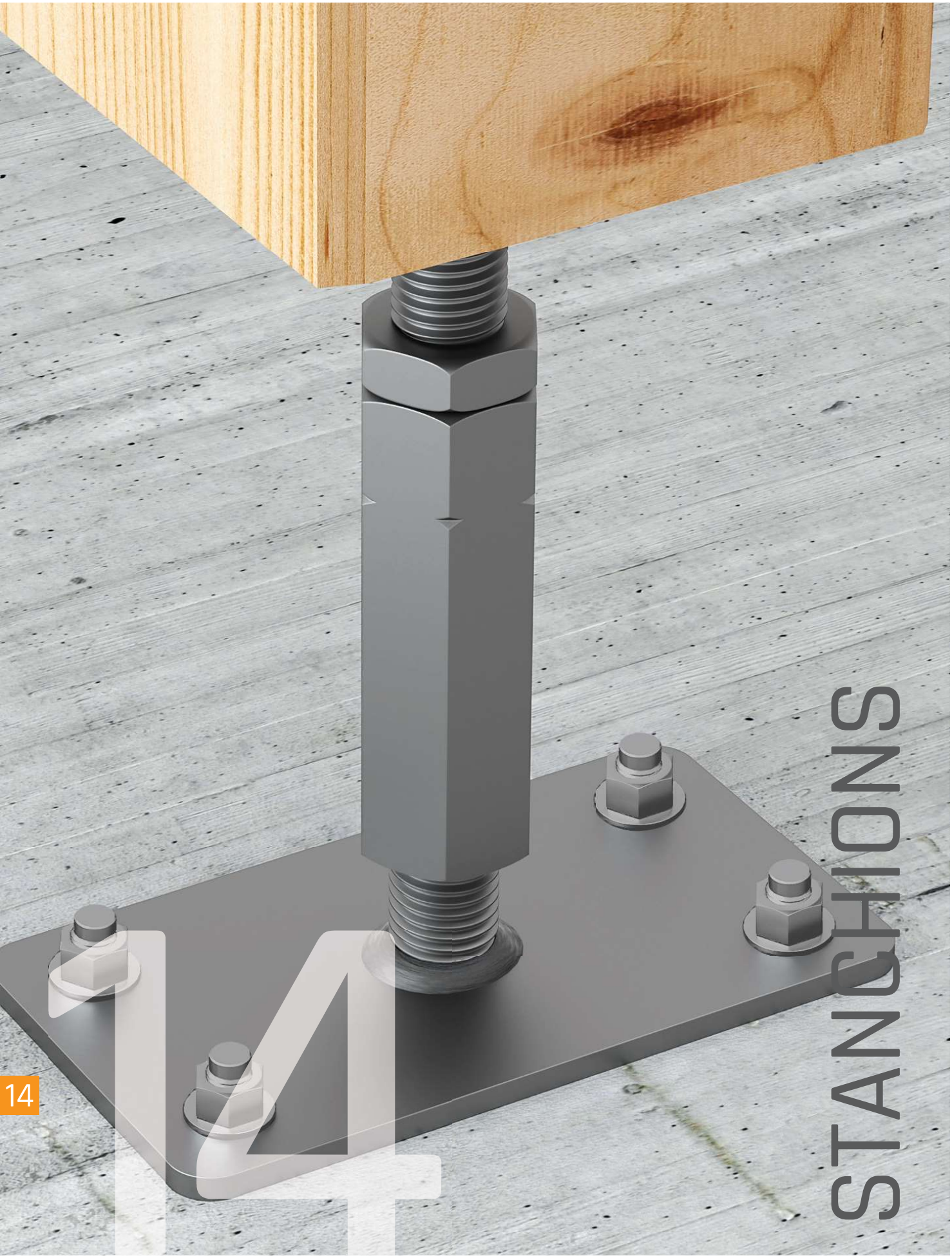
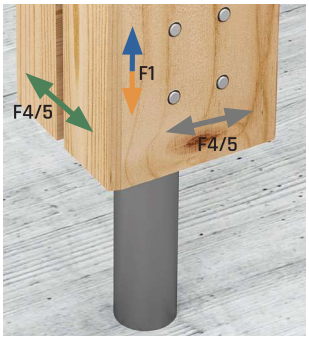
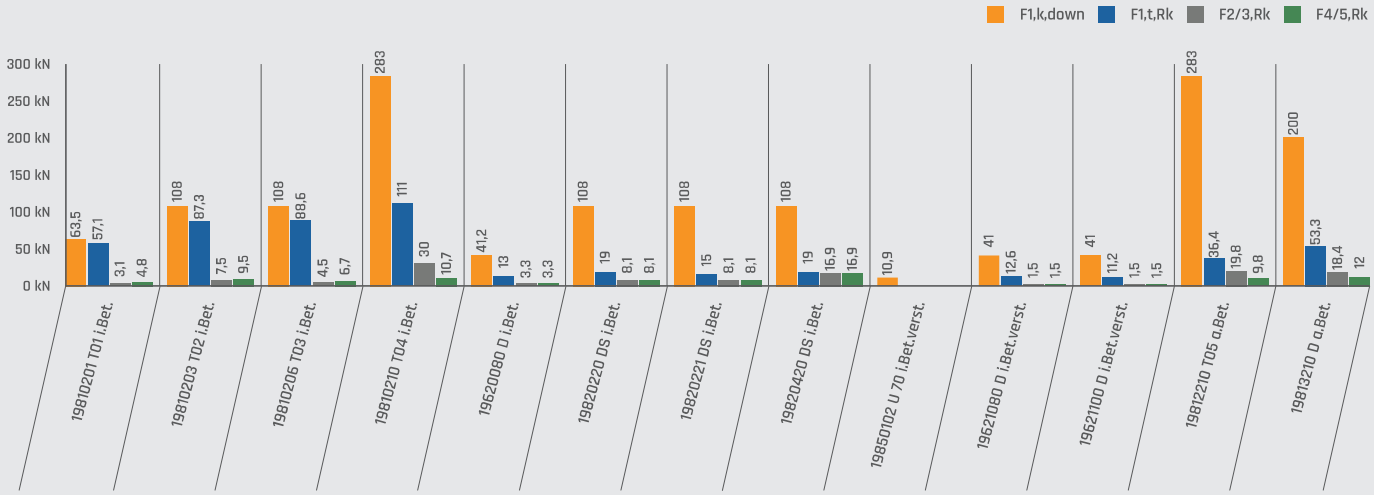


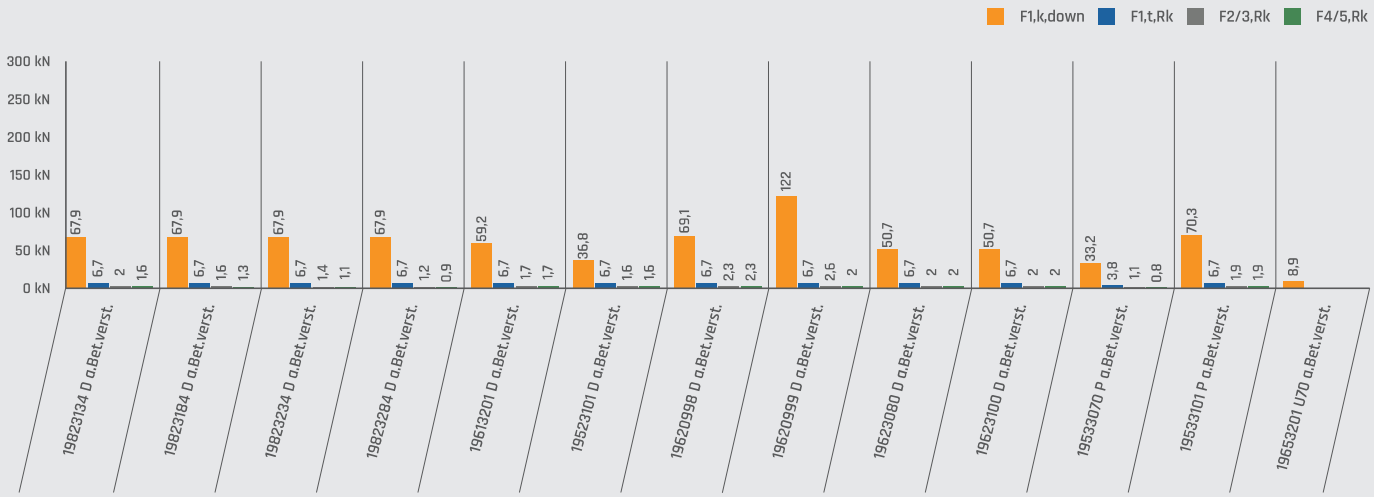
14 STANCHIONS

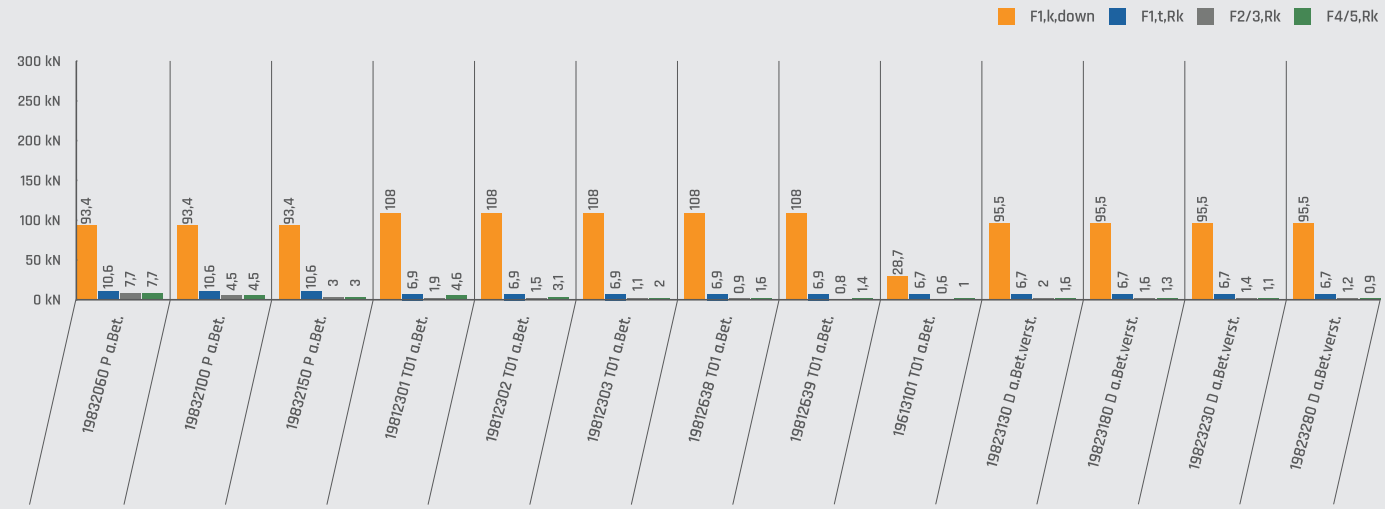


STANCHIONS

STATICS DIAGRAM






F1,k,down
F1,t,Rk
F2/3,Rk
F4/5,Rk
300 kN
250 kN
200 kN
150 kN
100 kN
50 kN
0 kN
19832060 P a.Bet.
93,4
10,6
7,7
7,7
19832100 P a.Bet.
93,4
10,6
4,5
4,5
19832150 P a.Bet.
93,4
10,6
3
3
19812301 T01 a.Bet.
108
6,9
1,9
4,6
19812302 T01 a.Bet.
108
6,9
1,5
3,1
19812303 T01 a.Bet.
108
6,9
1,1
2
19812638 T01 a.Bet.
108
6,9
0,9
1,6
19812639 T01 a.Bet.
108
6,9
0,8
1,4
19613101 T01 a.Bet.
28,7
6,7
0,6
1
19823130 D a.Bet.verst.
95,5
6,7
2
1,6
19823180 D a.Bet.verst.
95,5
6,7
1,6
1,3
19823230 D a.Bet.verst.
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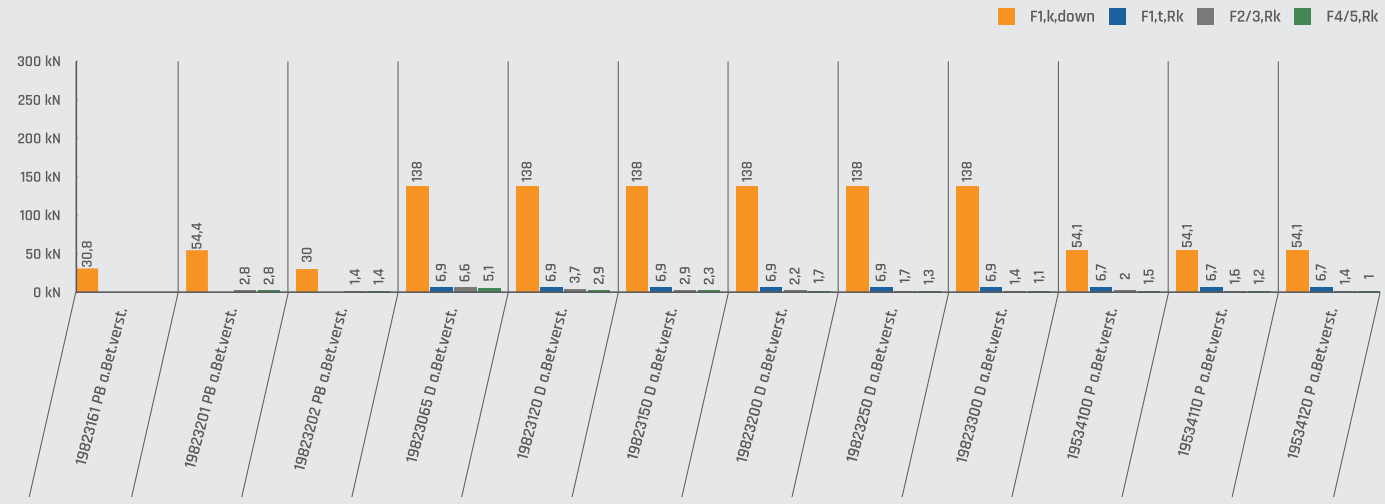
6,7
1,4
1,1
19823280 D a.Bet.verst.
95,5
6,7
1,2
0,9


F1,k,down
F1,t,Rk
F2/3,Rk
F4/5,Rk
300 kN
250 kN
200 kN
150 kN
100 kN
50 kN
0 kN
19823161 PB a.Bet.verst.
30,8
19823201 PB a.Bet.verst.
54,4
2,8
2,8
19823202 PB a.Bet.verst.
30
1,4
1,4
19823065 D a.Bet.verst.
138
6,9
6,6
5,1
19823120 D a.Bet.verst.
138
6,9
3,7
2,9
19823150 D a.Bet.verst.
138
6,9
2,9
2,3
19823200 D a.Bet.verst.
138
6,9
2,2
1,7
19823250 D a.Bet.verst.
138
6,9
1,7
1,3
19823300 D a.Bet.verst.
138
6,9
1,4
1,1
19534100 P a.Bet.verst.
54,1
6,7
2
1,5
19534110 P a.Bet.verst.
54,1
6,7
1,5
1,2
19534120 P a.Bet.verst.
54,1
6,7
1,4
1

STANCHIONS

TECHNICAL FEATURES

Geometry

W(B)	Width (mm)
H	Height (mm)
D(T)	Depth (mm)
T(S)	Material thickness (mm)
SB	Blade width (mm)
SH	Blade height (mm)
SS	Blade thickness (mm)
DOH	Mandrel height (mm)
DOØ	Mandrel diameter (mm)
TB	Carrier plate width (mm)
TL	Carrier plate length (mm)
TS	Carrier plate thickness (mm)
DH	Pin height (mm)
DØ	Pin diameter (mm)
RH	Pipe height (mm)
RØ	Pipe diameter (mm)
GH	Thread height (mm)
GØ	Thread diameter (mm)
BL	Baseplate length (mm)
BB	Baseplate width (mm)
BS	Baseplate thickness (mm)

Tables

VM	Connecting element
$Ø_{(mm)}$	Diameter of connecting element
$L_{ef,(mm)}$	Minimum thread length of wood construction screws
$L_{(mm)}$	Length of connecting element
	Grain direction in the wood component

Load directions / measurement

$F_{1,c}$ ↓	Pressure load, downwards, right-angled to the baseplate
$F_{1,t}$ ↑	Tensile load, upwards, right-angled to the baseplate
$F_{2/3}$ ← →	Load vertical to the connecting elements in the blade, pin, tab
$F_{4/5}$ ← →	Load parallel to the connecting elements in the blade, pin, tab
$\gamma_{M,Stahl}$	Safety coefficient for steel

Indices

[a] Load capacity values apply to baseplates with 8 mm and 6 mm thickness.

[b] Load capacity values apply to a baseplate with 8 mm thickness. For a baseplate with 6 mm thickness with the values marked with the indices [1] to [6] are to be multiplied with the factor from the following table.

1)	2)	3)	4)	5)	6)
0.67	0.72	0.75	0.81	0.84	0.86

[c] For a tensile load with load $F_{1,t}$ rod dowels are required in addition to the specified screws.

[d] If screws with a thread length longer l_{ef} longer than 100 mm are used, the value of load capacity $F_{1,t,Rk,Holz}$ must be increased by the factor $f_{1,t,Holz} = (l_{ef} / 100\ mm)^{0,9}$

STANCHIONS

APPLICATIONS

Application:
Connection of posts on concrete or in concrete

Materials:

Corrosion protection:
ZINTOP coating,
hot-dip galvanised
galvanised

For use in usage classes

Connecting element:

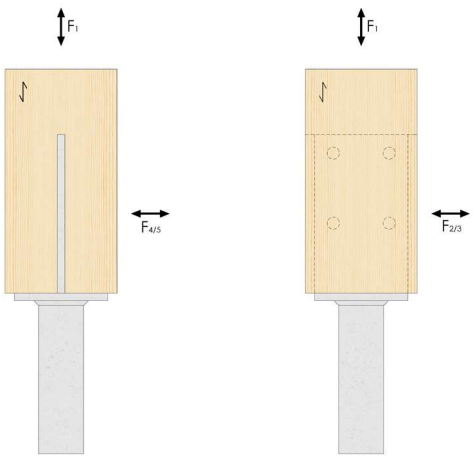
timber
Screws according to EN 14592 (DIN 571 and thread according to DIN 7998)
Screw diameter with minimum screw length and minimum thread length l_{ef}:

Ø 10x120 - $l_{ef.} \geq 100$ mm
Ø 10x60, Ø 4x60 - $l_{ef.} \geq 40$ mm
Ø 8x70 - $l_{ef.} \geq 50$ mm
Ø 12X80 - $l_{ef.} \geq 60$ mm

Concrete
Bolt anchor, concrete screw, adhesive dowel

Connecting elements from page 274

Load directions



General information

For use in usage class 3, the fastening elements must be provided with a zinc coating (Fe/Zn 25c).
The posts must always be installed perpendicular to the baseplate of the stanchion.
The end grain surface of the post must be placed fully on the baseplate.
In load case F1,t sometimes additional rod dowels are required.
Minimum spacing of the rod dowel to the end grain: $a_{3,t} \geq 80$ mm.

For stanchions with support plate (with holes), the minimum spacing and minimum length of the thread can be observed.
GH disc head screws screwed into the end wood vertically.

The minimum requirement of the steel quality is fulfilled when using GH rod dowels.
The following load capacities can be applied:

Ø	8	10	12
$F_{v,Rk}$/0°	9.2	13.2	18.2

Connection to concrete
Proof of the load-bearing capacity for fastening to concrete must be provided separately in accordance with the manufacturer's specifications.
For stanchions in concrete, the minimum concreting depth is 150 mm.

Design
The table contains characteristic values of the load-bearing capacity for determining design values of the load-bearing capacity in the ultimate limit state.
The load-bearing capacities apply to the specified maximum spacing between the load application points and the upper edge of the substrate.
Characteristic raw density of timber: ρ_k = 350 kg/m³ (C24) or higher.

Design value of load capacity

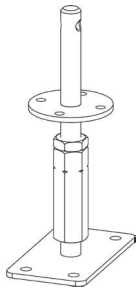
$$F_{i,Rd} = \min \{ k_{mod} \times F_{i,Rk,Holz} / \gamma_{M,Holz} ; F_{i,Rk,Stahl} / \gamma_{M,Stahl} \}$$

with k_{mod} nach DIN EN 1995-1-1 und $\gamma_{M,Holz}$ = 1,3
All partial safety factors $\gamma_{M,Stahl}$ must be considered when determining the design value.

Proof of load capacity:

$$\sum [F_{(i,Ed)}/F_{(i,Rd)} \leq 1]$$

Design example



Stanchion 19613201 type D03 on concrete, height-adjustable

Column connection
Post NH C24 14/14; Planned spacing of the end grain from the floor: a=200 mm
Usage class 2 (posts under a roof and protected from weathering and splashes)

Impact combinations
1 Impact combination of own weight and snow, k_{mod} = 0.9
Pressure force $F_{1,C,Ed}$ = 31.2 kN

2 Impact combination of own weight and wind, k_{mod} = 1.0
Tensile force $F_{1,t,Ed}$ = 2.47 kN horizontal force $F_{2/3}$ or $F_{4/5}$ = 0.78 kN
If the correct arrangement of the stanchion is not checked at the installation site, the horizontal load should be applied in the most unfavourable constellation.

Properties and requirements of the stanchion from the table

Art. No.	[mm]					Connecting element
	Post		Maximum distances			
	$W(B)_{min}$	H_{min}	a_{max}	$e_{2/3}$	$e_{4/5}$	
19613201	120	120	236	236	236	4 screws Ø10x120

Connecting element

4 screws Ø 10 x 120 according to EN 14592 with thread length l_{ef} ≥ 100 mm
→ e.g. wood construction screw GH S Drive Ø 10 x 200 with l_{ef} = 100 mm (+ countersunk washer)
or key screws according to DIN 571 Ø 10 x 180 with l_{ef} = 0.6 x 180 = 108 mm
The screws must be screwed into the pre-drilled holes.

Specified minimum cross-section of column
b/h =14/14 > min b/h = 12/12 ✓

Maximum distances
a = 200 mm < max a = 236 mm ✓

Load capacities of the stanchion from table

Art. No.	$F_{1,c}$ - pressure			$F_{1,t}$ - tension			$F_{2/3}$			$F_{4/5}$		
	timber	Steel		timber	Steel		timber	Steel		timber	Steel	
	$F_{1,c,Rk}$	$F_{1,c,Rk}$	γ_M	$F_{1,t,Rk}$	$F_{1,t,Rk}$	γ_M	$F_{2/3,Rk}$	$F_{2/3,Rk}$	γ_M	$F_{4/5,Rk}$	$F_{4/5,Rk}$	γ_M
19613201 [b]	129,00	59,20	1,00	16,30 [d]	6,66	1,00	8,36 [5]	1,66	1,25	8,36 [5]	1,66	1,25
		44,30	1,10									

Design value of load capacities for impact combination 1
[b] The thickness of the baseplate is 6 mm → the reduction factors [1] and [5] must be considered!
$F_{1,c,Rd}$= min {k_{mod} x $F_{1,c,Rk,Holz}$ / $\gamma_{M,Holz}$; $F_{1,c,Rk,Stahl}$ / $\gamma_{M,Stahl}$} = min {0,9 x 129 / 1,3 ; 0,67 x 59,2 / 1,0 ; 44,3 / 1,1}= 39,7 kN

Design value of load capacity for impact combination 1
$F_{1,c,Ed}$ / $F_{1,c,Rd}$ = 31,2 / 39,7 = <u>0,79</u> ✓

Design value of load capacities for impact combination 2
[d] An increase in the load-bearing capacity of the timber connection has no effect on the overall load-bearing capacity here, as the overall load capacity is limited by the steel load capacity.
$F_{1,t,Rd}$ = min {k_{mod} x $F_{1,t,Rk,Holz}$ / $\gamma_{M,Holz}$; $F_{1,t,Rk,Stahl}$ / $\gamma_{M,Stahl}$} = min {1,0 x 16,3 / 1,3 ; 6,66 / 1,0} = <u>6,66 kN</u>
$F_{2/3,Rd}$= $F_{4/5,Rd}$= min {k_{mod} x $F_{2/3,Rk,Holz}$ / $\gamma_{M,Holz}$; $F_{2/3,Rk,Stahl}$ / $\gamma_{M,Stahl}$} = min {1,0 x 0,84 x 8,36 / 1,3 ; 1,66 / 1,25} = <u>1,33 kN</u>

Design value of load capacity for impact combination 2
$F_{1,t,Ed}$ / $F_{1,t,Rd}$ + $F_{2/3,Ed}$ / $F_{2/3,Rd}$ = 2,47 / 6,66 + 0,78 / 1,33 = <u>0,96</u> ✓

Load on anchor bolts
4 anchor bolts Ø12 mm

Impact combination 1
No stress on the anchor bolts, as the compressive force is transferred to the substrate via contact through the baseplate.

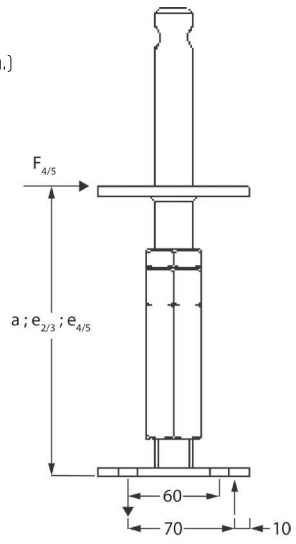
Impact combination 2
If the correct arrangement of the stanchion is not checked at the installation site, the load on the anchor bolts should be determined in the most unfavourable constellation. It is also recommended to determine the load on the anchor bolts with the maximum spacing $e_{2/3}$ or $e_{4/5}$.

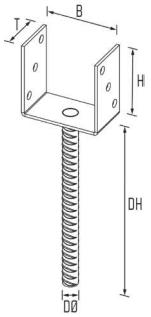
Tensile load on the anchor bolts by load $F_{1,t,Ed}$ and eccentric load $F_{4/5,Ed}$

$F_{ax,Bo,Ed}$ = $F_{1,t,Ed}$ / 4 + $F_{4/5,Ed}$ / 2 x $e_{4/5}$ / 70 mm = 2,47 / 4 + 0,78 / 2 x 236 / 70 = <u>1,93 kN</u>
(The distance between the centre of rotation and the edge of the component was set at 10 mm.)

Shearing load of the anchor bolts by load F

$F_{lat,Bo,Ed}$ = $F_{4/5,Ed}$ / 4 = 0,78 / 4 = <u>0,20 kN</u>





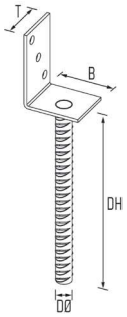
STANCHIONS

TYPE U-60 IN CONCRETE

NKL 3

235 JR feuerverzinkt

Art. No.	Top part [mm]					Pin [mm]			EAN	Weight	Pallet	PU
	W(B)	x	D(T)	x	H	D Ø	x	DH	4019346	kg		
19800201	71	x	60	x	115	20	x	250	500439	0.850	360	15
19800203	81	x	60	x	115	20	x	250	500453	0.880	360	15
19800204	91	x	60	x	115	20	x	250	500460	0.890	360	15
19800205	101	x	60	x	115	20	x	250	500477	1.300	240	10
19800206	121	x	60	x	115	20	x	250	500484	0.920	240	10
19800207	141	x	60	x	115	20	x	250	500491	0.960	240	10



STANCHIONS

TYPE L-60 IN CONCRETE

NKL 3

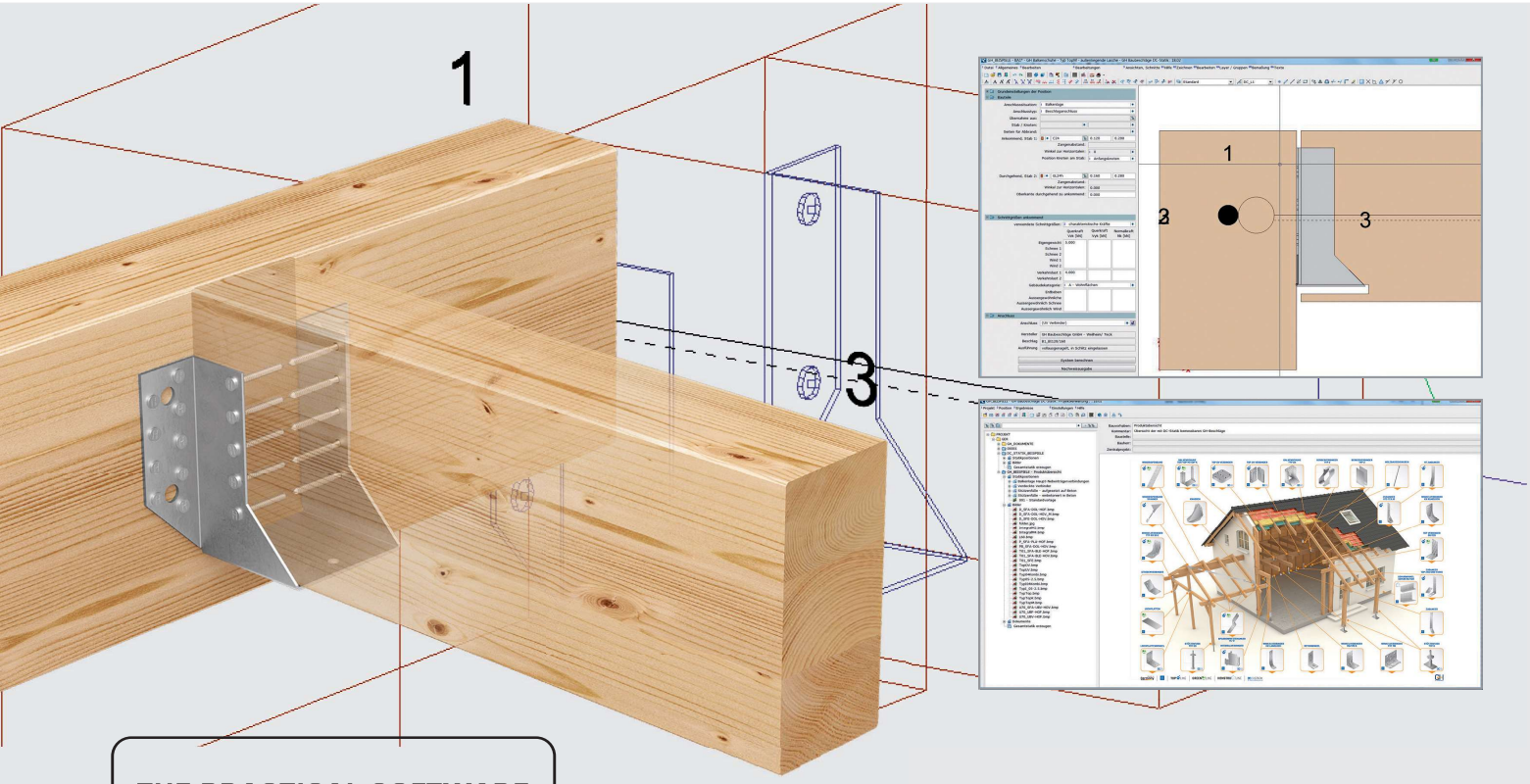
235 JR feuerverzinkt

Art. No.	Top part [mm]			Pin [mm]			EAN	Weight	Pallet	PU
	W(B)	x	D(T)	D Ø	x	DH	4019346	kg		
19860102	70	x	60	20	x	250	500002	0.690	640	20

DCSTATIK

EXTENSIVE DESIGN OF OUR GH TIMBER CONNECTORS*

WITH THE GH DC STATICS



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By entering the design criteria, the timber cross-sections and the loads, you will receive a selection of possible connectors. You will receive verifiable static proof of the design as a PDF document in just a few clicks.

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*Joist hangers, timber/timber, integral connectors, UV connector timber/timber, OV connector, stanchion

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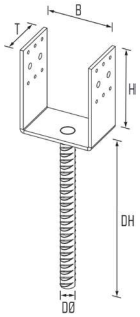


ETA-16 0550

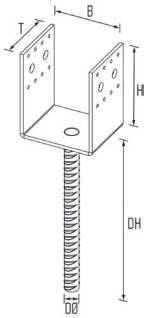
NKL 3

235 JR feuerverzinkt

STANCHIONS

TYPE U-70 IN CONCRETE

Art. No.	Top part [mm]					Pin [mm]			EAN	Weight	Pallet	PU
	W(B)	x	D(T)	x	H	D Ø	x	DH	4019346	kg		
19800301	81	x	70	x	125	20	x	250	500200	1.120	360	15
19800302	91	x	70	x	125	20	x	250	500217	1.150	360	15
19800303	101	x	70	x	125	20	x	250	500224	1.180	240	10
19800304	121	x	70	x	125	20	x	250	500231	1.220	240	10



ETA-16 0550

NKL 3

235 JR feuerverzinkt

STANCHIONS

TYPE U-90 IN CONCRETE

Art. No.	Top part [mm]					Pin [mm]			EAN	Weight	Pallet	PU
	W(B)	x	D(T)	x	H	D Ø	x	DH	4019346	kg		
19800305	91	x	90	x	125	20	x	250	500248	1.510	240	10
19800306	101	x	90	x	125	20	x	250	500255	1.550	240	10
19800307	121	x	90	x	125	20	x	250	500262	1.620	240	10
19800308	141	x	90	x	125	20	x	250	500279	1.680	240	10

TYPE U-70 IN CONCRETE

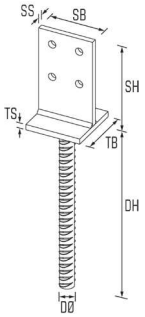
Timber / Concrete

Art. No.	[mm]					Connecting element	$F_{1,c}$ - pressure			$F_{1,t}$ - tension			$F_{2/3}$			$F_{4/5}$		
	Post		Maximum distances				timber	Steel		timber	Steel		timber	Steel		timber	Steel	
	B_{min}	H_{min}	a_{max}	$e_{2/3}$	$e_{3/4}$		$F_{1,c,Rk}$	$F_{1,c,Rk}$	γ_M	$F_{1,t,Rk}$	$F_{1,t,Rk}$	γ_M	$F_{2/3,Rk}$	$F_{2/3,Rk}$	γ_M	$F_{4/5,Rk}$	$F_{4/5,Rk}$	γ_M
19800301	81	94	100	190	102	2 screws Ø8x70	75,70	39,40	1,00	6,17	3,91	1,00	5,01	1,31	1,00	4,93	2,75	1,00
19800302	91	94	100	190	102	2 screws Ø8x70	83,10	39,40	1,00	6,17	3,33	1,00	5,01	1,10	1,00	4,93	2,75	1,00
19800303	101	94	100	190	102	2 screws Ø8x70	90,40	39,40	1,00	6,17	2,90	1,00	5,01	1,10	1,00	4,93	2,75	1,00
19800304	121	94	100	190	102	2 screws Ø8x70	105,00	39,40	1,00	6,17	2,31	1,00	5,01	1,10	1,00	4,93	2,75	1,00

TYPE U-90 IN CONCRETE

Timber / Concrete

Art. No.	[mm]					Connecting element	$F_{1,c}$ - pressure			$F_{1,t}$ - tension			$F_{2/3}$			$F_{4/5}$		
	Post		Maximum distances				timber	Steel		timber	Steel		timber	Steel		timber	Steel	
	B_{min}	H_{min}	a_{max}	$e_{2/3}$	$e_{3/4}$		$F_{1,c,Rk}$	$F_{1,c,Rk}$	γ_M	$F_{1,t,Rk}$	$F_{1,t,Rk}$	γ_M	$F_{2/3,Rk}$	$F_{2/3,Rk}$	γ_M	$F_{4/5,Rk}$	$F_{4/5,Rk}$	γ_M
19800305	91	126	100	190	97	2 screws Ø12x80	107,00	39,40	1,00	10,90	3,33	1,00	7,95	1,81	1,00	6,36	2,16	1,00
19800306	101	126	100	190	97	2 screws Ø12x80	116,00	39,40	1,00	10,90	2,90	1,00	7,95	1,55	1,00	6,36	2,16	1,00
19800307	121	126	100	190	97	2 screws Ø12x80	135,00	39,40	1,00	10,90	2,31	1,00	7,95	1,41	1,00	6,36	2,16	1,00
19800308	141	126	100	190	97	2 screws Ø12x80	154,00	39,40	1,00	10,90	1,91	1,00	7,95	1,41	1,00	6,36	2,16	1,00

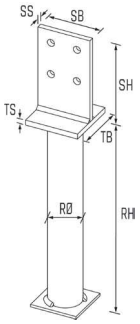


STANCHIONS

TYPE T-01 IN CONCRETE

Art. No.	Blade [mm]						Pin [mm]			Carrier plate [mm]			EAN	Weight	Pallet	PU
	SB	x	SH	x	SS	Ø 11	D Ø	x	DH	TB	x	TS	4019346	kg		
19810201	80	x	130	x	8	4	20	x	250	80	x	8	505007	1.800	240	10
19810240	80	x	130	x	8	4	20	x	400	80	x	8	003503	2.150	200	10

Fastening element: GH rod dowels Ø 10 mm **(see page 284)**



STANCHIONS

TYPE T-02 IN CONCRETE

Art. No.	Blade [mm]						Tube [mm]			Carrier plate [mm]			EAN	Weight	Pallet	PU
	SB	x	SH	x	SS	Ø 11	R Ø	x	RH	TB	x	TS	4019346	kg		
19810203	80	x	130	x	8	4	48,3	x	300	80	x	8	505021	2.350	180	10
19810204	80	x	130	x	8	4	48,3	x	500	80	x	8	505038	3.100	120	10

Fastening element: GH rod dowels Ø 10 mm **(see page 284)**

TYPE T-01 IN CONCRETE

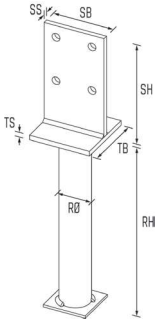
Timber | Concrete

Art. No.	[mm]					Connecting element	$F_{1,c}$ - pressure			$F_{1,t}$ - tension			$F_{2/3}$			$F_{4/5}$		
	Post		Maximum distances				timber	Steel		timber	Steel		timber	Steel		timber	Steel	
	B_{min}	H_{min}	a_{max}	$e_{2/3}$	$e_{3/4}$		$F_{1,c,Rk}$	$F_{1,c,Rk}$	γ_M	$F_{1,t,Rk}$	$F_{1,t,Rk}$	γ_M	$F_{2/3,Rk}$	$F_{2/3,Rk}$	γ_M	$F_{4/5,Rk}$	$F_{4/5,Rk}$	γ_M
19810201	100	100	100	210	120	4 rod dowels Ø10	75,60	63,50	1,00	24,80	57,10	1,25	9,20	3,11	1,25	1,66	4,77	1,00
19810240	100	100	150	260	164	4 rod dowels Ø10	75,60	63,50	1,00	24,80	57,10	1,25	9,20	2,38	1,00	1,60	3,63	1,00

TYPE T-02 IN CONCRETE

Timber | Concrete

Art. No.	[mm]					Connecting element	$F_{1,c}$ - pressure			$F_{1,t}$ - tension			$F_{2/3}$			$F_{4/5}$		
	Post		Maximum distances				timber	Steel		timber	Steel		timber	Steel		timber	Steel	
	B_{min}	H_{min}	a_{max}	$e_{2/3}$	$e_{3/4}$		$F_{1,c,Rk}$	$F_{1,c,Rk}$	γ_M	$F_{1,t,Rk}$	$F_{1,t,Rk}$	γ_M	$F_{2/3,Rk}$	$F_{2/3,Rk}$	γ_M	$F_{4/5,Rk}$	$F_{4/5,Rk}$	γ_M
19810203	100	120	100	210	132	4 rod dowels Ø10	75,60	108,00	1,10	24,80	87,30	1,25	12,00	7,53	1,00	2,26	9,50	1,00
19810204	100	120	200	310	232	4 rod dowels Ø10	75,60	108,00	1,10	24,80	87,30	1,25	12,00	5,07	1,00	2,26	6,70	1,00

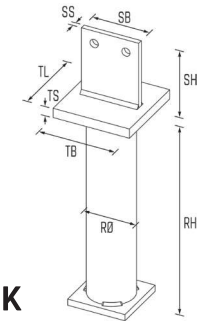


STANCHIONS

TYPE T-03 IN CONCRETE

Art. No.	Blade [mm]						Tube [mm]			Carrier plate [mm]			EAN	Weight	Pallet	PU
	SB	x	SH	x	SS	Ø 13	R Ø	x	RH	TB	x	TS	4019346	kg		
19810206	100	x	170	x	8	4	48,3	x	500	100	x	8	505052	3.870	60	5

Fastening element: GH rod dowels Ø 12 mm **(see page 285)**



STANCHIONS

TYPE T-04 IN CONCRETE EXTRA THICK

Art. No.	Blade [mm]						Tube [mm]			Carrier plate [mm]			EAN	Weight	Pallet	PU
	SB	x	SH	x	SS	Ø 13	R Ø	x	RH	TB	x	TS	4019346	kg		
19810210	90	x	105	x	8	2	70	x	323	120	x	15	505700	5.330	50	1

The carrier plate has a thickness of 15 mm. For timber constructions with maximum static pressure stress.

Fastening element: GH rod dowels Ø 12 mm **(see page 285)**

TYPE T-03 IN CONCRETE

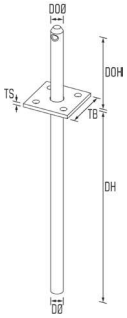
Timber / Concrete

Art. No.	[mm]					Connecting element	$F_{1,c}$ - pressure			$F_{1,t}$ - tension			$F_{2/3}$			$F_{4/5}$		
	Post		Maximum distances				timber	Steel		timber	Steel		timber	Steel		timber	Steel	
	B_{min}	H_{min}	a_{max}	$e_{2/3}$	$e_{3/4}$		$F_{1,c,Rk}$	$F_{1,c,Rk}$	γ_M	$F_{1,t,Rk}$	$F_{1,t,Rk}$	γ_M	$F_{2/3,Rk}$	$F_{2/3,Rk}$	γ_M	$F_{4/5,Rk}$	$F_{4/5,Rk}$	γ_M
19810206	120	156	200	350	232	4 rod dowels Ø10	128,00	108,00	1,10	34,90	88,60	1,25	18,90	4,48	1,00	2,95	6,70	1,00

TYPE T-04 IN CONCRETE EXTRA THICK

Timber / Concrete

Art. No.	[mm]					Connecting element	$F_{1,c}$ - pressure			$F_{1,t}$ - tension			$F_{2/3}$			$F_{4/5}$		
	Post		Maximum distances				timber	Steel		timber	Steel		timber	Steel		timber	Steel	
	B_{min}	H_{min}	a_{max}	$e_{2/3}$	$e_{3/4}$		$F_{1,c,Rk}$	$F_{1,c,Rk}$	γ_M	$F_{1,t,Rk}$	$F_{1,t,Rk}$	γ_M	$F_{2/3,Rk}$	$F_{2/3,Rk}$	γ_M	$F_{4/5,Rk}$	$F_{4/5,Rk}$	γ_M
19810210	140	136	150	230	182	2 rod dowels Ø12	213,00	283,00	1,10	36,00	111,00	1,25	18,90	30,00	1,25	4,90	10,70	1,00



STANCHIONS

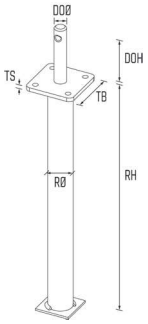
TYPE D IN CONCRETE

ETA-16 0550

NKL 3 | 235 JR feuerverzinkt | DC DCSTATIK

Art. No.	Mandrel [mm]				Pin [mm]			Carrier plate [mm]				EAN	Weight	Pallet	PU
	DO Ø	x	DOH	Ø 9	D Ø	x	DH	TB	x	TS	Ø 11	4019346	kg		
19620080	20	x	120	1,00	20	x	374	80	x	6	4	510001	1.930	180	10
19620100	20	x	120	1,00	20	x	374	100	x	6	4	510018	1.690	180	10
19820400	24	x	120	1,00	24	x	374	100	x	6	4	003510	2.490	180	5

Fastening element: GH rod dowels Ø 8 mm **(see page 284)**
TOP-Fix Duo screw Ø 10 x 120 mm **(see page 316)**



STANCHIONS

TYPE DS IN CONCRETE

ETA-16 0550

NKL 3 | 235 JR feuerverzinkt | DC DCSTATIK

Art. No.	Mandrel [mm]				Tube [mm]			Carrier plate [mm]				EAN	Weight	Pallet	PU
	DO Ø	x	DOH	Ø 11	R Ø	x	RH	TB	x	TS	Ø 11	4019346	kg		
19820220	24	x	120	1	48,3	x	500	100	x	6	4	510148	2.900	120	10
19820221	24	x	120	1	48,3	x	400	100	x	6	4	010556	2.900	120	10
19820420	40	x	120	1	48,3	x	500	100	x	6	4	510131	3.100	120	10

Sturdy hot-dip galvanised stanchion to install in concrete to transfer loads directly into the foundations.
The 24 or 40 mm mandrels enable a quick, cost-effective and invisible connection.

Fastening element: GH rod dowels Ø 10 mm **(see page 284)**
TOP-Fix Duo screw Ø 10 x 120 mm **(see page 316)**

TYPE D IN CONCRETE

Timber / Concrete

Art. No.	[mm]					Connecting element	$F_{1,c}$ - pressure			$F_{1,t}$ - tension			$F_{2/3}$			$F_{4/5}$		
	Post		Maximum distances				timber	Steel		timber	Steel		timber	Steel		timber	Steel	
	B_{min}	H_{min}	a_{max}	$e_{2/3}$	$e_{3/4}$		$F_{1,c,Rk}$	$F_{1,c,Rk}$	γ_M	$F_{1,t,Rk}$	$F_{1,t,Rk}$	γ_M	$F_{2/3,Rk}$	$F_{2/3,Rk}$	γ_M	$F_{4/5,Rk}$	$F_{4/5,Rk}$	γ_M
19620080	100	100	100	100	100	4 screws Ø10x120	105,00	41,20	1,00	16,30 d)	13,00	1,00	6,38	3,33	1,00	6,38	3,33	1,00
19620100	120	120	100	100	100	4 screws Ø10x120	176,00	41,90	1,00	16,30 d)	11,50	1,00	6,94	3,33	1,00	6,94	3,33	1,00
19820400	120	120	100	100	100	4 screws Ø10x120	174,00	38,80	1,00	16,30 d)	10,90	1,00	6,94	5,76	1,00	6,94	5,76	1,00

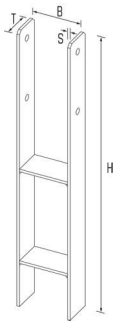
For indices see **page 326**

TYPE DS IN CONCRETE

Timber / Concrete

Art. No.	[mm]					Connecting element	$F_{1,c}$ - pressure			$F_{1,t}$ - tension			$F_{2/3}$			$F_{4/5}$		
	Post		Maximum distances				timber	Steel		timber	Steel		timber	Steel		timber	Steel	
	B_{min}	H_{min}	a_{max}	$e_{2/3}$	$e_{3/4}$		$F_{1,c,Rk}$	$F_{1,c,Rk}$	γ_M	$F_{1,t,Rk}$	$F_{1,t,Rk}$	γ_M	$F_{2/3,Rk}$	$F_{2/3,Rk}$	γ_M	$F_{4/5,Rk}$	$F_{4/5,Rk}$	γ_M
19820220	120	120	200	200	200	4 screws Ø10x120	174,00	108,00	1,10	16,30 d)	19,00	1,00	8,22	8,08	1,00	8,22	8,08	1,00
19820221	120	120	100	100	100	4 screws Ø10x120	174,00	108,00	1,10	16,30 d)	19,00	1,00	8,22	16,90	1,00	8,22	16,90	1,00
19820420	120	120	200	200	200	4 screws Ø10x120	160,00	108,00	1,10	16,30 d)	15,00	1,00	8,22	8,08	1,00	8,22	8,08	1,00

For indices see **page 326**



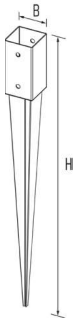
STANCHIONS

TYPE H IN CONCRETE GROUP S

NKL 3

235 JR feuerverzinkt

Art. No.	Dimensions [mm]							EAN	Weight	PU
	W(B)	x	H	x	D(T)	x	T(S)	4019346	kg	
19840080	71	x	600	x	60	x	6,0	515129	3.850	1
19840090	81	x	600	x	60	x	6,0	515136	3.900	1
19840100	91	x	600	x	60	x	6,0	515105	3.950	1
19840105	95	x	600	x	60	x	6,0	515143	4.075	1
19840110	101	x	600	x	60	x	6,0	515112	4.100	1
19840111	111	x	600	x	60	x	6,0	515150	4.015	1
19840120	121	x	600	x	60	x	6,0	515167	4.175	1
19840140	141	x	600	x	60	x	6,0	515181	4.248	1



STANCHIONS

TYPE S-R

NKL 3

235 JR feuerverzinkt

Art. No.	Dimensions [mm]			EAN	Weight	PU
	W(B)	x	H	4019346	kg	
19880271	71	x	750	515235	2.000	1
19880291	91	x	750	515242	2.600	1
19880071	71	x	900	515204	2.200	1
19880091	91	x	900	515211	2.800	1
19880101	101	x	900	515228	3.200	1

ZINTOP

ON THE SAFE SIDE, WITH AN ATTRACTIVE LOOK

Stanchions that have to meet the requirements of usage class 3 are subsequently hot-dip galvanised or have our **ZIN**TOP coating.
ZINTOP not only has optimum corrosion protection, but is also visually more appealing.
We supply a larger selection of stanchions, including ones with the **ZIN**TOP surface.
The **ZIN**TOP coating is approved for usage class 3.

Advantages of the ZINTOP **coating:**

- Even surface
- High corrosion resistance
- No contact corrosion in connection with stainless steel
- Approved for usage class 3 in timber construction
- Good surface hardness
- Even layer thickness, including on thread parts

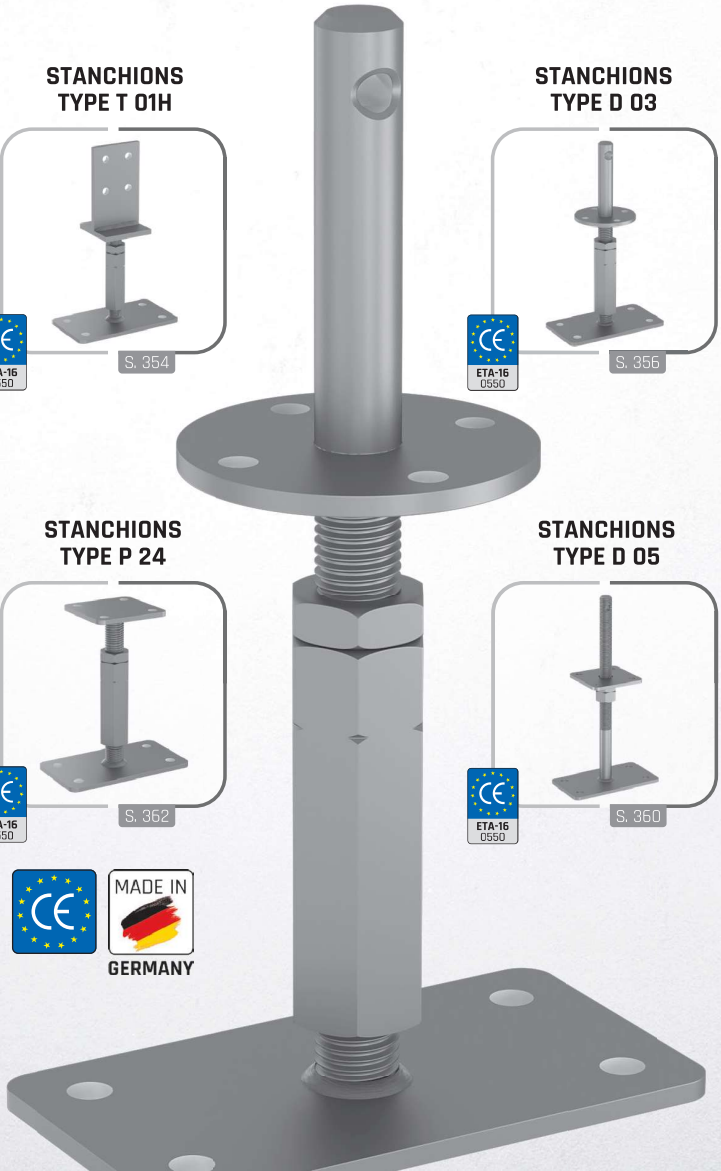
The usage class must be determined for the corresponding application according to EN 1995-1-1 2.3 1.3 Usage classes. The following definition is only a reference point:

Usage class 1
The timber component is located in a heated building

Usage class 2
The wood component is located under a roof and is not directly exposed to the weather

usage class 3
The wood component can be exposed to weather and splashes.

The static values indicated in the catalogue are for orientation purposes only. Detailed load capacity tables for determination of combined stress with design examples can be found at:
www.holzverbinder.de



STANCHIONS TYPE PR

S. 364

STANCHIONS TYPE T 01H

S. 354

STANCHIONS TYPE D 03

S. 356

STANCHIONS TYPE D

S. 358

STANCHIONS TYPE D 24

S. 350

STANCHIONS TYPE P 24

S. 362

STANCHIONS TYPE D 05

S. 360

STANCHIONS TYPE D 40

S. 352

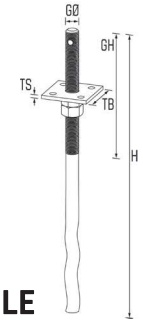
STANCHIONS TYPE D I. B.

S. 342

MADE IN GERMANY

STANCHIONS TYPE U 70

S. 366



ZINTOP

ETA-16 0550

NKL 3

235 JR ZINTOP

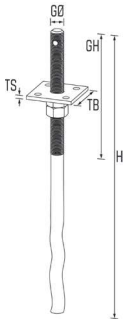
DCSTATIK

ZINTOP STANCHIONS

TYPE D IN CONCRETE HEIGHT-ADJUSTABLETABLE

Art. No.	Mandrel [mm]					Carrier plate [mm]				EAN	Weight	Pallet	PU
	G Ø	x	GH	H	Ø 9	TB	x	TS	Ø 11	4019346	kg		
19621080TOP	22	x	240	500	1,00	80	x	6	4	010693	1.630	360	10
19621100TOP	22	x	240	500	1,00	100	x	6	4	010709	1.960	360	10

Fastening element: GH rod dowels Ø 8 mm **(see page 284)**
TOP-Fix Duo screw Ø 10 x 120 mm **(see page 316)**



ETA-16 0550

NKL 2

235 JR galv. verzinkt

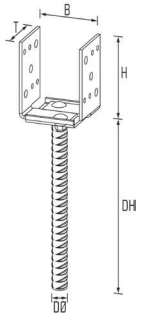
DCSTATIK

STANCHIONS

TYPE D IN CONCRETE HEIGHT-ADJUSTABLE

Art. No.	Mandrel [mm]					Carrier plate [mm]				EAN	Weight	Pallet	PU
	G Ø	x	GH	H	Ø 9	TB	x	TS	Ø 11	4019346	kg		
19621080	22	x	240	500	1,00	80	x	6	4	510025	1.630	360	10
19621100	22	x	240	500	1,00	100	x	6	4	510032	1.960	360	10

Fastening element: GH rod dowels Ø 8 mm **(see page 284)**
TOP-Fix Duo screw Ø 10 x 120 mm **(see page 316)**



ETA-16 0550

NKL 3

235 JR feuerverzinkt

DCSTATIK

STANCHIONS

TYPE U-70 IN CONCRETE SIDE-ADJUSTABLE

Art. No.	Top part [mm]					Pin [mm]			EAN	Weight	Pallet	PU
	W(B)	x	H	x	D(T)	D Ø	x	DH	4019346	kg		
19850102	70-150	x	115	x	70	20	x	250	501016	1.150	240	10
19850202	70-150	x	115	x	70	20	x	400	003527	2.120	240	10

Side adjustment 70-150 mm via slotted hole using a fixing screw.

Fastening element: TOP-Fix Duo screw Ø 10 x 60 mm **(see page 316)**

TYPE D IN CONCRETE HEIGHT-ADJUSTABLE

Timber | Concrete

Art. No.	[mm]					Connecting element	$F_{1,c}$ - pressure			$F_{1,t}$ - tension			$F_{2/3}$			$F_{4/5}$		
	Post		Maximum distances				timber	Steel		timber	Steel		timber	Steel		timber	Steel	
	B_{min}	H_{min}	a_{max}	$e_{2/3}$	$e_{3/4}$		$F_{1,c,Rk}$	$F_{1,c,Rk}$	γ_M	$F_{1,t,Rk}$	$F_{1,t,Rk}$	γ_M	$F_{2/3,Rk}$	$F_{2/3,Rk}$	γ_M	$F_{4/5,Rk}$	$F_{4/5,Rk}$	γ_M
19621080TOP	100	100	180	180	180	2 screws Ø12x120	106,00	41,00	1,10	16,30 d)	12,60	1,00	6,38	1,53	1,00	6,38	1,53	1,00
19621100TOP	120	120	180	180	180	2 screws Ø12x120	178,00	41,00	1,10	16,30 d)	11,20	1,00	6,94	1,53	1,00	6,94	1,53	1,00
19621080TOP	100	100	**300**	**300**	**300**	2 screws Ø12x120	106,00	22,90	1,10	16,30 d)	12,60	1,00	6,38	0,90	1,00	6,38	0,90	1,00
19621100TOP	120	120	**300**	**300**	**300**	2 screws Ø12x120	178,00	22,90	1,10	16,30 d)	11,20	1,00	6,94	0,90	1,00	6,94	0,90	1,00

For indices see **page 326**

TYPE D IN CONCRETE HEIGHT-ADJUSTABLE

Timber | Concrete

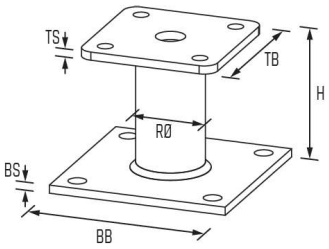
Art. No.	[mm]					Connecting element	$F_{1,c}$ - pressure			$F_{1,t}$ - pressure			$F_{2/3}$			$F_{4/5}$		
	Post		Maximum distances				timber	Steel		timber	Steel		timber	Steel		timber	Steel	
	B_{min}	H_{min}	a_{max}	$e_{2/3}$	$e_{3/4}$		$F_{1,c,Rk}$	$F_{1,c,Rk}$	γ_M	$F_{1,t,Rk}$	$F_{1,t,Rk}$	γ_M	$F_{2/3,Rk}$	$F_{2/3,Rk}$	γ_M	$F_{4/5,Rk}$	$F_{4/5,Rk}$	γ_M
19621080	100	100	180	180	180	2 screws Ø12x120	106,00	41,00	1,10	16,30 d)	12,60	1,00	6,38	1,53	1,00	6,38	1,53	1,00
19621100	120	120	180	180	180	2 screws Ø12x120	178,00	41,00	1,10	16,30 d)	11,20	1,00	6,94	1,53	1,00	6,94	1,53	1,00
19621080	100	100	**300**	**300**	**300**	2 screws Ø12x120	106,00	22,90	1,10	16,30 d)	12,60	1,00	6,38	0,90	1,00	6,38	0,90	1,00
19621100	120	120	**300**	**300**	**300**	2 screws Ø12x120	178,00	22,90	1,10	16,30 d)	11,20	1,00	6,94	0,90	1,00	6,94	0,90	1,00

For indices see **page 326**

TYPE U-70 IN CONCRETE SIDE-ADJUSTABLE

Timber | Concrete

Art. No.	[mm]					Connecting element	$F_{1,c}$ - pressure			$F_{1,t}$ - pressure			$F_{2/3}$			$F_{4/5}$		
	Post		Maximum distances				timber	Steel		timber	Steel		timber	Steel		timber	Steel	
	B_{min}	H_{min}	a_{max}	$e_{2/3}$	$e_{3/4}$		$F_{1,c,Rk}$	$F_{1,c,Rk}$	γ_M	$F_{1,t,Rk}$	$F_{1,t,Rk}$	γ_M	$F_{2/3,Rk}$	$F_{2/3,Rk}$	γ_M	$F_{4/5,Rk}$	$F_{4/5,Rk}$	γ_M
19850102	70-150	100	100	210	132	2 screws Ø10x60	15,90	10,90 -	1,00	-	-	-	-	-	-	-	-	-
19850202	70-150	70	150	210	132	2 screws Ø10x60	15,90	10,90 -	1,00	-	-	-	-	-	-	-	-	-



ETA-16 0550

NKL 3

235 JR feuerverzinkt

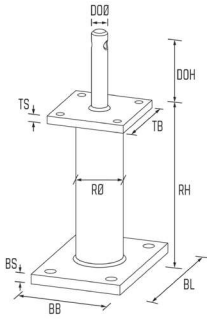
DC DCSTATIK

STANCHIONS

TYPE P

Art. No.	Dimensions [mm]		Carrier plate [mm]				Baseplate [mm]				EAN	Weight	Pallet	PU
	R Ø	H	TB	x	TS	Ø 11	BB	x	BS	Ø 13	4019346	kg		
19832060	48,3	60	100	x	6	4	130	x	6	4	510209	1.270	400	10
19832100	48,3	100	100	x	6	4	130	x	6	4	510216	1.420	300	10
19832150	48,3	150	100	x	6	4	130	x	6	4	510223	1.620	240	10

Fastening element: TOP-Fix Duo screw Ø 10 x 120 mm **(see page 316)**



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NKL 3

235 JR feuerverzinkt

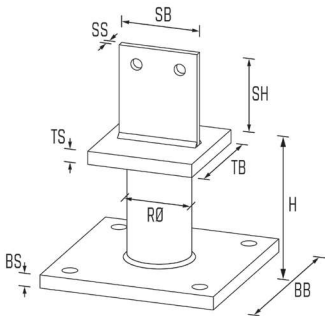
DC DCSTATIK

STANCHIONS

TYPE D EXTRA THICK ON CONCRETE

Art. No.	Mandrel [mm]						Carrier plate [mm]				Baseplate [mm]						EAN	Weight	Pallet	PU
	DO Ø	x	DOH	Ø 11	R Ø	H	TB	x	TS	Ø 12	BB	x	BL	x	BS	Ø 17	4019346	kg		
19813210	24	x	120	1	70	250	120	x	12	4	140	x	200	x	15	4	003565	7.190	50	1

Fastening element: GH rod dowels Ø 10 mm **(see page 284)**
TOP-Fix Duo screw Ø 10 x 100 mm **(see page 316)**



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NKL 3

235 JR feuerverzinkt

DC DCSTATIK

STANCHIONS

TYPE T-05 EXTRA THICK

Art. No.	Blade [mm]								Carrier plate [mm]			Baseplate [mm]				EAN	Weight	Pallet	PU
	SB	x	SH	x	SS	Ø 13	R Ø	H	TB	x	TS	BB	x	BS	Ø 17	4019346	kg		
19812210	90	x	150	x	8	2	70	148	120	x	15	200	x	15	4	505717	8.050	50	1

Fastening element: GH rod dowels Ø 12 mm **(see page 285)**

STATICS

TYPE P

Timber | Concrete

Art. No.	[mm]					Connecting element	$F_{1,c}$ - pressure			$F_{1,t}$ - tension			$F_{2/3}$			$F_{4/5}$		
	Post		Maximum distances				timber	Steel		timber	Steel		timber	Steel		timber	Steel	
	B_{min}	H_{min}	a_{max}	$e_{2/3}$	$e_{3/4}$		$F_{1,c,Rk}$	$F_{1,c,Rk}$	γ_M	$F_{1,t,Rk}$	$F_{1,t,Rk}$	γ_M	$F_{2/3,Rk}$	$F_{2/3,Rk}$	γ_M	$F_{4/5,Rk}$	$F_{4/5,Rk}$	γ_M
19832060	120	120	60	60	60	4 screws Ø10x120	101,00	93,40	1,00	16,30 d)	10,60	1,00	6,94	7,71	1,00	6,94	7,71	1,00
19832100	120	120	100	100	100	4 screws Ø10x120	101,00	93,40	1,00	16,30 d)	10,60	1,00	6,94	4,53	1,00	6,94	4,53	1,00
19832150	120	120	150	150	150	4 screws Ø10x120	101,00	93,40	1,00	16,30 d)	10,60	1,00	6,94	2,99	1,00	6,94	2,99	1,00

For indices see **page 326**

TYPE D EXTRA THICK ON CONCRETE

Timber | Concrete

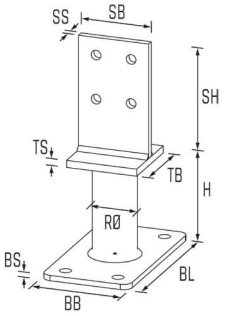
Art. No.	[mm]					Connecting element	$F_{1,c}$ - pressure			$F_{1,t}$ - tension			$F_{2/3}$			$F_{4/5}$		
	Post		Maximum distances				timber	Steel		timber	Steel		timber	Steel		timber	Steel	
	B_{min}	H_{min}	a_{max}	$e_{2/3}$	$e_{3/4}$		$F_{1,c,Rk}$	$F_{1,c,Rk}$	γ_M	$F_{1,t,Rk}$	$F_{1,t,Rk}$	γ_M	$F_{2/3,Rk}$	$F_{2/3,Rk}$	γ_M	$F_{4/5,Rk}$	$F_{4/5,Rk}$	γ_M
19813210	140	140	250	250	250	2 Schrauben Ø10x100	262,00	200,00	1,25	16,30 d)	53,30	1,00	10,20	18,40	1,25	10,20	12,00	1,00

For indices see **page 326**

TYPE T-05 EXTRA THICK

Timber | Concrete

Art. No.	[mm]					Connecting element	$F_{1,c}$ - pressure			$F_{1,t}$ - tension			$F_{2/3}$			$F_{4/5}$		
	Post		Maximum distances				timber	Steel		timber	Steel		timber	Steel		timber	Steel	
	B_{min}	H_{min}	a_{max}	$e_{2/3}$	$e_{3/4}$		$F_{1,c,Rk}$	$F_{1,c,Rk}$	γ_M	$F_{1,t,Rk}$	$F_{1,t,Rk}$	γ_M	$F_{2/3,Rk}$	$F_{2/3,Rk}$	γ_M	$F_{4/5,Rk}$	$F_{4/5,Rk}$	γ_M
19812210	140	140	148	228	167	2 Stabdübel Ø12	202,00	283,00	1,00	36,00	36,40	1,25	19,60	19,80	1,25	4,78	9,77	1,00



ETA-16 0550

NKL 3

235 JR feuerverzinkt

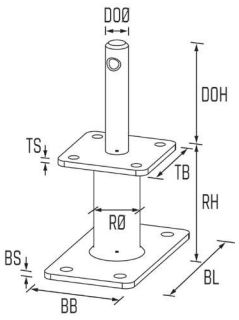
DCSTATIK

STANCHIONS

TYPE T-01 ON CONCRETE

Art. No.	Blade [mm]								Carrier plate [mm]			Baseplate [mm]						EAN	Weight	Pallet	PU
	SB	x	SH	x	SS	Ø 11	R Ø	H	TB	x	TS	BB	x	BL	x	BS	Ø 13	4019346	kg		
19812301	80	x	130	x	8	4	48,3	70	80	x	8	100	x	180	x	6	4	505083	2.000	240	10
19812302	80	x	130	x	8	4	48,3	120	80	x	8	100	x	180	x	6	4	505090	2.100	240	10
19812303	80	x	130	x	8	4	48,3	200	80	x	8	100	x	180	x	6	4	505113	2.300	240	10
19812638	80	x	130	x	8	4	48,3	250	80	x	8	100	x	180	x	6	4	003541	2.500	180	10
19812639	80	x	130	x	8	4	48,3	300	80	x	8	100	x	180	x	6	4	003558	2.600	180	10

Fastening element: GH rod dowels Ø 10 mm **(see page 284)**



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NKL 3

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DCSTATIK

STANCHIONS

TYPE D ON CONCRETE

Art. No.	Mandrel [mm]						Carrier plate [mm]				Baseplate [mm]						EAN	Weight	Pallet	PU
	DO Ø	x	DOH	Ø 11	R Ø	H	TB	x	TS	Ø 11	BB	x	BL	x	BS	Ø 13	4019346	kg		
19823065	24	x	120	1	48,3	70	100	x	6	4	100	x	180	x	6	4	011935	1.950	240	10
19823120	24	x	120	1	48,3	120	100	x	6	4	100	x	180	x	6	4	011928	2.200	240	10
19823150	24	x	120	1	48,3	150	100	x	6	4	100	x	180	x	6	4	011201	2.300	240	10
19823200	24	x	120	1	48,3	200	100	x	6	4	100	x	180	x	6	4	011218	2.500	180	10
19823250	24	x	120	1	48,3	250	100	x	6	4	100	x	180	x	6	4	011225	2.700	180	10
19823300	24	x	120	1	48,3	300	100	x	6	4	100	x	180	x	6	4	011232	2.900	180	10

Fastening element: GH rod dowels Ø 10 mm **(see page 284)**
TOP-Fix Duo screw Ø 10 x 120 mm **(see page 316)**

TYPE T-01 ON CONCRETE

Timber | Concrete

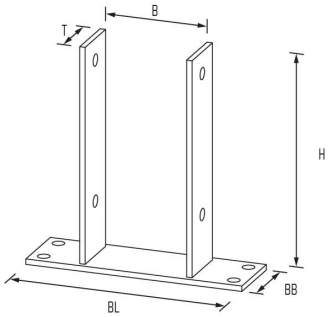
Art. No.	[mm]					Connecting element	$F_{1,c}$ - pressure			$F_{1,t}$ - tension			$F_{2/3}$			$F_{4/5}$		
	Post		Maximum distances				timber	Steel		timber	Steel		timber	Steel		timber	Steel	
	B_{min}	H_{min}	a_{max}	$e_{2/3}$	$e_{3/4}$		$F_{1,c,Rk}$	$F_{1,c,Rk}$	γ_M	$F_{1,t,Rk}$	$F_{1,t,Rk}$	γ_M	$F_{2/3,Rk}$	$F_{2/3,Rk}$	γ_M	$F_{4/5,Rk}$	$F_{4/5,Rk}$	γ_M
19812301	100	100	70	180	92	4 rod dowels Ø10	75,60	108,00	1,10	24,80	6,88	1,00	9,22	1,87	1,00	2,24	4,61	1,00
19812302	100	100	120	230	139	4 rod dowels Ø10	75,60	108,00	1,10	24,80	6,88	1,00	9,22	1,45	1,00	2,19	3,05	1,00
19812303	100	100	200	310	214	4 rod dowels Ø10	75,60	108,00	1,10	24,80	6,88	1,00	9,22	1,07	1,00	2,10	1,98	1,00
19812638	100	100	250	360	263	4 rod dowels Ø10	75,60	108,00	1,10	24,80	6,88	1,00	9,22	0,92	1,00	2,08	1,61	1,00
19812639	100	100	300	410	312	4 rod dowels Ø10	75,60	108,00	1,10	24,80	6,88	1,00	9,22	0,81	1,00	1,99	1,36	1,00

TYPE D ON CONCRETE

Timber | Concrete

Art. No.	[mm]					Connecting element	$F_{1,c}$ - pressure			$F_{1,t}$ - tension			$F_{2/3}$			$F_{4/5}$		
	Post		Maximum distances				timber	Steel		timber	Steel		timber	Steel		timber	Steel	
	B_{min}	H_{min}	a_{max}	$e_{2/3}$	$e_{3/4}$		$F_{1,c,Rk}$	$F_{1,c,Rk}$	γ_M	$F_{1,t,Rk}$	$F_{1,t,Rk}$	γ_M	$F_{2/3,Rk}$	$F_{2/3,Rk}$	γ_M	$F_{4/5,Rk}$	$F_{4/5,Rk}$	γ_M
19823065	120	120	70	70	70	4 screws Ø10x120	169,00	138,00	1,10	16,30 d)	6,88	1,00	6,68	6,61	1,00	6,68	5,09	1,00
19823120	120	120	120	120	120	4 screws Ø10x120	169,00	138,00	1,10	16,30 d)	6,88	1,00	6,68	3,71	1,00	6,68	2,86	1,00
19823150	120	120	150	150	150	4 screws Ø10x120	169,00	138,00	1,10	16,30 d)	6,88	1,00	6,68	2,94	1,00	6,68	2,25	1,00
19823200	120	120	200	200	200	4 screws Ø10x120	169,00	138,00	1,10	16,30 d)	6,88	1,00	6,68	2,18	1,00	6,68	1,68	1,00
19823250	120	120	250	250	250	4 screws Ø10x120	169,00	138,00	1,10	16,30 d)	6,88	1,00	6,68	1,73	1,00	6,68	1,33	1,00
19823300	120	120	300	300	300	4 screws Ø10x120	169,00	138,00	1,10	16,30 d)	6,88	1,00	6,68	1,44	1,00	6,68	1,11	1,00

For indices see **page 326**



STANCHIONS

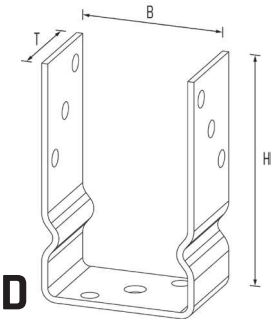
TYPE S-B ON CONCRETE

NKL 3

235 JR feuerverzinkt

Art. No.	Top part [mm]					Baseplate [mm]			EAN	Weight	Pallet	PU
	W(B)	x	H	x	D(T)	BB	x	BL	4019346	kg		
19874201	71	x	200	x	50	60	x	150	515013	1.200	320	10
19874202	81	x	200	x	50	60	x	150	515006	1.250	320	10
19874203	91	x	200	x	50	60	x	150	515020	1.300	320	10
19874204	101	x	200	x	50	60	x	150	515037	1.320	320	10
19874205	121	x	200	x	50	60	x	150	515044	1.370	320	10
19874206	141	x	200	x	50	60	x	150	515051	1.430	320	10

Fastening element: TOP-Fix Duo screw **(see page 316)**



STANCHIONS

TYPE S-B ON CONRETE WITH BEAD

NKL 3

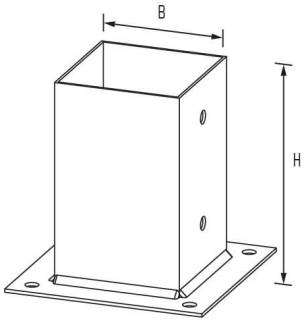
235 JR feuerverzinkt

Art. No.	Dimensions [mm]					EAN	Weight	Pallet	PU
	W(B)	x	H	x	D(T)	4019346	kg		
19874071	71	x	150	x	60	516003	1.100	600	20
19874081	81	x	150	x	60	516010	1.140	600	20
19874091	91	x	150	x	60	516027	1.170	480	20
19874101	101	x	150	x	60	516034	1.250	480	20
19874121	121	x	150	x	60	516041	1.290	480	20

Fastening element: TOP-Fix Duo screw **(see page 316)**

NKL 3

235 JR feuerverzinkt

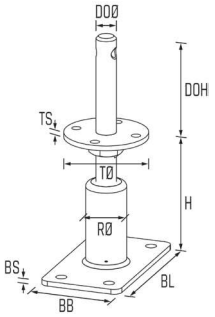


STANCHIONS

SCREW-ON GROUND SLEEVES

Art. No.	Dimensions [mm]			EAN	Weight	Pallet	PU
	W(B)	x	H	4019346	kg		
19894071	71	x	150	515068	1.160	594	1
19894091	91	x	150	515075	1.300	504	10
19894101	101	x	150	515198	1.380	462	10

Fastening element: TOP-Fix Duo screw **(see page 316)**



ZINTOP

ETA-16 0550

NKL 3

235 JR ZINTOP

DCSTATIK

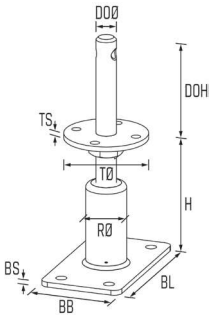
ZINTOP STANCHIONS

TYPE D-24 HEIGHT-ADJUSTABLE

Art. No.	Mandrel [mm]						Carrier plate [mm]				Baseplate [mm]					EAN	Weight	Pallet	PU
	DO Ø	x	DOH	Ø 11	R Ø	H	T Ø	x	TS	Ø 11	BB	x	BL	x	BS	Ø 13	4019346	kg		
19823130TOP	24	x	120	1	48,3	140-210	100	x	6	4	100	x	180	x	6	4	010723	2.700	240	10
19823180TOP	24	x	120	1	48,3	190-260	100	x	6	4	100	x	180	x	6	4	010730	2.825	240	10
19823230TOP	24	x	120	1	48,3	240-310	100	x	6	4	100	x	180	x	6	4	010747	3.000	240	10
19823280TOP	24	x	120	1	48,3	290-360	100	x	6	4	100	x	180	x	6	4	010754	3.125	240	10

An M24 thread allows height adjustment of up to 70 mm when installed and pre-assembly of the support plate with mandrel.

Fastening element: GH rod dowels Ø 10 mm **(see page 284)**
TOP-Fix Duo screw Ø 10 x 120 mm **(see page 316)**



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NKL 3

235 JR feuerverzinkt

DCSTATIK

STANCHIONS

TYPE D-24 HEIGHT-ADJUSTABLE

Art. No.	Mandrel [mm]						Carrier plate [mm]				Baseplate [mm]					EAN	Weight	Pallet	PU
	DO Ø	x	DOH	Ø 11	BL	H	T Ø	x	TS	Ø 11	G Ø	x	BB	x	R Ø	Ø 13	4019346	kg		
19823130	24	x	120	1	48,3	140-210	100	x	6	4	100	x	180	x	6	4	510087	2.700	240	10
19823180	24	x	120	1	48,3	190-260	100	x	6	4	100	x	180	x	6	4	510094	2.825	240	10
19823230	24	x	120	1	48,3	240-310	100	x	6	4	100	x	180	x	6	4	510100	3.000	240	10
19823280	24	x	120	1	48,3	290-360	100	x	6	4	100	x	180	x	6	4	510117	3.125	240	10

An M24 thread allows height adjustment of up to 70 mm when installed and pre-assembly of the support plate with mandrel.

Fastening element: GH rod dowels Ø 10 mm **(see page 284)**
TOP-Fix Duo screw Ø 10 x 120 mm **(see page 316)**

TYPE D-24 HEIGHT-ADJUSTABLE

Timber | Concrete

Art. No.	[mm]					Connecting element	$F_{1,c}$ - pressure			$F_{1,t}$ - tension			$F_{2/3}$			$F_{4/5}$		
	Post		Maximum distances				timber	Steel		timber	Steel		timber	Steel		timber	Steel	
	B_{min}	H_{min}	a_{max}	$e_{2/3}$	$e_{3/4}$		$F_{1,c,Rk}$	$F_{1,c,Rk}$	γ_M	$F_{1,t,Rk}$	$F_{1,t,Rk}$	γ_M	$F_{2/3,Rk}$	$F_{2/3,Rk}$	γ_M	$F_{4/5,Rk}$	$F_{4/5,Rk}$	γ_M
19823130TOP	120	120	210	210	210	4 screws Ø10x120 (Load case $F_{1,c}$+1 rod dowel Ø10)	129,00	95,50	1,25	6,36 c)	6,66 c)	1,00	7,67 5)	2,01	1,00	7,67 5)	1,55	1,00
19823180TOP	120	120	260	260	260		129,00	95,50	1,25	6,36 c)	6,66 c)	1,00	7,67 5)	1,63	1,00	7,67 5)	1,25	1,00
19823230TOP	120	120	310	310	310		129,00	95,50	1,25	6,36 c)	6,66 c)	1,00	7,67 5)	1,36	1,00	7,67 5)	1,05	1,00
19823280TOP	120	120	360	360	360		129,00	95,50	1,25	6,36 c)	6,66 c)	1,00	7,67 5)	1,18	1,00	7,67 5)	0,90	1,00

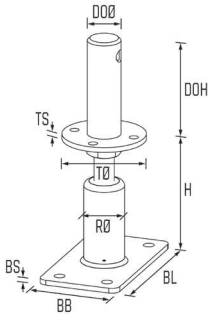
For indices see **page 326**

TYPE D-24 HEIGHT-ADJUSTABLE

Timber | Concrete

Art. No.	[mm]					Connecting element	$F_{1,c}$ - pressure			$F_{1,t}$ - tension			$F_{2/3}$			$F_{4/5}$		
	Post		Maximum distances				timber	Steel		timber	Steel		timber	Steel		timber	Steel	
	B_{min}	H_{min}	a_{max}	$e_{2/3}$	$e_{3/4}$		$F_{1,c,Rk}$	$F_{1,c,Rk}$	γ_M	$F_{1,t,Rk}$	$F_{1,t,Rk}$	γ_M	$F_{2/3,Rk}$	$F_{2/3,Rk}$	γ_M	$F_{4/5,Rk}$	$F_{4/5,Rk}$	γ_M
19823130	120	120	210	210	210	4 screws Ø10x120 (Load case $F_{1,c}$+1 rod dowel Ø10)	129,00	95,50	1,25	6,36 c)	6,66 c)	1,00	7,67 5)	2,01	1,00	7,67 5)	1,55	1,00
19823180	120	120	260	260	260		129,00	95,50	1,25	6,36 c)	6,66 c)	1,00	7,67 5)	1,63	1,00	7,67 5)	1,25	1,00
19823230	120	120	310	310	310		129,00	95,50	1,25	6,36 c)	6,66 c)	1,00	7,67 5)	1,36	1,00	7,67 5)	1,05	1,00
19823280	120	120	360	360	360		129,00	95,50	1,25	6,36 c)	6,66 c)	1,00	7,67 5)	1,18	1,00	7,67 5)	0,90	1,00

For indices see **page 326**



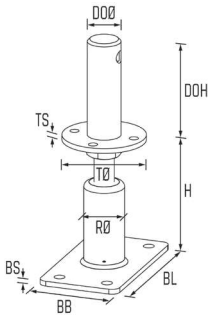
ZINTOP STANCHIONS

TYPE D-40 HEIGHT-ADJUSTABLE

Art. No.	Mandrel [mm]						Carrier plate [mm]				Baseplate [mm]					EAN	Weight	Pallet	PU
	DO Ø	x	DOH	Ø 11	R Ø	H	T Ø	x	TS	Ø 11	BB	x	BL	x	BS	Ø 13	4019346	kg		
19823134TOP	40	x	120	1	48,3	140-210	100	x	6	4	100	x	180	x	6	4	010761	3.450	120	5
19823184TOP	40	x	120	1	48,3	190-260	100	x	6	4	100	x	180	x	6	4	010778	3.580	120	5
19823234TOP	40	x	120	1	48,3	240-310	100	x	6	4	100	x	180	x	6	4	010785	3.700	120	5

Especially for joinery systems
An M24 thread allows height adjustment of up to 70 mm when installed and pre-assembly of the support plate with mandrel.

Fastening element: GH rod dowels Ø 10 mm **(see page 284)**
TOP-Fix Duo screw Ø 10 x 120 mm **(see page 316)**



STANCHIONS

TYPE D-40 HEIGHT-ADJUSTABLE

Art. No.	Mandrel [mm]						Carrier plate [mm]				Baseplate [mm]					EAN	Weight	Pallet	PU
	DO Ø	x	DOH	Ø 11	R Ø	H	T Ø	x	TS	Ø 11	BB	x	BL	1	BS	Ø 13	4019346	kg		
19823134	40	x	120	1	48,3	140-210	100	x	6	4	100	x	180	x	6	4	501214	3.450	120	5
19823184	40	x	120	1	48,3	190-260	100	x	6	4	100	x	180	x	6	4	501252	3.580	120	5
19823234	40	x	120	1	48,3	240-310	100	x	6	4	100	x	180	x	6	4	501269	3.700	120	5
19823284	40	x	120	1	48,3	290-360	100	x	6	4	100	x	180	x	6	4	011911	3.900	240	5

Especially for joinery systems
An M24 thread allows height adjustment of up to 70 mm when installed and pre-assembly of the support plate with mandrel.

Fastening element: GH rod dowels Ø 10 mm **(see page 284)**
TOP-Fix Duo screw Ø 10 x 120 mm **(see page 316)**

TYPE D-40 HEIGHT-ADJUSTABLE

Timber | Concrete

Art. No.	[mm]					Connecting element	$F_{1,c}$ - pressure			$F_{1,t}$ -tension			$F_{2/3}$			$F_{4/5}$		
	Post		Maximum distances				timber	Steel		timber	Steel		timber	Steel		timber	Steel	
	B_{min}	H_{min}	a_{max}	$e_{2/3}$	$e_{3/4}$		$F_{1,c,Rk}$	$F_{1,c,Rk}$	γ_M	$F_{1,t,Rk}$	$F_{1,t,Rk}$	γ_M	$F_{2/3,Rk}$	$F_{2/3,Rk}$	γ_M	$F_{4/5,Rk}$	$F_{4/5,Rk}$	γ_M
19823134TOP	120	120	210	210	210	4 screws Ø10x120	114,00	67,90 6)	1,00	16,30 d)	6,66	1,00	7,67 5)	2,01	1,00	7,67 5)	1,55	1,00
19823184TOP	120	120	260	260	260	4 screws Ø10x120	114,00	67,90 6)	1,00	16,30 d)	6,66	1,00	7,67 5)	1,63	1,00	7,67 5)	1,25	1,00
19823234TOP	120	120	310	310	310	4 screws Ø10x120	114,00	67,90 6)	1,00	16,30 d)	6,66	1,00	7,67 5)	1,36	1,00	7,67 5)	1,05	1,00

For indices see **page 326**

TYPE D-40 HEIGHT-ADJUSTABLE

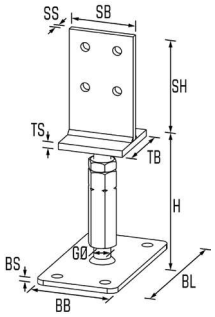
Timber | Concrete

Art. No.	[mm]					Connecting element	$F_{1,c}$ - pressure			$F_{1,t}$ -tension			$F_{2/3}$			$F_{4/5}$		
	Post		Maximum distances				timber	Steel		timber	Steel		timber	Steel		timber	Steel	
	B_{min}	H_{min}	a_{max}	$e_{2/3}$	$e_{3/4}$		$F_{1,c,Rk}$	$F_{1,c,Rk}$	γ_M	$F_{1,t,Rk}$	$F_{1,t,Rk}$	γ_M	$F_{2/3,Rk}$	$F_{2/3,Rk}$	γ_M	$F_{4/5,Rk}$	$F_{4/5,Rk}$	γ_M
19823134	120	120	210	210	210	4 screws Ø10x120	114,00	67,90 6)	1,00	16,30 d)	6,66	1,00	7,67 5)	2,01	1,00	7,67 5)	1,55	1,00
19823184	120	120	260	260	260	4 screws Ø10x120	114,00	67,90 6)	1,00	16,30 d)	6,66	1,00	7,67 5)	1,63	1,00	7,67 5)	1,25	1,00
19823234	120	120	310	310	310	4 screws Ø10x120	114,00	67,90 6)	1,00	16,30 d)	6,66	1,00	7,67 5)	1,36	1,00	7,67 5)	1,05	1,00
19823284	120	120	360	360	360	4 screws Ø10x120	114,00	67,90 6)	1,00	16,30 d)	6,66	1,00	7,67 5)	1,18	1,00	7,67 5)	0,90	1,00

For indices see **page 326**

ZINTOP STANCHIONS

TYPE T-01H ON CONCRETE, ADJUSTABLE



ZINTOP

ETA-16 0550

NKL 3

235 JR ZINTOP

DCSTATIK

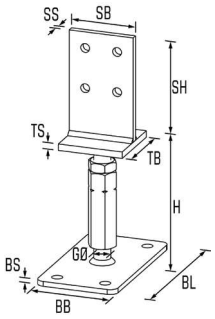
Art. No.	Blade [mm]								Carrier plate [mm]			Baseplate [mm]						EAN	Weight	Pallet	PU
	SB	x	SH	x	SS	Ø 11	G Ø	H	TB	x	TS	BB	x	BL	x	BS	Ø 13	4019346	kg		
19613101TOP	80	x	130	x	8	4	20	150-200	80	x	8	100	x	180	x	6	4	010792	2.800	180	5

Hight-adjustable from 150 to 200 mm when installed.

Fastening element: GH rod dowels Ø 10 mm **(see page 284)**

STANCHIONS

TYPE T-01H ON CONCRETE, ADJUSTABLE



ETA-16 0550

NKL 2

235 JR galv. verzinkt

DCSTATIK

Art. No.	Blade [mm]								Carrier plate [mm]			Baseplate [mm]						EAN	Weight	Pallet	PU
	SB	x	SH	x	SS	Ø 11	G Ø	H	TB	x	TS	BB	x	BL	x	BS	Ø 13	4019346	kg		
19613101	80	x	130	x	8	4	20	150-200	80	x	8	100	x	180	x	6	4	505106	2.800	180	5

Hight-adjustable from 150 to 200 mm when installed.

Fastening element: GH rod dowels Ø 10 mm **(siehe Seite 284)**

TYPE T-01H ON CONCRETE, ADJUSTABLE

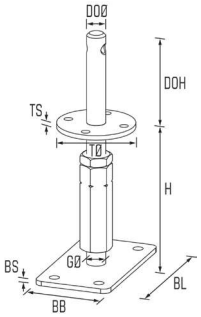
Timber | Concrete

Art. No.	[mm]					Connecting element	$F_{1,c}$ - pressure			$F_{1,t}$ - tension			$F_{2/3}$			$F_{4/5}$		
	Post		Maximum distances				timber	Steel		timber	Steel		timber	Steel		timber	Steel	
	B_{min}	H_{min}	a_{max}	$e_{2/3}$	$e_{3/4}$		$F_{1,c,Rk}$	$F_{1,c,Rk}$	γ_M	$F_{1,t,Rk}$	$F_{1,t,Rk}$	γ_M	$F_{2/3,Rk}$	$F_{2/3,Rk}$	γ_M	$F_{4/5,Rk}$	$F_{4/5,Rk}$	γ_M
19613101TOP	100	100	200	310	203	4 rod dowels Ø10	75,60	28,70	1,10	24,80	6,66	1,00	9,22	0,63	1,00	0,93	0,96	1,00

TYPE T-01H ON CONCRETE, ADJUSTABLE

Timber | Concrete

Art. No.	[mm]					Connecting element	$F_{1,c}$ - pressure			$F_{1,t}$ - tension			$F_{2/3}$			$F_{4/5}$		
	Post		Maximum distances				timber	Steel		timber	Steel		timber	Steel		timber	Steel	
	B_{min}	H_{min}	a_{max}	$e_{2/3}$	$e_{3/4}$		$F_{1,c,Rk}$	$F_{1,c,Rk}$	γ_M	$F_{1,t,Rk}$	$F_{1,t,Rk}$	γ_M	$F_{2/3,Rk}$	$F_{2/3,Rk}$	γ_M	$F_{4/5,Rk}$	$F_{4/5,Rk}$	γ_M
19613101	100	100	200	310	203	4 rod dowels Ø10	75,60	28,70	1,10	24,80	6,66	1,00	9,22	0,63	1,00	0,93	0,96	1,00



ZINTOP

ETA-16 0550

NKL 3

235 JR ZINTOP

DCSTATIK

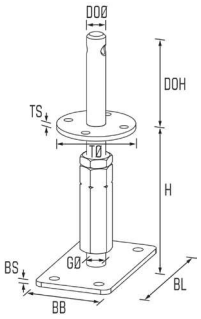
ZINTOP STANCHIONS

TYPE D 03 ON CONCRETE, HEIGHT-ADJUSTABLE

Art. No.	Mandrel [mm]						Carrier plate [mm]				Baseplate [mm]					EAN	Weight	Pallet	PU
	DO Ø	x	DOH	Ø 11	G Ø	H	T Ø	x	TS	Ø 11	BB	x	BL	x	BS	Ø 13	4019346	kg		
19613201TOP	24	x	120	1	24	165-236	100	x	6	4	100	x	180	x	6	4	010716	2.850	240	10

Hight-adjustable from 165 to 236 mm when installed.

Fastening element: GH rod dowels Ø 10 mm **(see page 284)**
TOP-Fix Duo screw Ø 10 x 120 mm **(see page 316)**



ETA-16 0550

NKL 2

235 JR galv. verzinkt

DCSTATIK

STANCHIONS

TYPE D 03 ON CONCRETE, HEIGHT-ADJUSTABLE

Art. No.	Mandrel [mm]						Carrier plate [mm]				Baseplate [mm]					EAN	Weight	Pallet	PU
	DO Ø	x	DOH	Ø 11	G Ø	H	T Ø	x	TS	Ø 11	BB	x	BL	x	BS	Ø 13	4019346	kg		
19613201	24	x	120	1	24	165-236	100	x	6	4	100	x	180	x	6	4	003534	2.850	240	10

Hight-adjustable from 165 to 236 mm when installed.

Fastening element: GH rod dowels Ø 10 mm **(see page 284)**
TOP-Fix Duo screw Ø 10 x 120 mm **(see page 316)**

TYPE D 03 ON CONCRETE, HEIGHT-ADJUSTABLE

Timber | Concrete

Art. No.	[mm]					Connecting element	$F_{1,c}$ - pressure			$F_{1,t}$ - tension			$F_{2/3}$			$F_{4/5}$		
	Post		Maximum distances				timber	Steel		timber	Steel		timber	Steel		timber	Steel	
	B_{min}	H_{min}	a_{max}	$e_{2/3}$	$e_{3/4}$		$F_{1,c,Rk}$	$F_{1,c,Rk}$	γ_M	$F_{1,t,Rk}$	$F_{1,t,Rk}$	γ_M	$F_{2/3,Rk}$	$F_{2/3,Rk}$	γ_M	$F_{4/5,Rk}$	$F_{4/5,Rk}$	γ_M
19613201TOP	120	120	236	236	236	4 screws Ø10x120	129,00	59,20 1) 44,30	1,00 1,10	16,30 d)	6,66	1,00	8,36 5)	1,66	1,25	8,36 5)	1,66	1,25

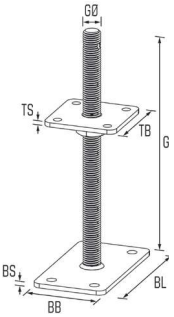
For indices see **page 326**

TYPE D 03 ON CONCRETE, HEIGHT-ADJUSTABLE

Timber | Concrete

Art. No.	[mm]					Connecting element	$F_{1,c}$ - pressure			$F_{1,t}$ - tension			$F_{2/3}$			$F_{4/5}$		
	Post		Maximum distances				timber	Steel		timber	Steel		timber	Steel		timber	Steel	
	B_{min}	H_{min}	a_{max}	$e_{2/3}$	$e_{3/4}$		$F_{1,c,Rk}$	$F_{1,c,Rk}$	γ_M	$F_{1,t,Rk}$	$F_{1,t,Rk}$	γ_M	$F_{2/3,Rk}$	$F_{2/3,Rk}$	γ_M	$F_{4/5,Rk}$	$F_{4/5,Rk}$	γ_M
19613201	120	120	236	236	236	4 screws Ø10x120	129,00	59,20 1) 44,30	1,00 1,10	16,30 d)	6,66	1,00	8,36 5)	1,66	1,25	8,36 5)	1,66	1,25

For indices see **page 326**



ZINTOP ETA-16 0550 NKL 3 235 JR ZINTOP DCSTATIK

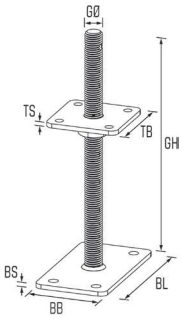
ZINTOP STANCHIONS

TYPE D ON CONCRETE, HEIGHT-ADJUSTABLE

Art. No.	Thread [mm]				Carrier plate [mm]				Baseplate [mm]						EAN	Weight	Pallet	PU
	G Ø	x	GH	Ø 9	TB	x	TS	Ø 11	BB	x	BL	x	BS	Ø 13	4019346	kg		
19523101TOP	20	x	330	1	80	x	6	4	100	x	180	x	6	4	010662	1.550	240	10
19620998TOP	24	x	330	-	100	x	6	4	100	x	180	x	6	4	010679	2.230	240	10
19620999TOP	30	x	330	-	120	x	8	4	100	x	180	x	6	4	010686	3.400	120	5

Carrier plate welded.

Fastening element: GH rod dowels Ø 8 mm **(see page 284)**
TOP-Fix Duo screw Ø 10 x 120 mm **(see page 316)**



ETA-16 0550 NKL 2 235 JR galv. verzinkt DCSTATIK

STANCHIONS

TYPE D ON CONCRETE, HEIGHT-ADJUSTABLE

Art. No.	Thread [mm]				Carrier plate [mm]				Baseplate [mm]						EAN	Weight	Pallet	PU
	G Ø	x	GH	Ø 9	TB	x	TS	Ø 11	BB	x	BL	x	BS	Ø 13	4019346	kg		
19523101	20	x	330	1	80	x	6	4	100	x	180	x	6	4	510070	1.550	240	10
19620998	24	x	330	-	100	x	6	4	100	x	180	x	6	4	217757	2.230	240	10
19620999	30	x	330	-	120	x	8	4	100	x	180	x	6	4	501245	3.400	120	5

Carrier plate welded.

Fastening element: GH rod dowels Ø 8 mm **(see page 284)**
TOP-Fix Duo screw Ø 10 x 120 mm **(see page 316)**

TYPE D ON CONCRETE, HEIGHT-ADJUSTABLE

Timber | Concrete

Art. No.	[mm]					Connecting element	$F_{1,c}$ - pressure			$F_{1,t}$ - tension			$F_{2/3}$			$F_{4/5}$		
	Post		Maximum distances				timber	Steel		timber	Steel		timber	Steel		timber	Steel	
	B_{min}	H_{min}	a_{max}	$e_{2/3}$	$e_{3/4}$		$F_{1,c,Rk}$	$F_{1,c,Rk}$	γ_M	$F_{1,t,Rk}$	$F_{1,t,Rk}$	γ_M	$F_{2/3,Rk}$	$F_{2/3,Rk}$	γ_M	$F_{4/5,Rk}$	$F_{4/5,Rk}$	γ_M
19523101TOP	100	100	170	170	170	4 screws Ø10x120	107,00	36,80	1,10	16,30 d)	6,66	1,00	7,55 5)	1,64	1,25	7,55 5)	1,64	1,25
19620998TOP	120	120	170	170	170	4 screws Ø10x120	191,00	69,10 3)	1,00	16,30 d)	6,66	1,00	8,22 5)	2,34	1,25	8,22 5)	2,34	1,25
								62,70	1,10									
19620999TOP	140	140	170	170	170	4 screws Ø10x120	278,00	122,00 4)	1,00	16,30 d)	6,66	1,00	8,75 5)	2,61	1,00	8,75 5)	2,01	1,00
								118,00	1,10									
19523101TOP	100	100	**336**	**336**	**336**	4 screws Ø10x120	107,00	13,80	1,10	16,30 d)	6,66	1,00	7,55 5)	0,81	1,25	7,55 5)	0,81	1,25
19620998TOP	120	120	**336**	**336**	**336**	4 screws Ø10x120	191,00	26,60	1,10	16,30 d)	6,66	1,00	8,22 5)	1,15	1,25	8,22 5)	1,15	1,25
19620999TOP	140	140	**336**	**336**	**336**	4 screws Ø10x120	278,00	60,00	1,10	16,30 d)	6,66	1,00	8,75 5)	1,29	1,00	8,75 5)	0,99	1,00

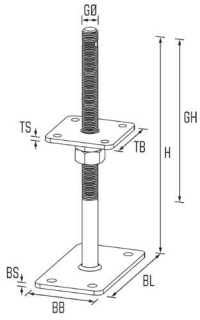
For indices see **page 326**

TYPE D ON CONCRETE, HEIGHT-ADJUSTABLE

Timber | Concrete

Art. No.	[mm]					Connecting element	$F_{1,c}$ - pressure			$F_{1,t}$ - tension			$F_{2/3}$			$F_{4/5}$		
	Post		Maximum distances				timber	Steel		timber	Steel		timber	Steel		timber	Steel	
	B_{min}	H_{min}	a_{max}	$e_{2/3}$	$e_{3/4}$		$F_{1,c,Rk}$	$F_{1,c,Rk}$	γ_M	$F_{1,t,Rk}$	$F_{1,t,Rk}$	γ_M	$F_{2/3,Rk}$	$F_{2/3,Rk}$	γ_M	$F_{4/5,Rk}$	$F_{4/5,Rk}$	γ_M
19523101	100	100	170	170	170	4 screws Ø10x120	107,00	36,80	1,10	16,30 d)	6,66	1,00	7,55 5)	1,64	1,25	7,55 5)	1,64	1,25
19620998	120	120	170	170	170	4 screws Ø10x120	191,00	69,10 3)	1,00	16,30 d)	6,66	1,00	8,22 5)	2,34	1,25	8,22 5)	2,34	1,25
								62,70	1,00									
19620999	140	140	170	170	170	4 screws Ø10x120	278,00	122,00 4)	1,00	16,30 d)	6,66	1,00	8,75 5)	2,61	1,00	8,75 5)	2,01	1,00
								118,00	1,10									
19523101	100	100	**336**	**336**	**336**	4 screws Ø10x120	107,00	13,80	1,10	16,30 d)	6,66	1,00	7,55 5)	0,81	1,25	7,55 5)	0,81	1,25
19620998	120	120	**336**	**336**	**336**	4 screws Ø10x120	191,00	26,60	1,10	16,30 d)	6,66	1,00	8,22 5)	1,15	1,25	8,22 5)	1,15	1,25
19620999	140	140	**336**	**336**	**336**	4 screws Ø10x120	278,00	60,00	1,10	16,30 d)	6,66	1,00	8,75 5)	1,29	1,00	8,75 5)	0,99	1,00

For indices see **page 326**



ZINTOP

ETA-16 0550

NKL 3

235 JR ZINTOP

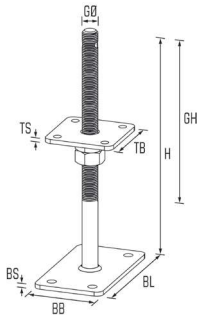
DC DCSTATIK

ZINTOP STANCHIONS

TYPE D 05 ON CONCRETE, HEIGHT-ADJUSTABLE

Art. No.	Thread [mm]					Carrier plate [mm]				Baseplate [mm]					EAN	Weight	Pallet	PU
	G Ø	x	GH	Ø 9	H	TB	x	TS	Ø 11	BB	x	BL	x	BS	Ø 13	4019346	kg		
19623080TOP	22	x	250	1	350	80	x	6	4	100	x	180	x	6	4	010648	2.110	240	10
19623100TOP	22	x	250	1	350	100	x	6	4	100	x	180	x	6	4	010655	2.390	240	10

Fastening element: GH rod dowels Ø 8 mm **(see page 284)**
TOP-Fix Duo screw Ø 10 x 120 mm **(see page 316)**



ETA-16 0550

NKL 2

235 JR galv. verzinkt

DC DCSTATIK

STANCHIONS

TYPE D 05 ON CONCRETE, HEIGHT-ADJUSTABLE

Art. No.	Thread [mm]					Carrier plate [mm]				Baseplate [mm]					EAN	Weight	Pallet	PU
	G Ø	x	GH	Ø 9	H	TB	x	TS	Ø 11	BB	x	BL	x	BS	Ø 13	4019346	kg		
19623080	22	x	250	1	350	80	x	6	4	100	x	180	x	6	4	510056	2.110	240	10
19623100	22	x	250	1	350	100	x	6	4	100	x	180	x	6	4	510063	2.390	240	10

Fastening element: GH rod dowels Ø 8 mm **(see page 284)**
TOP-Fix Duo screw Ø 10 x 120 mm **(see page 316)**

TYPE D 05 ON CONCRETE, HEIGHT-ADJUSTABLE

Timber | Concrete

Art. No.	[mm]					Connecting element	$F_{1,c}$ - pressure			$F_{1,t}$ - tension			$F_{2/3}$			$F_{4/5}$		
	Post		Maximum distances				timber	Steel		timber	Steel		timber	Steel		timber	Steel	
	B_{min}	H_{min}	a_{max}	$e_{2/3}$	$e_{3/4}$		$F_{1,c,Rk}$	$F_{1,c,Rk}$	γ_M	$F_{1,t,Rk}$	$F_{1,t,Rk}$	γ_M	$F_{2/3,Rk}$	$F_{2/3,Rk}$	γ_M	$F_{4/5,Rk}$	$F_{4/5,Rk}$	γ_M
19623080TOP	100	100	170	170	170	4 screws Ø10x120 (Load case $F_{1,t}$:+1 rod dowel Ø8)	117,00	50,70	1,10	4,25 c)	6,66 c)	1,00	6,38	2,01	1,25	6,38	2,01	1,25
19623100TOP	120	120	170	170	170		193,00	50,70	1,10	4,25 c)	6,66 c)	1,00	6,94	2,01	1,25	6,94	2,01	1,25
19623080TOP	100	100	**356**	**356**	**356**	4 screws Ø10x120	117,00	18,70	1,10	-	-	-	6,38	0,94	1,25	6,38	0,94	1,25
19623100TOP	120	120	**356**	**356**	**356**	4 screws Ø10x120	193,00	18,70	1,10	-	-	-	6,94	0,94	1,25	6,94	0,94	1,25

For indices see **page 326**

TYPE D 05 ON CONCRETE, HEIGHT-ADJUSTABLE

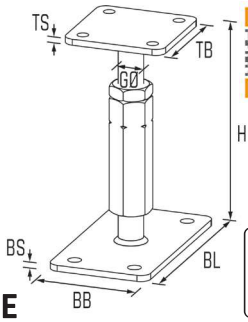
Timber | Concrete

Art. No.	[mm]					Connecting element	$F_{1,c}$ - pressure			$F_{1,t}$ - tension			$F_{2/3}$			$F_{4/5}$		
	Post		Maximum distances				timber	Steel		timber	Steel		timber	Steel		timber	Steel	
	B_{min}	H_{min}	a_{max}	$e_{2/3}$	$e_{3/4}$		$F_{1,c,Rk}$	$F_{1,c,Rk}$	γ_M	$F_{1,t,Rk}$	$F_{1,t,Rk}$	γ_M	$F_{2/3,Rk}$	$F_{2/3,Rk}$	γ_M	$F_{4/5,Rk}$	$F_{4/5,Rk}$	γ_M
19623080	100	100	170	170	170	4 screws Ø10x120 (Load case $F_{1,t}$:+1 rod dowel Ø8)	117,00	50,70	1,10	4,25 c)	6,66 c)	1,00	6,38	2,01	1,25	6,38	2,01	1,25
19623100	120	120	170	170	170		193,00	50,70	1,10	4,25 c)	6,66 c)	1,00	6,94	2,01	1,25	6,94	2,01	1,25
19623080	100	100	**356**	**356**	**356**	4 screws Ø10x120	117,00	18,70	1,10	-	-	-	6,38	0,94	1,25	6,38	0,94	1,25
19623100	120	120	**356**	**356**	**356**	4 screws Ø10x120	193,00	18,70	1,10	-	-	-	6,94	0,94	1,25	6,94	0,94	1,25

For indices see **page 326**

ZINTOP STANCHIONS

TYPE P 24 ON CONCRETE, HEIGHT-ADJUSTABLE



ZINTOP

ETA-16 0550

NKL 3

235 JR ZINTOP

DCSTATIK

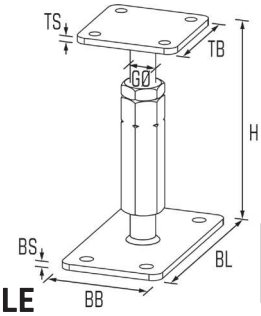
Art. No.	Carrier plate [mm]						Baseplate [mm]						EAN	Weight	Pallet	PU
	TB	x	TS	Ø 11	G Ø	H	BB	x	BL	x	BS	Ø 13	4019346	kg		
19533101TOP	100	x	6	4	24	150-200	100	x	180	x	6	4	010815	2.940	240	10

Hight-adjustable from 150 to 200 mm when installed.

Fastening element: TOP-Fix Duo screw Ø 10 x 120 mm **(see page 316)**

STANCHIONS

TYPE P 24 ON CONCRETE, HEIGHT-ADJUSTABLE



ETA-16 0550

NKL 2

235 JR galv. verzinkt

DCSTATIK

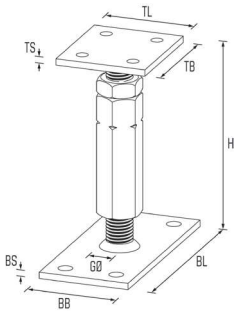
Art. No.	Carrier plate [mm]						Baseplate [mm]						EAN	Weight	Pallet	PU
	TB	x	TS	Ø 11	G Ø	H	BB	x	BL	x	BS	Ø 13	4019346	kg		
19533101	100	x	6	4	24	150-200	100	x	180	x	6	4	011249	2.260	240	10

Hight-adjustable from 150 to 200 mm when installed.

Fastening element: TOP-Fix Duo screw Ø 10 x 120 mm **(see page 316)**

STANCHIONS

TYPE P ON CONCRETE, HEIGHT-ADJUSTABLE



ETA-16 0550

NKL 2

235 JR galv. verzinkt

DCSTATIK

Art. No.	Carrier plate [mm]							Baseplate [mm]						EAN	Weight	Pallet	PU
	TB	x	TL	x	TS	Ø 9	G Ø	H	BB	x	BL	x	BS	Ø 11	4019346	kg		
19533070	70	x	80	x	5	4	20	150-200	70	x	150	x	5	4	501221	0.900	240	10

Hight-adjustable from 150 to 200 mm when installed.

Fastening element: TOP-Fix Duo screw Ø 8 x 70 mm **(see page 316)**

TYPE P 24 ON CONCRETE, HEIGHT-ADJUSTABLE

Timber / Concrete

Art. No.	[mm]					Connecting element	$F_{1,c}$ - pressure			$F_{1,t}$ - tension			$F_{2/3}$			$F_{4/5}$		
	Post		Maximum distances				timber	Steel		timber	Steel		timber	Steel		timber	Steel	
	B_{min}	H_{min}	a_{max}	$e_{2/3}$	$e_{3/4}$		$F_{1,c,Rk}$	$F_{1,c,Rk}$	γ_M	$F_{1,t,Rk}$	$F_{1,t,Rk}$	γ_M	$F_{2/3,Rk}$	$F_{2/3,Rk}$	γ_M	$F_{4/5,Rk}$	$F_{4/5,Rk}$	γ_M
19533101TOP	120	120	210	210	210	4 screws Ø10x120	202,00	70,30 2)	1,00	16,30 d)	6,66	1,00	8,22 5)	1,87	1,25	8,22 5)	1,87	1,25
								56,70	1,10									

For indices see **page 326**

TYPE P 24 ON CONCRETE, HEIGHT-ADJUSTABLE

Timber / Concrete

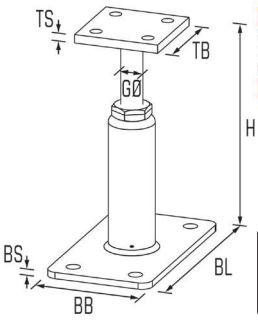
Art. No.	[mm]					Connecting element	$F_{1,c}$ - pressure			$F_{1,t}$ - tension			$F_{2/3}$			$F_{4/5}$		
	Post		Maximum distances				timber	Steel		timber	Steel		timber	Steel		timber	Steel	
	B_{min}	H_{min}	a_{max}	$e_{2/3}$	$e_{3/4}$		$F_{1,c,Rk}$	$F_{1,c,Rk}$	γ_M	$F_{1,t,Rk}$	$F_{1,t,Rk}$	γ_M	$F_{2/3,Rk}$	$F_{2/3,Rk}$	γ_M	$F_{4/5,Rk}$	$F_{4/5,Rk}$	γ_M
19533101	120	120	210	210	210	4 screws Ø10x120	202,00	70,30 2)	1,00	16,30 d)	6,66	1,00	8,22 5)	1,87	1,25	8,22 5)	1,87	1,25
								56,70	1,10									

For indices see **page 326**

TYPE P 24 ON CONCRETE, HEIGHT-ADJUSTABLE

Timber / Concrete

Art. No.	[mm]					Connecting element	$F_{1,c}$ - pressure			$F_{1,t}$ - tension			$F_{2/3}$			$F_{4/5}$		
	Post		Maximum distances				timber	Steel		timber	Steel		timber	Steel		timber	Steel	
	B_{min}	H_{min}	a_{max}	$e_{2/3}$	$e_{3/4}$		$F_{1,c,Rk}$	$F_{1,c,Rk}$	γ_M	$F_{1,t,Rk}$	$F_{1,t,Rk}$	γ_M	$F_{2/3,Rk}$	$F_{2/3,Rk}$	γ_M	$F_{4/5,Rk}$	$F_{4/5,Rk}$	γ_M
19533070	100	90	200	200	200	4 screws Ø8x70	93,40	33,20	1,10	7,80	3,84	1,00	3,38	1,05	1,00	3,38	0,81	1,00



ZINTOP

ETA-16 0550

NKL 3

235 JR ZINTOP

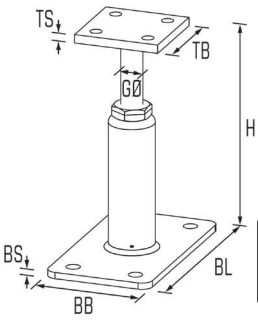
DC DCSTATIK

ZINTOP STANCHIONS

TYPE PR ON CONCRETE, HEIGHT-ADJUSTABLE

Art. No.	Carrier plate [mm]						Baseplate [mm]						EAN	Weight	Pallet	PU
	TB	x	TS	Ø 11	G Ø	H	BB	x	BL	x	BS	Ø 13	4019346	kg		
19534100TOP	80	x	6	4	22	135-215	100	x	180	x	6	4	010617	1.700	240	10
19534110TOP	80	x	6	4	22	185-265	100	x	180	x	6	4	010600	1.900	240	10
19534120TOP	80	x	6	4	22	235-315	100	x	180	x	6	4	010624	2.100	240	10

Fastening element: TOP-Fix Duo screw Ø 10 x 120 mm **(see page 316)**



ETA-16 0550

NKL 2

235 JR galv. verzinkt

DC DCSTATIK

STANCHIONS

TYPE PR ON CONCRETE, HEIGHT-ADJUSTABLE

Art. No.	Carrier plate [mm]						Baseplate [mm]						EAN	Weight	Pallet	PU
	TB	x	TS	Ø 11	G Ø	H	BB	x	BL	x	BS	Ø 13	4019346	kg		
19534100	80	x	8	4	22	135-215	100	x	180	x	6	4	011256	1.700	240	10
19534110	80	x	8	4	22	185-265	100	x	180	x	6	4	011263	1.900	240	10
19534120	80	x	8	4	22	235-315	100	x	180	x	6	4	011270	2.100	240	10

Fastening element: TOP-Fix Duo screw Ø 10 x 120 mm **(see page 316)**

TYPE PR ON CONCRETE, HEIGHT-ADJUSTABLE

Timber | Concrete

Art. No.	[mm]					Connecting element	$F_{1,c}$ - pressure			$F_{1,t}$ - tension			$F_{2/3}$			$F_{4/5}$		
	Post		Maximum distances				timber	Steel		timber	Steel		timber	Steel		timber	Steel	
	B_{min}	H_{min}	a_{max}	$e_{2/3}$	$e_{3/4}$		$F_{1,c,Rk}$	$F_{1,c,Rk}$	γ_M	$F_{1,t,Rk}$	$F_{1,t,Rk}$	γ_M	$F_{2/3,Rk}$	$F_{2/3,Rk}$	γ_M	$F_{4/5,Rk}$	$F_{4/5,Rk}$	γ_M
19534100TOP	100	100	215	215	215	4 screws Ø10x120	126,00	54,10	1,25	16,30 d)	6,66	1,00	7,55 5)	1,99	1,00	7,55 5)	1,53	1,00
19534110TOP	100	100	265	265	265	4 screws Ø10x120	126,00	54,10	1,25	16,30 d)	6,66	1,00	7,55 5)	1,61	1,00	7,55 5)	1,24	1,00
19534120TOP	100	100	315	315	315	4 screws Ø10x120	126,00	54,10	1,25	16,30 d)	6,66	1,00	7,55 5)	1,35	1,00	7,55 5)	1,04	1,00

For indices see **page 326**

TYPE PR ON CONCRETE, HEIGHT-ADJUSTABLE

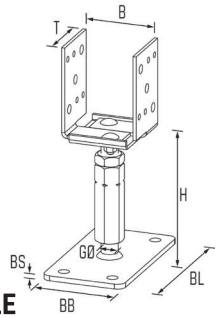
Timber | Concrete

Art.-Nr.	[mm]					Connecting element	$F_{1,c}$ - pressure			$F_{1,t}$ - tension			$F_{2/3}$			$F_{4/5}$		
	Post		Maximum distances				timber	Steel		timber	Steel		timber	Steel		timber	Steel	
	B_{min}	H_{min}	a_{max}	$e_{2/3}$	$e_{3/4}$		$F_{1,c,Rk}$	$F_{1,c,Rk}$	γ_M	$F_{1,t,Rk}$	$F_{1,t,Rk}$	γ_M	$F_{2/3,Rk}$	$F_{2/3,Rk}$	γ_M	$F_{4/5,Rk}$	$F_{4/5,Rk}$	γ_M
19534100	100	100	215	215	215	4 screws Ø10x120	126,00	54,10	1,25	16,30 d)	6,66	1,00	7,55 5)	1,99	1,00	7,55 5)	1,53	1,00
19534110	100	100	265	265	265	4 screws Ø10x120	126,00	54,10	1,25	16,30 d)	6,66	1,00	7,55 5)	1,61	1,00	7,55 5)	1,24	1,00
19534120	100	100	315	315	315	4 screws Ø10x120	126,00	54,10	1,25	16,30 d)	6,66	1,00	7,55 5)	1,35	1,00	7,55 5)	1,04	1,00

For indices see **page 326**

ZINTOP STANCHIONS

TYPE U 70 ON CONCRETE HEIGHT/SIDE-ADJUSTABLE



ZINTOP

ETA-16 0550

NKL 3

235 JR ZINTOP

DC DCSTATIK

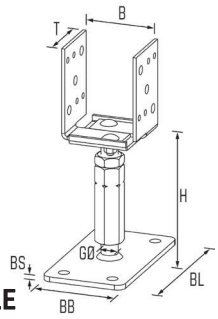
Art. No.	Top part [mm]					Baseplate [mm]						EAN	Weight	Pallet	PU
	W(B)	x	D(T)	G Ø	H	BB	x	BL	x	BS	Ø 13	4019346	kg		
19653201TOP	70-150	x	70	20	150-200	100	x	180	x	6	4	010808	1.850	240	10

Hight-adjustable from 150 to 200 mm when installed.

Fastening element: TOP-Fix Duo screw Ø 10 x 60 mm **(see page 316)**

STANCHIONS

TYPE U 70 ON CONCRETE HEIGHT/SIDE-ADJUSTABLE



ETA-16 0550

NKL 2

235 JR galv. verzinkt

DC DCSTATIK

Art. No.	Top part [mm]					Baseplate [mm]						EAN	Weight	Pallet	PU
	W(B)	x	D(T)	G Ø	H	BB	x	BL	x	BS	Ø 13	4019346	kg		
19653201	70-150	x	70	20	150-200	100	x	180	x	6	4	501054	1.850	240	10

Hight-adjustable from 150 to 200 mm when installed.

Fastening element: TOP-Fix Duo screw Ø 10 x 60 mm **(see page 316)**

TYPE U 70 ON CONCRETE, HEIGHT-/SIDE-ADJUSTABLE

Timber / Concrete

Art. No.	[mm]					Connecting element	$F_{1,c}$ - pressure			$F_{1,t}$ - tension			$F_{2/3}$			$F_{4/5}$		
	Post		Maximum distances				timber	Steel		timber	Steel		timber	Steel		timber	Steel	
	B_{min}	H_{min}	a_{max}	$e_{2/3}$	$e_{3/4}$		$F_{1,c,Rk}$	$F_{1,c,Rk}$	γ_M	$F_{1,t,Rk}$	$F_{1,t,Rk}$	γ_M	$F_{2/3,Rk}$	$F_{2/3,Rk}$	γ_M	$F_{4/5,Rk}$	$F_{4/5,Rk}$	γ_M
19653201TOP	70-150	100	200	-	-	4 screws Ø10x60	15,90	8,89	1,00	-	-	-	-	-	-	-	-	-

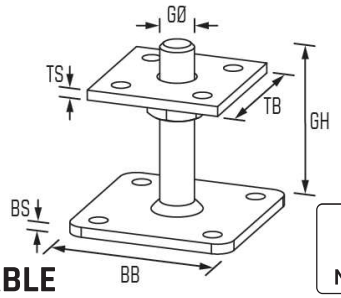
TYPE U 70 ON CONCRETE, SIDE-/HEIGHT-ADJUSTABLE

Timber / Concrete

Art. No.	[mm]					Connecting element	$F_{1,c}$ - pressure			$F_{1,t}$ - tension			$F_{2/3}$			$F_{4/5}$		
	Post		Maximum distances				timber	Steel		timber	Steel		timber	Steel		timber	Steel	
	B_{min}	H_{min}	a_{max}	$e_{2/3}$	$e_{3/4}$		$F_{1,c,Rk}$	$F_{1,c,Rk}$	γ_M	$F_{1,t,Rk}$	$F_{1,t,Rk}$	γ_M	$F_{2/3,Rk}$	$F_{2/3,Rk}$	γ_M	$F_{4/5,Rk}$	$F_{4/5,Rk}$	γ_M
19653201	70-150	100	200	-	-	4 screws Ø10x60	15,90	8,89	- 1,00	-	-	-	-	-	-	-	-	-

STANCHIONS

TYPE PB ON CONCRETE, HEIGHT-ADJUSTABLE



ETA-16 0550

NKL 3

235 JR galv. verzinkt

DCSTATIK

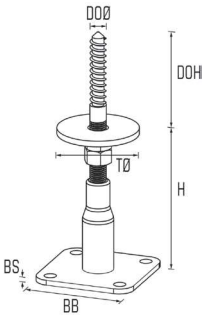
Art. No.	Thread [mm]			Carrier plate [mm]				Baseplate [mm]				EAN	Weight	Pallet	PU
	G Ø	x	GH	TB	x	TS	Ø	BB	x	BS	Ø 11	4019346	kg		
19823161	16	x	100	70	x	6	2x 5,0	100	x	6	4	510902	0.650	600	20
19823201	20	x	100	80	x	6	4x 11,0	100	x	6	4	510919	0.910	600	20
19823202	20	x	200	80	x	6	4x 11,0	100	x	6	4	510926	1.850	300	10

Height-adjustable in fitted state. The carrier plate can be pre-fitted.

Fastening element: TOP-Fix Duo screw **(see page 316)**

STANCHIONS

FIX ON CONCRETE, HEIGHT-ADJUSTABLE



NKL 2

235 JR galv. verzinkt

Art. No.	Mandrel [mm]					Baseplate [mm]				EAN	Weight	Pallet	PU
	DO Ø	x	DOH	H	T Ø	BB	x	BS	Ø 11	4019346	kg		
19523110	16	x	90	130-170	80	100	x	5	4	165508	1.100	300	10

TYPE PB ON CONCRETE, HEIGHT-ADJUSTABLE

Timber / Concrete

Art. No.	[mm]					Connecting element	$F_{1,c}$ - pressure			$F_{1,t}$ - tension			$F_{2/3}$			$F_{4/5}$		
	Post		Maximum distances				timber	Steel		timber	Steel		timber	Steel		timber	Steel	
	B_{min}	H_{min}	a_{max}	$e_{2/3}$	$e_{3/4}$		$F_{1,c,Rk}$	$F_{1,c,Rk}$	γ_M	$F_{1,t,Rk}$	$F_{1,t,Rk}$	γ_M	$F_{2/3,Rk}$	$F_{2/3,Rk}$	γ_M	$F_{4/5,Rk}$	$F_{4/5,Rk}$	γ_M
19823161	90	90	100	-	-	2 screws Ø4x60	89,60	30,80	1,10	-	-	-	-	-	-	-	-	-
19823201	100	100	100	100	100	4 screws Ø10x120	118,00	54,40	1,10	-	-	-	6,38	2,83	1,25	6,38	2,83	1,25
19823202	100	100	200	200	200	4 screws Ø10x120	118,00	30,00	1,10	-	-	-	6,38	1,37	1,25	6,38	1,37	1,25