GROOVED NAIL

BRIGHT / HOT DIP GALVANIZED / AISI 316/A4

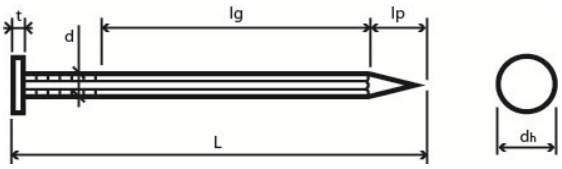
GUNNEBO FASTENING

Declaration of Performance

CE

Dokument no: CE-300366-A5
Used for timber structures, and for fitting mouldings and other types of fine joinery

Dimensions:
Bright: d 2,3 - 7,0 mm L 60 - 225 mm
Hot dip galvanized: d 2,3 - 8,0 mm L 55 - 330 mm
Stainless AISI 316/A4: d 2,3 - 3,4 mm L 60-100 mm



Material:
Bright/Hot dip galvanized: EN ISO 16120
Stainless steel AISI 316/A4: EN 10088.

Characteristic tensile strength of wire (fu) in acc. with EN 10218-1, min. 650 N/mm^2
Stainless steel: min. 750 N/mm^2

Treatment:
Bright, Corrosion class C1
Hot dip galvanized - min. 50 µm , Corrosion class C4
Stainless steel AISI 316/A4, Corrosion class C4

DIMENSIONS

BRIGHT

Name	Nominal diameter d [mm]	Total length L [mm]	Head diameter d_h [mm]	Head area A_h [mm^2]	Head thickness t [mm]	Point length l_p [mm]
2,3x60	2,3	60,0	5,7	25,5	0,8	3,2
2,8x75	2,7	75,0	6,7	35,2	1,0	3,7
3,4x90	3,3	90,0	8,2	52,8	1,0	4,6
3,4x100		100,0				
4,0x125	4,00	125,0	10,0	78,5	1,1	5,5
4,3x125	4,3	125,0	10,7	89,9	1,2	5,9
5,1x140	5,1	140,0	13,7	147,3	1,7	5,5
5,1x150		150,0				
5,1x160		160,0				
5,5x175	5,5	175,0	13,7	147,3	1,7	7,6
6,0x200	6,0	200,0	15,0	176,6	1,7	6,5
7,0x225	7,0	225,0	17,5	240,4	1,7	7,5

HOT DIP GALVANIZED

Name	Nominal diameter d [mm]	Total length L [mm]	Head diameter d_h [mm]	Head area A_h [mm^2]	Head thickness t [mm]	Point length l_p [mm]
2,3x55	2,3	55,0	5,7	25,5	0,8	3,2
2,3x60		60,0				
2,5x65	2,5	65,0	6,3	31,1	0,8	3,5
2,8x50	2,7	50,0	6,7	35,2	1,0	3,7
2,8x70		70,0				
2,8x75		75,0				
3,1x50	3,1	50,0	7,7	46,5	1,0	4,3
3,1x60		60,0				
3,1x75		75,0				
3,1x80		80,0				
3,1x100		100,0				

DIMENSIONS

HOT DIP GALVANIZED

Name	Nominal diameter d [mm]	Total length L [mm]	Head diameter d_h [mm]	Head area A_h [mm²]	Head thickness t [mm]	Point length l_p [mm]
3,4x60	3,3	60,0	8,2	52,8	1,0	4,6
3,4x70		70,0				
3,4x75		75,0				
3,4x90		90,0				
3,4x95		95,0				
3,4x100		100,0				
4,0x125	4,0	125,0	10,0	78,5	1,1	5,5
4,3x125	4,3	125,0	10,7	89,9	1,2	5,9
5,1x140	5,1	125,0	13,7	147,3	1,7	5,5
5,1x150		125,0				
5,1x160		125,0				
5,5x175	5,5	175,0	13,7	147,3	1,7	7,6
5,5x180		180,0				
5,5x210		210,0				
5,5x230		230,0				
6,0x190	6,0	190,0	15,0	176,6	1,7	6,5
6,0x200		200,0				
7,0x225	7,0	225,0	17,5	240,4	1,7	7,5
7,0x250		250,0				
7,0x275		275,0				
8,0x300	8,0	300,0	20,0	314,0	2,0	8,6
8,0x330		330,0				

AISI 316/A4

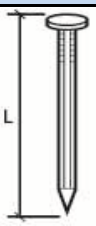
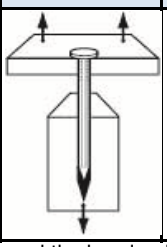
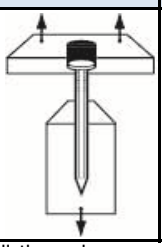
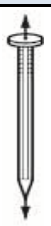
Name	Nominal diameter d [mm]	Total length L [mm]	Head diameter d_h [mm]	Head area A_h [mm²]	Head thickness t [mm]	Point length l_p [mm]
2,3x60	2,3	60,0	5,7	25,5	0,8	3,2
2,8x75	2,7	75,0	6,7	35,2	1,0	3,7
3,4x100	3,3	100,0	8,2	52,8	1,0	4,6

CHARACTERISTIC LOAD CAPACITY

BRIGHT

Name	Nominal diameter d [mm]	Total length L [mm]	Withdrawal parameter $f_{ax,k}$ [N/mm²]*	Head pull-trough parameter $f_{head,k}$ [N/mm²]*	Yield moment $M_{y,k}$ [Nmm]	Tensile capasity $f_{tens,k}$ [kN]
2,3x60	2,30	60,00	2,45	8,57	1887	NPD**
2,8x75	2,70	75,00			4259	
3,4x90	3,30	90,00			7263	
3,4x100		100,00				
4,0x125	4,00	125,00			10074	
4,3x125	4,3	125,0			12181	
5,1x140	5,10	140,00			21492	
5,1x150		150,00				
5,1x160		160,00				
5,5x175	5,50	175,00			26780	
6,0x200	6,0	200,0			33946	
7,0x225	7,0	225,0			46735	

HOT DIP GALVANIZED

Name	Nominal diameter d [mm]	Total length L [mm]	Withdrawal parameter $f_{ax,k}$ [N/mm²]*	Head pull-trough parameter $f_{head,k}$ [N/mm²]*	Yield moment $M_{y,k}$ [Nmm]	Tensile capasity $f_{tens,k}$ [kN]
2,3x55	2,30	55,00	2,45	8,57	1752	NPD**
2,3x60		60,00				
2,5x65	2,50	65,00			2219	
2,8x50	2,70	50,00			4259	
2,8x70		70,00				
2,8x75		75,00				
3,1x50	3,10	50,00			5086	
3,1x60		60,00				
3,1x75		75,00				
3,1x80		80,00				
3,1x100		100,00				
3,4x60	3,30	60,0			7263	
3,4x70		70,0				
3,4x75		75,0				
3,4x90		90,0				
3,4x95		95,0				
3,4x100		100,0				
						

*Declared values for the withdrawal parameter $f_{ax,k}$ and the head pull-through parameter $f_{head,k}$ are theoreticaly calculated in acc. with EN 1995-1-1. Values apply for wood with a characteristic density of ρ_k=350 kg/m^3 (C24).

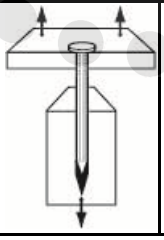
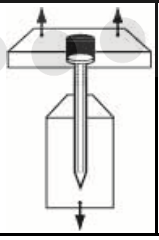
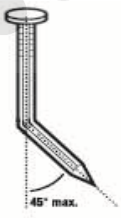
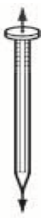
** "No Performance Declared"

CHARACTERISTIC LOAD CAPACITY

HOT DIP GALVANIZED

Name	Nominal diameter d [mm]	Total length L [mm]	Withdrawal parameter $f_{ax,k}$ [N/mm²]*	Head pull-trough parameter $f_{head,k}$ [N/mm²]*	Yield moment $M_{y,k}$ [Nmm]	Tensile capasity $f_{tens,k}$ [kN]
3,7x100	3,70	100,00	2,45	8,57	8563	NPD**
4,0x125	4,00	125,00			9020	
4,0x150		150,00				
4,3x125	4,30	125,00			12181	
5,1x140	5,10	125,00			20814	
5,1x150		125,00				
5,1x160		125,00				
5,5x175	5,50	175,00			27068	
5,5x180		180,00				
5,5x210		210,00				
5,5x230		230,00				
6,0x190	6,00	190,00			33946	
6,0x200		200,00				
7,0x225	7,00	225,00			46735	
7,0x250		250,00				
7,0x275		275,00				
8,0x300	8,00	300,00			69068	
8,0x330		330,00				

AISI 316/A4

Name	Nominal diameter d [mm]	Total length L [mm]	Withdrawal parameter $f_{ax,k}$ [N/mm²]*	Head pull-trough parameter $f_{head,k}$ [N/mm²]*	Yield moment $M_{y,k}$ [Nmm]	Tensile capasity $f_{tens,k}$ [kN]
2,3x60	2,30	60,00	2,45	8,57	2647	NPD**
2,8x75	2,70	75,00			4253	
3,4x100	3,30	100,00			8801	
						

*Declared values for the withdrawal parameter fax,k and the head pull-through parameter fhead,k are theoreticaly calculated in acc. with EN 1995-1-1. Values apply for wood with a characteristic density of ρk=350 kg/m3 (C24).

** "No Performance Declared"

PRODUCT IDENTIFICATION

Following articles which are sold in the brand name GUNNEBO FASTENING are covered by this Declaration of Performance:

BRIGHT ARTICLE NUMBER	HOT DIP GALVANIZED ARTICLE NUMBER		AISI 316/A4 ARTICLE NUMBER
Z274809	Z425196	Z175908	Z332202
Z400639	Z246064	Z400638	Z332707
Z242557	Z211785	Z211086	Z169111
Z274702	Z400608	Z175801	
Z273109	Z190307	Z541504	
Z141573	Z425340	Z424836	
Z273002	Z541508	17462	
Z242696	Z212087	Z174907	
Z256261	Z325139	Z328629	
Z254706	Z341115	Z174800	
Z400610	Z400859	Z424991	
Z254609	Z306566	Z541505	
Z261502	Z314240	Z400912	
Z400611	Z400858	6851	
Z261405	Z341157	Z211280	
Z258742	Z212281	Z181800	
Z400612	Z212388	Z345402	
Z400026	Z341571	Z400099	
Z341107	Z212485	13802	
Z242890	5212	Z400605	
Z341123	Z341678	Z211387	
Z242997	Z212689	Z400613	
Z243045	15793	Z541506	
	Z425099	Z181101	
	Z181004	Z240814	
	Z400606	Z400607	
	Z184007	Z541507	
	Z183909	Z305939	
	Z183705	70077	
	Z424755	70078	
		71239	

GROOVED NAIL

BRIGHT / HOT DIP GALVANIZED / AISI 316/A4

GUNNEBO FASTENING

Declaration of Performance

The manufacturer declares for:

Grooved nail, Bright, diameter 2,3 up to 7,0 mm

1. Product is in accordance with EN 14592:2008 “Timber Structures – Dowel-type fasteners – Requirements”.

2. Initial Type Testing was performed to confirm essential characteristic values in accordance to table ZA.1 in EN 14592. Declared values accompanies with the CE mark on each package and in this technical document.

3. Initial typ testing were performed by

SP Sveriges Tekniska Forskningsinstitut. Notified body 0402
PX07538

DTI, Danish Technological Institute. Notified body 1235
DK 1302213
DK 447875

Strojirensky Zkusebni Ustav s.p. Notified body 1015
E-30-20524-15

4. For this product the compliance with the conditions of the Annex ZA in EN 14592 are accomplished.

5. A FPC system is established and maintained under the responsibilities of the manufacturer.

Bright grooved nail, Corrosion Class C1.

The system of attestation of conformity for Timber fasteners used for structural timber products is 3.

This declaration of conformity is valid until any changes in the product, the raw material or the production process is performed, which would significantly change the declared characteristics.

Gunnebo 2012-03-29, Revised 2015-10-01

.....
Head of Operation, Claes Arnesson

Gbo Fastening Systems AB
Bruksvägen 2
SE 590 93 Gunnebo
Sweden

GROOVED NAIL

BRIGHT / HOT DIP GALVANIZED / AISI 316/A4

GUNNEBO FASTENING

Declaration of Performance

The manufacturer declares for:

Grooved nail, Hot dip galvanized, diameter 2,3 up to 8,0 mm

1. Product is in accordance with EN 14592:2008 “Timber Structures – Dowel-type fasteners – Requirements”.

2. Initial Type Testing was performed to confirm essential characteristic values in accordance to table ZA.1 in EN 14592. Declared values accompanies with the CE mark on each package and in this technical document.

3. Initial typ testing were performed by

SP Sveriges Tekniska Forskningsinstitut. Notified body 0402
PX07538

DTI, Danish Technological Institute. Notified body 1235
DK 1302213
DK 447875

Strojirensky Zkusebni Ustav s.p. Notified body 1015
E-30-20100-13
E-30-20111-13
E-30-20524-15

4. For this product the compliance with the conditions of the Annex ZA in EN 14592 are accomplished.

5. A FPC system is established and maintained under the responsibilities of the manufacturer.

Hot dip galvanized 50 µm, type 1. Corrosion Class C4.

The system of attestation of conformity for Timber fasteners used for structural timber products is 3.

This declaration of conformity is valid until any changes in the product, the raw material or the production process is performed, which would significantly change the declared characteristics.

Gunnebo 2012-03-29, Revised 2015-10-01

.....
Head of Operation, Claes Arnesson

Gbo Fastening Systems AB
Bruksvägen 2
SE 590 93 Gunnebo
Sweden

GROOVED NAIL

BRIGHT / HOT DIP GALVANIZED / AISI 316/A4

GUNNEBO FASTENING

Declaration of Performance

The manufacturer declares for:

Grooved nail, Stainless steel, diameter 2,3 up to 3,4 mm

1. Product is in accordance with EN 14592:2008 “Timber Structures – Dowel-type fasteners – Requirements”.

2. Initial Type Testing was performed to confirm essential characteristic values in accordance to table ZA.1 in EN 14592. Declared values accompanies with the CE mark on each package and in this technical document.

3. Initial Typprovning är utförd av

SP Sveriges Tekniska Forskningsinstitut. Notified body 0402
PX07538

DTI, Danish Technological Institute. Notified body 1235
DK 1302213
DK 447875

Strojirensky Zkusebni Ustav s.p. Notified body 1015
E-30-20100-13
E-30-20111-13

4. For this product the compliance with the conditions of the Annex ZA in EN 14592 are accomplished.

5. A FPC system is established and maintained under the responsibilities of the manufacturer.

Stainless steel AISI 316/A4, Corrosion Class C4.

The system of attestation of conformity for Timber fasteners used for structural timber products is 3.

This declaration of conformity is valid until any changes in the product, the raw material or the production process is performed, which would significantly change the declared characteristics.

Gunnebo 2012-03-29, Revised 2014-02-17

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Head of Operation, Claes Arnesson

Gbo Fastening Systems AB
Bruksvägen 2
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