

# RING SHANK NAIL

STAINLESS STEEL AISI 316/A4 & AISI 304/A2



Declaration of Performance



Dokument no: CE-300086-A2

This ring shank nail with its low oval head and ring shank is used to fix timber components to wood, where high pull-out strength is required. It can also be used for laying roofing tile.

**Dimensions:**

d: 2,3-3,1 mm L: 20-85 mm

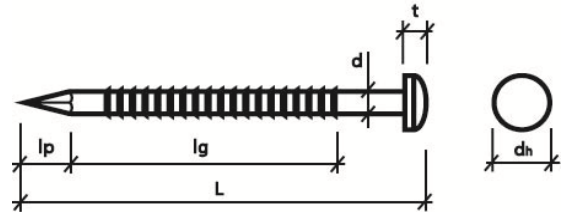
**Material:**

Stainless steel AISI 316/A4: EN 10088  
Rostfri AISI 304/A2: EN 10088

Characteristic tensile strength of wire ( $f_u$ ) in acc. with EN 10218-1. 700 N/mm<sup>2</sup>

**Behandling:**


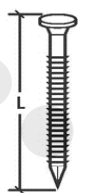

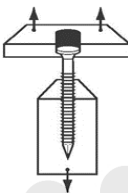
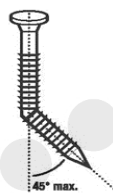

Stainless steel A2 & A4 - Service class 3



## DIMENSIONS

AISI 316/A4							
Name	Nominal diameter d [mm]	Total length L [mm]	Threaded length l <sub>g</sub> [mm]	Head diameter d <sub>h</sub> [mm]	Head area A <sub>h</sub> [mm <sup>2</sup> ]	Head thickness t [mm]	Point length l <sub>p</sub> [mm]
2,3x25	2,3	25,0	22,0	5,7	26,0	1,2	3,2
2,3x30		30,0	25,0				
2,3x35		35,0	30,0				
2,3x45		45,0	35,0				
2,3x50		50,0	40,0				
2,5x20	2,5	20	16	6,2	29,7	1,3	3,4
2,5x30		30	25				
2,5x60		60	45				
3,1x30	3,1	30,0	20,0	7,7	46,6	1,6	4,3
3,1x38		38,0	30,0				
3,1x45		45,0	35,0				
3,1x50		50,0	42,0				
3,1x60		60,0	45,0				
3,1x75		75,0	50,0				
3,1x85		85,0	55,0				
AISI 304/A2							
Name	Nominal diameter d [mm]	Total length L [mm]	Threaded length l <sub>g</sub> [mm]	Head diameter d <sub>h</sub> [mm]	Head area A <sub>h</sub> [mm <sup>2</sup> ]	Head thickness t [mm]	Point length l <sub>p</sub> [mm]
3,1x75	3,1	75,0	50,0	7,7	46,6	1,6	4,3

## CHARACTERISTIC LOAD CAPACITY

AISI 316/A4						
Name	Nominal diameter d [mm]	Total length L [mm]	Withdrawal parameter $f_{ax,k}$ [N/mm <sup>2</sup> ]*	Head pull-through parameter $f_{head,k}$ [N/mm <sup>2</sup> ]*	Yield moment $M_{y,k}$ [Nmm]	Tensile capacity $f_{tens,k}$ [kN]
2,3x25	2,3	25,0	4,0	24,1	1800	3,4
2,3x30		30,0				
2,3x35		35,0				
2,3x45		45,0				
2,3x50		50,0				
2,5x20	2,5	20	4,1	22,3	2300	3,7
2,5x30		30				
2,5x60		60				
3,1x30	3,1	30,0	5,2	NPD**	4400	5,8
3,1x38		38,0				
3,1x45		45,0				
3,1x50		50,0				
3,1x60		60,0				
3,1x75		75,0				
3,1x85		85,0				
AISI 304/A2						
Beteckning	Nominell diameter d [mm]	Totallängd L [mm]	Utdrags-hållfasthet $f_{ax,k}$ [N/mm <sup>2</sup> ]*	Genomdragnings-hållfasthet $f_{head,k}$ [N/mm <sup>2</sup> ]*	Flytmoment $M_{y,k}$ [Nmm]	dragbärförmåga $f_{tens,k}$ [kN]
3,1x75	3,1	75,0	5,2	NPD**	4400	5,8
						

\* The withdrawal parameter  $f_{ax,k}$  and the head pull-through parameter  $f_{head,k}$  is tested in wood with a characteristic density of  $\rho_k=350$  kg/m<sup>3</sup> (C24). When wood with another density is used values shall be multiplied with  $\rho_k/350$ .

\*\* "No Performance Declared"

## PRODUCT IDENTIFICATION

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

### ARTICLE NUMBER

221	Z324201	Z129478	331
Z324502	Z541534	Z541536	
Z541533	Z323909	Z143339	
Z324405	Z541535	Z437997	

# RING SHANK NAIL

STAINLESS STEEL AISI 316/A4 & AISI 304/A2



**GUNNEBO**  
FASTENING

Declaration of  
Performance

The manufacturer declares for:

## Ring shank nail, Stainless steel, diameter 2,3 and up to 3,1 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 Type Testing is performed by DTI, Danish Technological Institute.  
 $f_{tens,k}$ : Report DK 474099-1, Taastrup, 2012-04-27  
DK 426382-1, Taastrup, 2011-04-29  
 $M_{y,k}$ : Report DK 474099-2, Taastrup, 2012-04-27  
report DK 426382-3, Taastrup, 2011-05-05  
 $f_{ax,k}$ : Report DK 474099-3, Taastrup, 2012-05-15  
DK 426382-4, Taastrup, 2011-05-12  
 $f_{head,k}$  Report DK 474099-4, Taastrup. 2012-05-15  
 $f_{u,k}$ : Report DK 1302213, Århus, 2012-04-26  
Report DK 1302213, Århus, 2011-04-28
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 & AISI 304/A2, Service Class 3

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 2013-02-01*

Head of Operation, Claes Arnesson



**GBO Fastening systems AB**  
Bruksvägen 2  
SE 590 93 Gunnebo  
Sweden