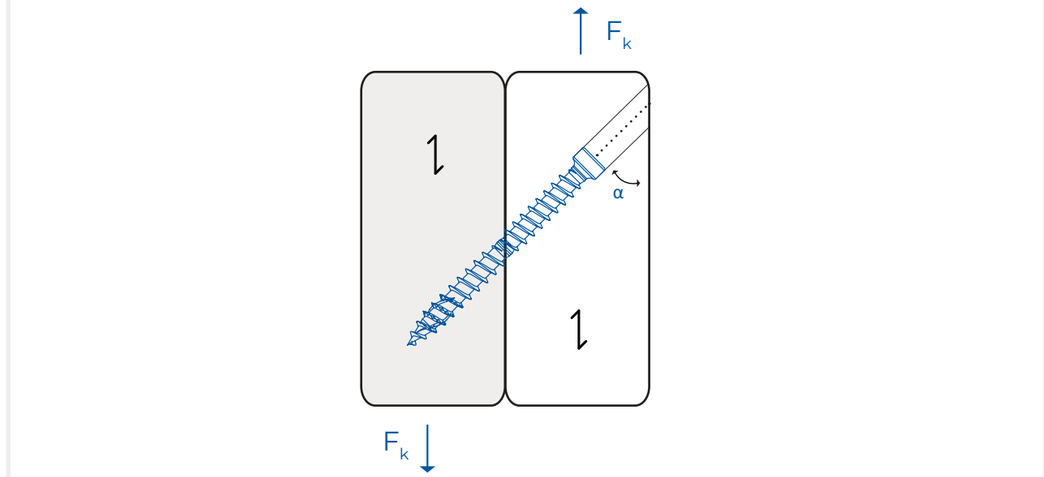


	F_k1 pullout and pullthough		F_k2 share	
Screw diameter	6,5 mm [mm]	8,2 mm [mm]	6,5 mm [mm]	8,2 mm [mm]
a_1	46	57	33	41
a_{1t}	65	82	80	80
a_2	33	41	26	33
a_{2c}	23	33	20	25

CONSTRUCTION SCREW

CAPACITY AND REQUIRED DISTANCES FOR INCLINED LATERAL LOADED SCREW



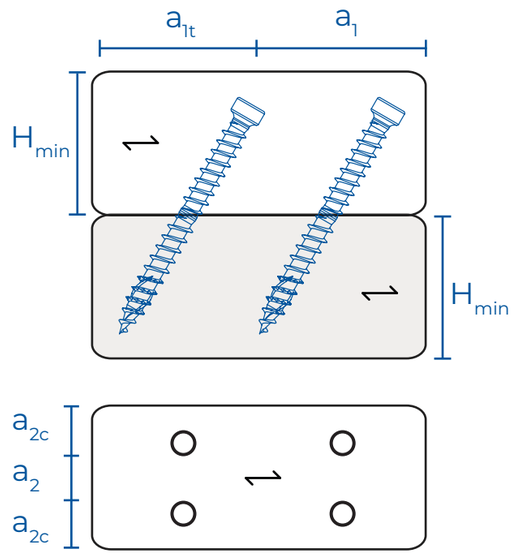


Dimension d x L [mm]	L2 [mm]	L1 [mm]	F_k [kN]		
			α30	α45	α60
6,5x65	24	32	1.47	1.9	2.14
6,5x90	38	43	1.97	2.55	2.53
6,5x130	45	65	2.98	3.03	3.03
6,5x160	60	65	3.04	3.03	3.03
6,5x190	60	75	3.25	3.24	2.25
6,5x220	60	75	3.25	3.24	2.25
8,2x90	38	43	2.81	3.63	3.73
8,2x130	38	65	4.25	4.44	4.43
8,2x160	60	65	4.47	4.44	4.43
8,2x190	60	75	4.76	4.75	4.75
8,2x220	60	75	4.76	4.75	4.75

Strong connection with high clamping force

Approved for heavy duty wood constructions. Sawpoint tip saws/cuts the fibers in the wood so the screw screws in with ease.

INTERNAL SPACING

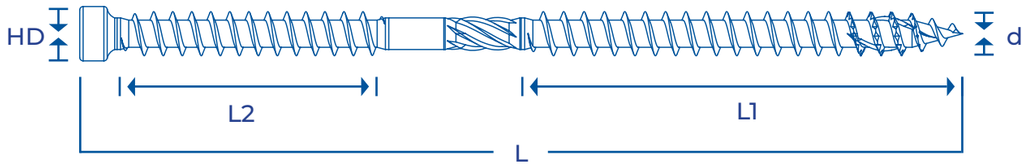


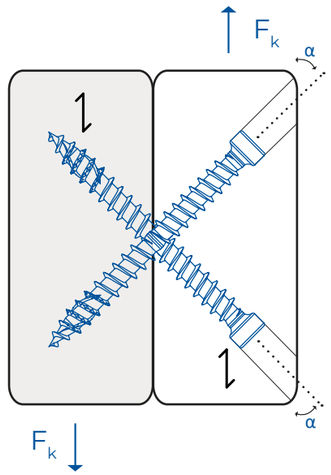
Dimension d x L [mm]	α30			α45			α60		
	H_{min} [mm]	a_1 [mm]	a_{1t} [mm]	H_{min} [mm]	a_1 [mm]	a_{1t} [mm]	H_{min} [mm]	a_1 [mm]	a_{1t} [mm]
6,5x65	17	65	94	23	46	92	29	38	88
6,5x90	24	65	100	33	46	97	41	38	92
6,5x130	33	65	108	46	46	103	56	38	96
6,5x160	41	65	115	57	46	109	70	38	100
6,5x190	50	65	119	70	46	112	86	38	103
6,5x220	57	65	126	81	46	117	99	38	107
8,2x90	24	82	100	33	58	97	41	47	92
8,2x130	33	82	108	46	58	103	56	47	96
8,2x160	41	82	116	58	58	108	72	47	99
8,2x190	49	82	120	69	58	113	85	47	103
8,2x220	57	82	126	80	58	118	98	47	107

Screws with d = 6,5 mm
a_2 = 26 mm
a_{2c} = 26 mm

Screws with d = 8,2 mm
a_2 = 33 mm
a_{2c} = 25 mm

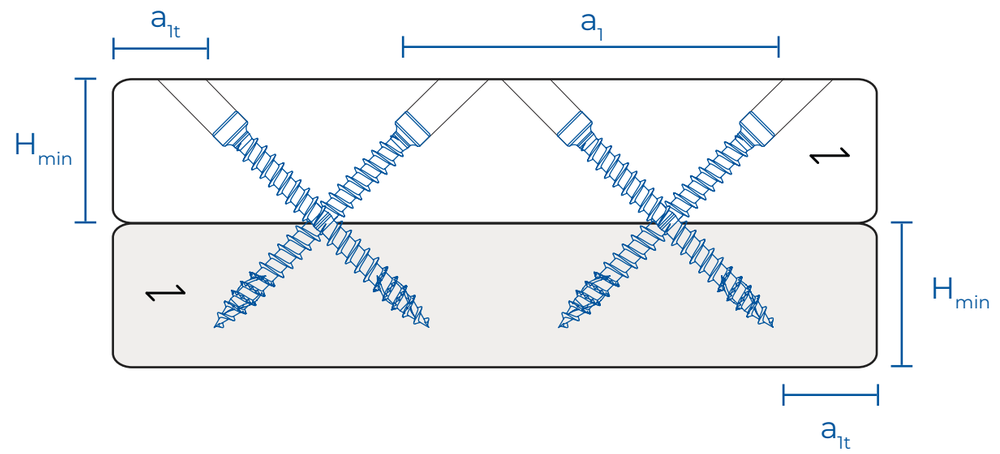
CAPACITY AND REQUIRED DISTANCES FOR MULTIPLE INCLINED LATERAL LOADED SCREW

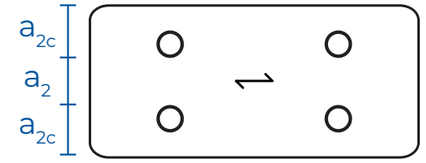




Dimension d x L [mm]	L2 [mm]	L1 [mm]	F_k [kN]		
			α30	α45	α60
6,5x65	24	32	4.29	4.48	4.69
6,5x90	38	43	6.2	6.48	6.79
6,5x130	45	65	8.42	8.8	9.22
6,5x160	60	65	9.57	10	10.48
6,5x190	60	75	10.33	10.8	11.32
6,5x220	60	75	10.33	10.8	11.32
8,2x90	38	43	8.84	9.25	9.69
8,2x130	38	65	11.24	11.25	12.32
8,2x160	60	65	13.65	14.27	14.95
8,2x190	60	75	14.74	15.41	16.14
8,2x220	60	75	14.74	15.41	16.14

INTERNAL SPACING



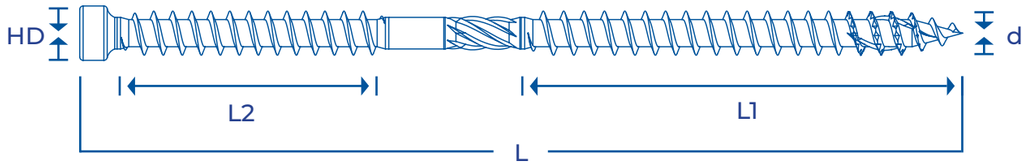


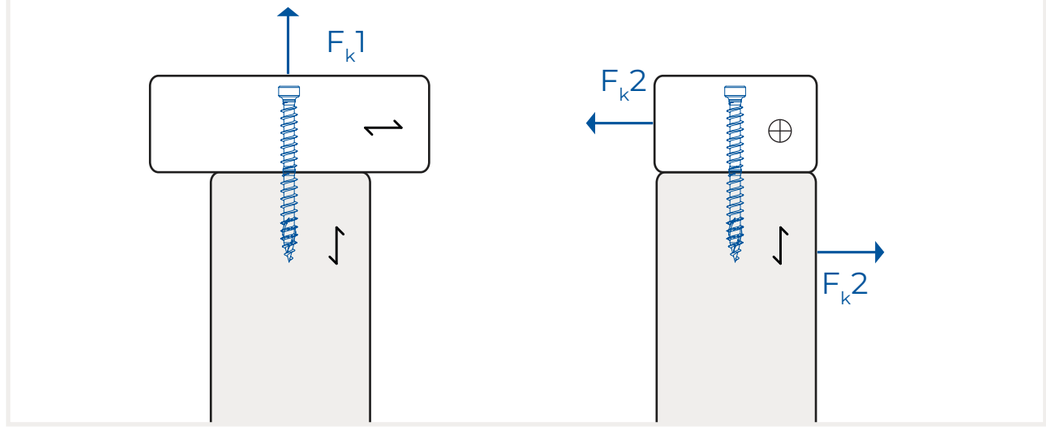
Dimension d x L [mm]	α30		α45		α60	
	H_{min} [mm]	a_1 [mm]	H_{min} [mm]	a_1 [mm]	H_{min} [mm]	a_1 [mm]
6,5x65	17	65	23	46	29	38
6,5x90	24	65	33	46	41	38
6,5x130	33	65	46	46	56	38
6,5x160	41	65	57	46	70	38
6,5x190	50	65	70	46	86	38
6,5x220	57	65	81	46	99	38
8,2x90	24	82	33	58	41	47
8,2x130	33	82	46	58	56	47
8,2x160	41	82	57	58	70	47
8,2x190	50	82	70	58	86	47
8,2x220	57	82	81	58	99	47

Screws with d = 6,5 mm
a1t = 80 mm
a2 = 26 mm
a2c = 20 mm

Screws with d = 8,2 mm
a1t = 80 mm
a2 = 31 mm
a2c = 25 mm

CAPACITY AND REQUIRED DISTANCES FOR AXIAL AND LATERAL LOADED SCREW – T JOINT

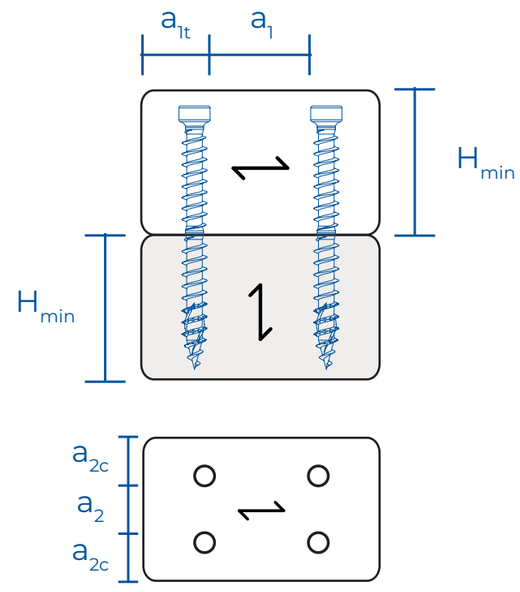




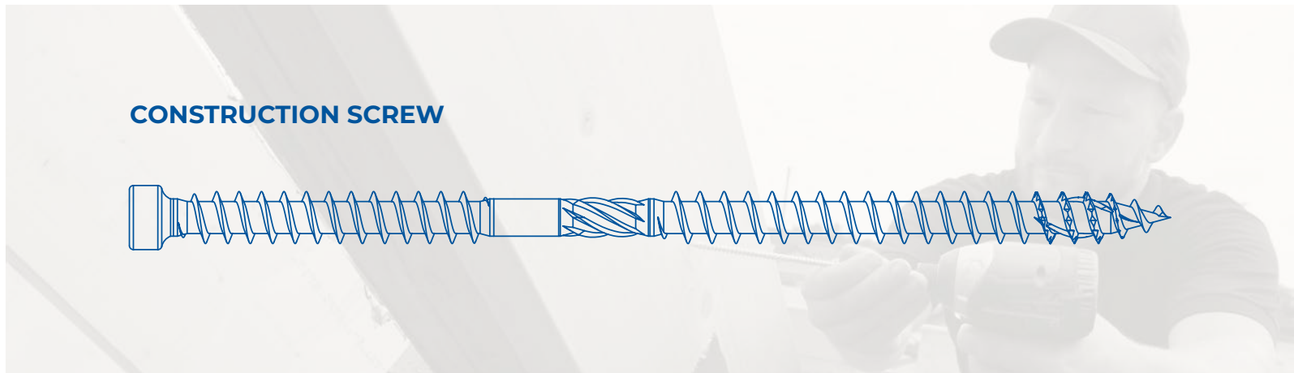
Dimension d x L [mm]	L2 [mm]	L1 [mm]	H_{min} [mm]	Pullout and pullthough	Share
				F_k1 [kN]	F_k2 [kN]
6,5x65	24	32	52	2,52*	1.32
6,5x90	38	43	53	3,38*	2.48
6,5x130	45	65	73	5.11	2.91
6,5x160	60	65	88	5.11	2.91
6,5x190	60	75	103	5.9	3.11
6,5x220	60	75	118	5.9	3.11
8,2x90	38	43	66	4,82*	3.54
8,2x130	38	65	73	7.29	4.28
8,2x160	60	65	88	7.29	4.28
8,2x190	60	75	103	8.41	4.56
8,2x220	60	75	118	8.41	4.56

* stated values is not according with EN 1995-1-1:2004/A1:2008 since it do not respect the minimum point side penetration length of the thread part.

INTERNAL SPACING

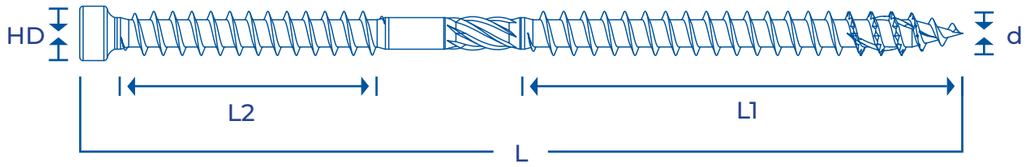


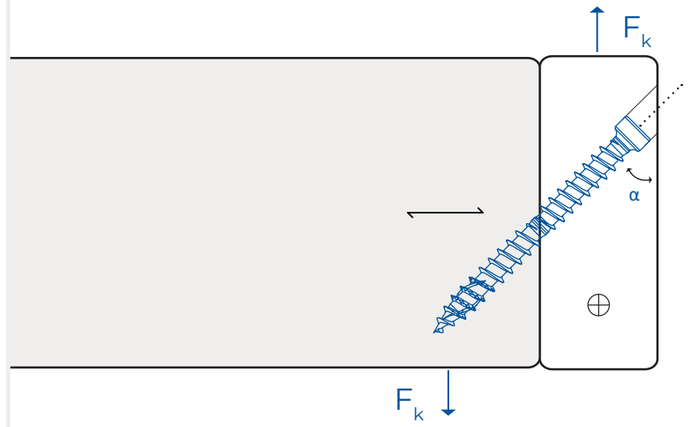
	F_k1 pullout and pullthough		F_k2 share	
Screw diameter	6,5 [mm]	8,2 [mm]	6,5 [mm]	8,2 [mm]
a_1	46	58	33	41
a_{1t}	65	82	80	80
a_2	33	41	26	33
a_{2c}	26	33	20	25



CONSTRUCTION SCREW

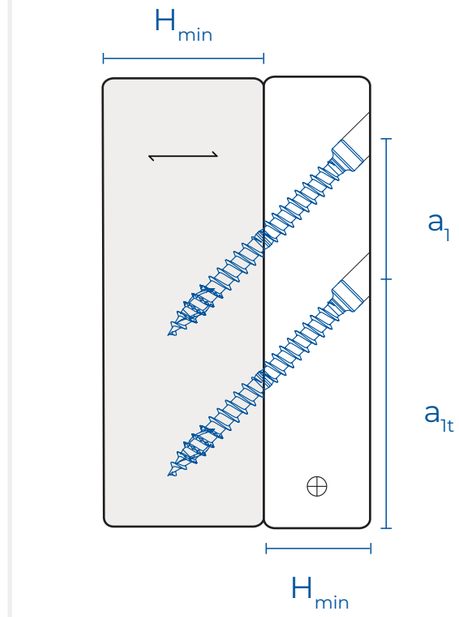
CAPACITY AND REQUIRED DISTANCES FOR INCLINED LATERAL LOADED SCREW - T JOINT

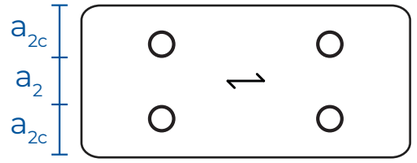




Dimension d x L [mm]	L2 [mm]	L1 [mm]	F_k (kn)		
			α30	α45	α60
6,5x65	24	32	1.18	1.67	2.04
6,5x90	38	43	1.66	2.37	2.48
6,5x130	45	65	2.32	2.96	2.93
6,5x160	60	65	2.89	2.96	2.93
6,5x190	60	75	3.22	3.18	3.14
6,5x220	60	75	3.22	3.18	3.14
8,2x90	38	43	2.36	3.37	3.78
8,2x130	38	65	3.07	4.34	4.48
8,2x160	60	65	4.16	4.34	4.48
8,2x190	60	75	4.71	4.65	4.8
8,2x220	60	75	4.71	4.65	4.8

INTERNAL SPACING



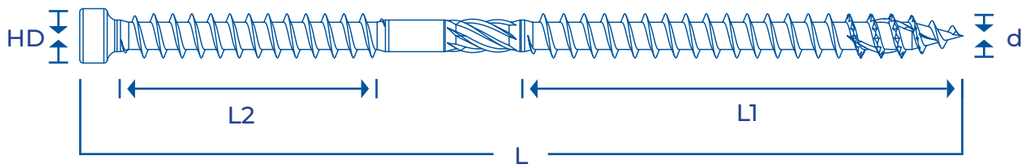


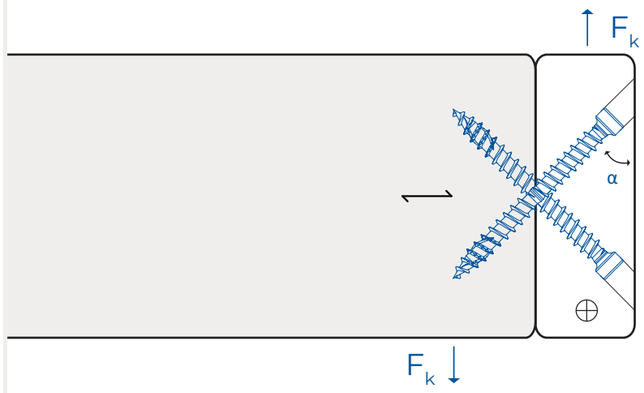
Dimension d x L [mm]	α30			α45			α60		
	H_{min} [mm]	a_1 [mm]	a_{1t} [mm]	H_{min} [mm]	a_1 [mm]	a_{1t} [mm]	H_{min} [mm]	a_1 [mm]	a_{1t} [mm]
6,5x65	17	65	94	23	46	92	29	38	88
6,5x90	24	65	100	33	46	97	41	38	92
6,5x130	33	65	108	46	46	103	56	38	96
6,5x160	41	65	115	57	46	109	70	38	100
6,5x190	50	65	119	70	46	112	86	38	103
6,5x220	57	65	126	81	46	117	99	38	107
8,2x90	24	82	100	33	58	97	41	47	92
8,2x130	33	82	108	46	58	103	56	47	96
8,2x160	41	82	116	58	58	108	72	47	99
8,2x190	49	82	120	69	58	113	85	47	103
8,2x220	57	82	126	80	58	118	98	47	107

Screws with d = 6,5 mm
a_2 = 26 mm
a_{2c} = 20 mm

Screws with d = 8,2 mm
a_2 = 33 mm
a_{2c} = 25 mm

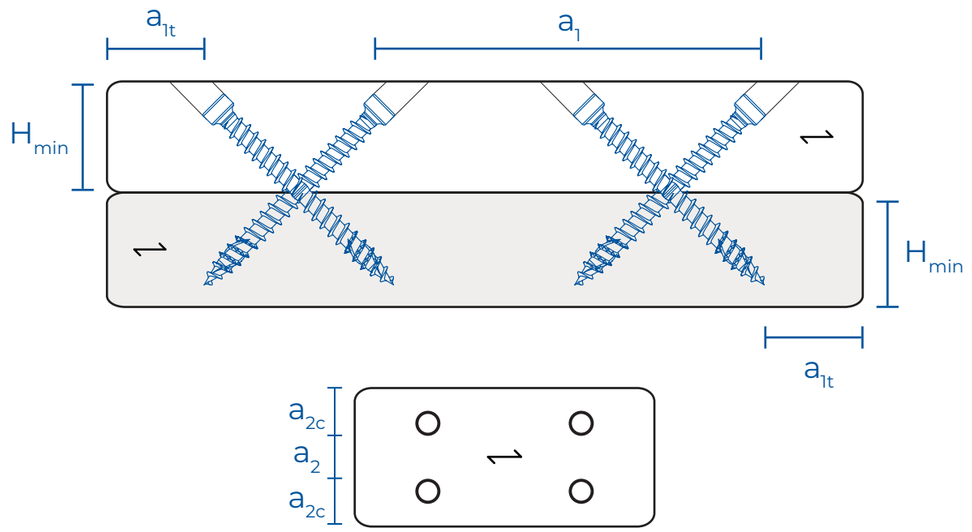
CAPACITY AND REQUIRED DISTANCES FOR MULTIPLE INCLINED LATERAL LOADED SCREW – T JOINT





Dimension d x L [mm]	L2 [mm]	L1 [mm]	F_k (kn)		
			α30	α45	α60
6,5x65	24	32	4.29	4.48	4.69
6,5x90	38	43	6.2	6.48	6.79
6,5x130	45	65	8.42	8.8	9.22
6,5x160	60	65	9.57	10	10.48
6,5x190	60	75	10.33	10.8	11.32
6,5x220	60	75	10.33	10.8	11.32
8,2x90	38	43	7.61	7.95	8.33
8,2x130	38	65	9.67	10.11	10.6
8,2x160	60	65	11.74	12.27	12.86
8,2x190	60	75	12.68	13.26	13.89
8,2x220	60	75	12.68	13.26	13.89

INTERNAL SPACING



Dimension d x L [mm]	α30		α45		α60	
	H_{min} [mm]	a_1 [mm]	H_{min} [mm]	a_1 [mm]	H_{min} [mm]	a_1 [mm]
6,5x65	17	65	23	46	29	38
6,5x90	24	65	33	46	41	38
6,5x130	33	65	46	46	56	38
6,5x160	41	65	57	46	70	38
6,5x190	50	65	70	46	86	38
6,5x220	57	65	81	46	99	38
8,2x90	24	82	33	58	41	47
8,2x130	33	82	46	58	56	47
8,2x160	41	82	58	58	72	47
8,2x190	49	82	69	58	85	47
8,2x220	57	82	80	58	98	47

Screws with d = 6,5 mm
a_{1t} = 80 mm
a_2 = 26 mm
a_{2c} = 20 mm

Screws with d = 8,2 mm
a_{1t} = 80 mm
a_2 = 31 mm
a_{2c} = 25 mm

NKT FASTENERS

DB CON

CONSTRUCTION SCREW

NKT Fasteners construction screw DB CON developed in close collaboration with the end user securing painless and fast installation speed achieving some of the strongest wood on wood connections.