



Nail type: **3.4mm diameter smooth shank**  
 Finish: **Bright**  
 Collation: **21° plastic strip**

Collation: thermoplastic strip


Suitable for these tools:-

DuoFast DFSN100.1, CN350B , DF90S

Haubold RN100, RN130

Nail lengths\*: 80 to 130mm

Nails per strip: 28

For fixing timber, OSB or plywood to timber 

### CORROSION PROTECTION

Label colour on packaging	Eurocode 5 service class	Finish
	Service Class 1 Indoor use 	Bright (no protection)

Eurocode 5 only details minimum protection, it does not consider local environmental conditions, we recommend that you refer to ISO12944 part 2 to determine the appropriate corrosion protection. See appendix for details.

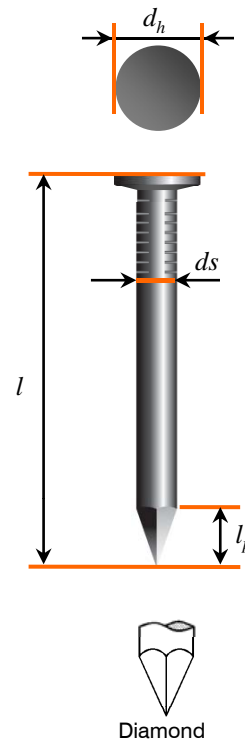
### NAIL PROPERTIES / DIMENSIONS

- Tensile strength of wire: min 700 N/mm<sup>2</sup>
- Shank diameter ( $d_s$ )\*: 3.4mm
- Head diameter ( $d_h$ )\*: 8.2mm
- Standard nail lengths\* ( $l$ )  
 $l$  (mm) 82 90 100 130
- Standard point: diamond
- Point length  $l_p$ : 3.7mm

- Tolerances according to EN14592 for nail length, nail diameter and head diameter
- See tool manuals for min and max nail lengths

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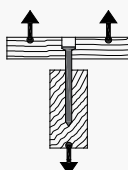
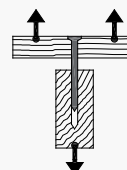

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CE  
EN14592

U  
DIN1052

### CHARACTERISTIC PARAMETERS FOR CALCULATION TO EUROCODE 5

Head pull-through $f_{head,k}$ [N/mm <sup>2</sup> ]	Withdrawal $f_{ax,k}$ [N/mm <sup>2</sup> ]	Yield moment $M_{y,k}$ [Nmm]
8.58	2.45	5059
		

Minimum embedment in base member: 28mm (lateral load)  
 Smooth shank nails not suitable for permanent axial loading

See Datasheet Appendix for guidance on spacing etc.. and Eurocode 5 for complete rules on timber member dimensions etc..

- To obtain characteristic head pull-through capacity multiply factor by  $d_h^2$
- For withdrawal capacity multiply factor by base material embedment and fastener nominal diameter
- Values based on characteristic wood density of 350kg/m<sup>3</sup>



Nail type: **3.4mm diameter smooth shank**  
 Finish: **Electro-galvanised 5µm**  
 Collation: **21° plastic strip**

Collation: thermoplastic strip


Suitable for these tools:-

DuoFast DFSN100.1, CN350B , DF90S

Haubold RN100, RN130

Nail lengths\*: 80 to 130mm

Nails per strip: 28

For fixing timber, OSB or plywood to timber 

### CORROSION PROTECTION

Label colour on packaging	Eurocode 5 service class	Finish
	Service Class 1 Indoor use 	Electro-galvanised $\geq 5\mu\text{m}$

Eurocode 5 only details minimum protection, it does not consider local environmental conditions, we recommend that you refer to ISO12944 part 2 to determine the appropriate corrosion protection. See appendix for details.

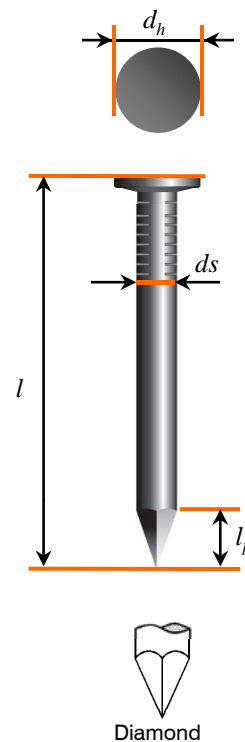
### NAIL PROPERTIES / DIMENSIONS

- Tensile strength of wire: min 700 N/mm<sup>2</sup>
- Shank diameter ( $d_s$ )\*: 3.4mm
- Head diameter ( $d_h$ )\*: 8.2mm
- Standard nail lengths\* ( $l$ )  
 $l$  (mm) 82 90 100 130
- Standard point: diamond
- Point length  $l_p$ : 3.7mm

- Tolerances according to EN14592 for nail length, nail diameter and head diameter
- See tool manuals for min and max nail lengths

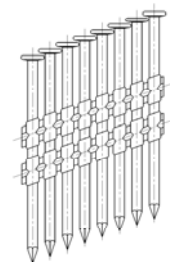
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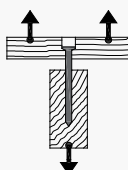
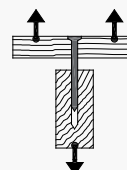



**CE**  
EN14592

**U**  
DIN1052



### CHARACTERISTIC PARAMETERS FOR CALCULATION TO EUROCODE 5

Head pull-through $f_{head,k}$ [N/mm <sup>2</sup> ]	Withdrawal $f_{ax,k}$ [N/mm <sup>2</sup> ]	Yield moment $M_{y,k}$ [Nmm]
8.58	2.45	5059
		

Minimum embedment in base member: 28mm (lateral load)  
 Smooth shank nails not suitable for permanent axial loading

See Datasheet Appendix for guidance on spacing etc.. and Eurocode 5 for complete rules on timber member dimensions etc..

- To obtain characteristic head pull-through capacity multiply factor by  $d_h^2$
- For withdrawal capacity multiply factor by base material embedment and fastener nominal diameter
- Values based on characteristic wood density of 350kg/m<sup>3</sup>



Nail type: **3.8mm diameter smooth shank**  
 Finish: **Bright**  
 Collation: **21° plastic strip**


Collation: thermoplastic strip

Suitable for these tools:-

Haubold RN130, RN160

Nail lengths\*: 100 to 130mm

Nails per strip: 28

For fixing timber, OSB or plywood to timber 

### CORROSION PROTECTION

Label colour on packaging	Eurocode 5 service class	Finish
	Service Class 1 Indoor use 	Bright (no protection)

Eurocode 5 only details minimum protection, it does not consider local environmental conditions, we recommend that you refer to ISO12944 part 2 to determine the appropriate corrosion protection. See appendix for details.

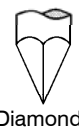
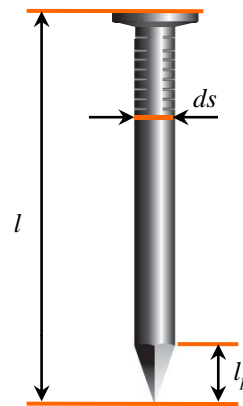
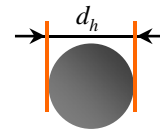
### NAIL PROPERTIES / DIMENSIONS

- Tensile strength of wire: min 700 N/mm<sup>2</sup>
- Shank diameter ( $d_s$ )\*: 3.8mm
- Head diameter ( $d_h$ )\*: 8.2mm
- Standard nail lengths\* ( $l$ )  
 $l$  (mm) 100 110 120 130
- Standard point: diamond
- Point length  $l_p$ : 4.2mm

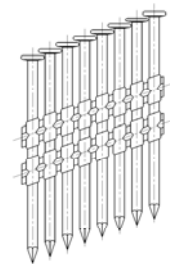
- Tolerances according to EN14592 for nail length, nail diameter and head diameter
- See tool manuals for min and max nail lengths

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Diamond



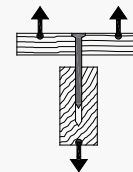
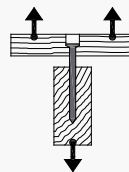
### CHARACTERISTIC PARAMETERS FOR CALCULATION TO EUROCODE 5

Head pull-through $f_{head,k}$ [N/mm <sup>2</sup> ]	Withdrawal $f_{ax,k}$ [N/mm <sup>2</sup> ]	Yield moment $M_{y,k}$ [Nmm]
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8.58

2.45

6755



Minimum embedment in base member: 31mm (lateral load)  
 Smooth shank nails not suitable for permanent axial loading

See Datasheet Appendix for guidance on spacing etc.. and Eurocode 5 for complete rules on timber member dimensions etc..

- To obtain characteristic head pull-through capacity multiply factor by  $d_h^2$
- For withdrawal capacity multiply factor by base material embedment and fastener nominal diameter
- Values based on characteristic wood density of 350kg/m<sup>3</sup>



Nail type: **3.8mm diameter smooth shank**  
 Finish: **Electro-galvanised 5µm**  
 Collation: **21° plastic strip**


Collation: thermoplastic strip

Suitable for these tools:-

Haubold RN130, RN160

Nail lengths\*: 100 to 130mm

Nails per strip: 28

For fixing timber, OSB or plywood to timber 

### CORROSION PROTECTION

Label colour on packaging	Eurocode 5 service class	Finish
	Service Class 1 Indoor use 	Electro-galvanised $\geq 5\mu\text{m}$

Eurocode 5 only details minimum protection, it does not consider local environmental conditions, we recommend that you refer to ISO12944 part 2 to determine the appropriate corrosion protection. See appendix for details.

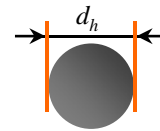
### NAIL PROPERTIES / DIMENSIONS

- Tensile strength of wire: min 700 N/mm<sup>2</sup>
- Shank diameter ( $d_s$ )\*: 3.8mm
- Head diameter ( $d_h$ )\*: 8.2mm
- Standard nail lengths\* ( $l$ )  
 $l$  (mm) 100 110 120 130
- Standard point: diamond
- Point length  $l_p$ : 4.2mm

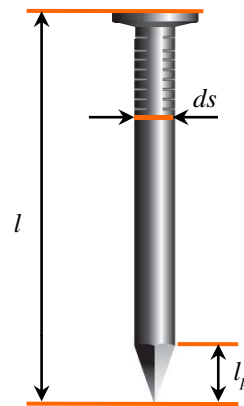
- Tolerances according to EN14592 for nail length, nail diameter and head diameter
- See tool manuals for min and max nail lengths

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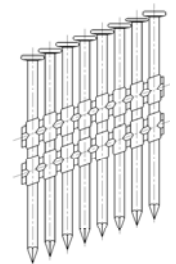
**CE**  
EN14592



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DIN1052



Diamond



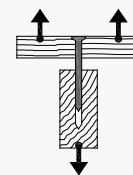
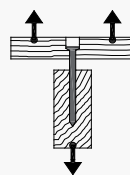
### CHARACTERISTIC PARAMETERS FOR CALCULATION TO EUROCODE 5

Head pull-through $f_{head,k}$ [N/mm <sup>2</sup> ]	Withdrawal $f_{ax,k}$ [N/mm <sup>2</sup> ]	Yield moment $M_{y,k}$ [Nmm]
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8.58

2.45

6755



Minimum embedment in base member: 31mm (lateral load)  
 Smooth shank nails not suitable for permanent axial loading

See Datasheet Appendix for guidance on spacing etc.. and Eurocode 5 for complete rules on timber member dimensions etc..

- To obtain characteristic head pull-through capacity multiply factor by  $d_h^2$
- For withdrawal capacity multiply factor by base material embedment and fastener nominal diameter
- Values based on characteristic wood density of 350kg/m<sup>3</sup>




Nail type: 4.2mm diameter smooth shank  
 Finish: **Bright**  
 Collation: 21° plastic strip



Collation: thermoplastic strip

Suitable for these tools:-  
 Haubold RN160

Nail lengths\*: 100 to 160mm  
 Nails per strip: 22

For fixing timber, OSB or plywood to timber 

### CORROSION PROTECTION

Label colour on packaging	Eurocode 5 service class	Finish
	Service Class 2 Protected Outdoor 	Bright (no protection)

Eurocode 5 only details minimum protection, it does not consider local environmental conditions, we recommend that you refer to ISO12944 part 2 to determine the appropriate corrosion protection. See appendix for details.

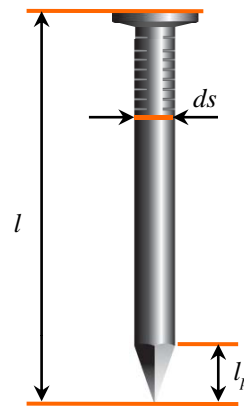
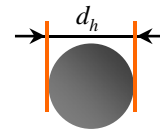
### NAIL PROPERTIES / DIMENSIONS

- Tensile strength of wire: min 700 N/mm<sup>2</sup>
- Shank diameter ( $d_s$ )\*: 4.2mm
- Head diameter ( $d_h$ )\*: 8.3mm
- Standard nail lengths\* ( $l$ )  
 $l$  (mm) 100 120 140 145 160
- Standard point: diamond
- Point length  $l_p$ : 4.6mm

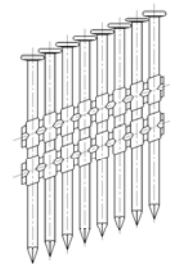
- Tolerances according to EN14592 for nail length, nail diameter and head diameter
- See tool manuals for min and max nail lengths

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Diamond



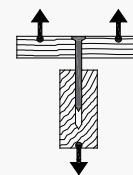
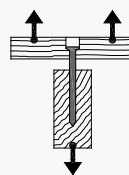
### CHARACTERISTIC PARAMETERS FOR CALCULATION TO EUROCODE 5

Head pull-through $f_{head,k}$ [N/mm <sup>2</sup> ]	Withdrawal $f_{ax,k}$ [N/mm <sup>2</sup> ]	Yield moment $M_{y,k}$ [Nmm]
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8.58

2.45

8763



Minimum embedment in base member: 34mm (lateral load)  
 Smooth shank nails not suitable for permanent axial loading

See Datasheet Appendix for guidance on spacing etc.. and Eurocode 5 for complete rules on timber member dimensions etc..

- To obtain characteristic head pull-through capacity multiply factor by  $d_h^2$
- For withdrawal capacity multiply factor by base material embedment and fastener nominal diameter
- Values based on characteristic wood density of 350kg/m<sup>3</sup>



Nail type: 4.2mm diameter smooth shank  
 Finish: Electro-galvanised 5µm  
 Collation: 21° plastic strip

Collation: thermoplastic strip

Suitable for these tools:-  
 Haubold RN160

Nail lengths\*: 100 to 160mm  
 Nails per strip: 22

For fixing timber, OSB or plywood to timber 

### CORROSION PROTECTION

Label colour on packaging	Eurocode 5 service class	Finish
	Service Class 2 Protected Outdoor 	Electro-galvanised ≥ 5µm

Eurocode 5 only details minimum protection, it does not consider local environmental conditions, we recommend that you refer to ISO12944 part 2 to determine the appropriate corrosion protection. See appendix for details.

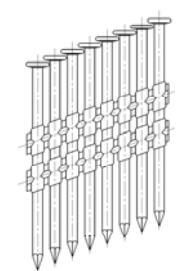
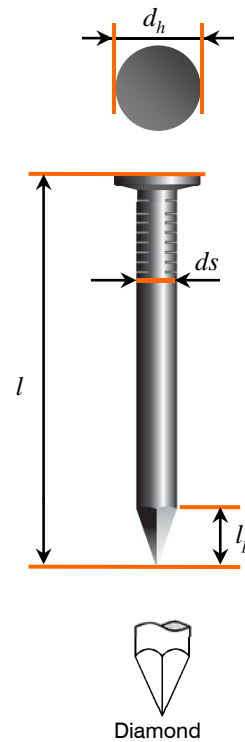
### NAIL PROPERTIES / DIMENSIONS

- Tensile strength of wire: min 700 N/mm<sup>2</sup>
- Shank diameter ( $d_s$ )\*: 4.2mm
- Head diameter ( $d_h$ )\*: 8.3mm
- Standard nail lengths\* ( $l$ )  
 $l$  (mm) 100 120 140 145 160
- Standard point: diamond
- Point length  $l_p$ : 4.6mm

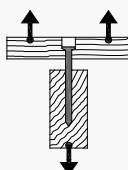
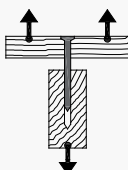

- Tolerances according to EN14592 for nail length, nail diameter and head diameter
- See tool manuals for min and max nail lengths

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### CHARACTERISTIC PARAMETERS FOR CALCULATION TO EUROCODE 5

Head pull-through $f_{head,k}$ [N/mm <sup>2</sup> ]	Withdrawal $f_{ax,k}$ [N/mm <sup>2</sup> ]	Yield moment $M_{y,k}$ [Nmm]
8.58	2.45	8763
		

Minimum embedment in base member: 34mm (lateral load)  
 Smooth shank nails not suitable for permanent axial loading

See Datasheet Appendix for guidance on spacing etc.. and Eurocode 5 for complete rules on timber member dimensions etc..

- To obtain characteristic head pull-through capacity multiply factor by  $d_h^2$
- For withdrawal capacity multiply factor by base material embedment and fastener nominal diameter
- Values based on characteristic wood density of 350kg/m<sup>3</sup>



Nail type: **4.6mm diameter smooth shank**  
 Finish: **Bright**  
 Collation: **21° plastic strip**

Collation: thermoplastic strip  
**Suitable for these tools:-**  
 Haubold RN160, RN220

Nail lengths\*: 145 to 220mm  
 Nails per strip: 22

For fixing timber, OSB or plywood to timber

### CORROSION PROTECTION

Label colour on packaging	Eurocode 5 service class	Finish
	Service Class 2 Protected Outdoor	Bright (no protection)

Eurocode 5 only details minimum protection, it does not consider local environmental conditions, we recommend that you refer to ISO12944 part 2 to determine the appropriate corrosion protection. See appendix for details.

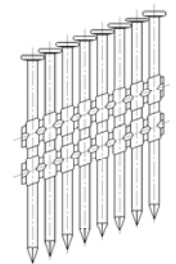
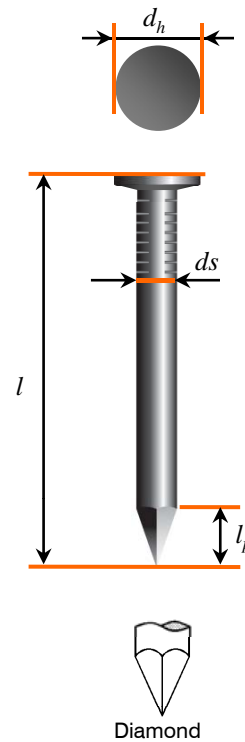
### NAIL PROPERTIES / DIMENSIONS

- Tensile strength of wire: min 700 N/mm<sup>2</sup>
- Shank diameter ( $d_s$ )\*: 4.6mm
- Head diameter ( $d_h$ )\*: 9.2mm
- Standard nail lengths\* ( $l$ );-  
 $l$  (mm) 145 160
- Standard point: diamond
- Point length  $l_p$ : 5.1mm

- Tolerances according to EN14592 for nail length, nail diameter and head diameter
- See tool manuals for min and max nail lengths

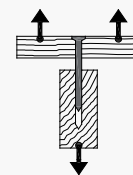
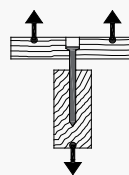
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### CHARACTERISTIC PARAMETERS FOR CALCULATION TO EUROCODE 5

Head pull-through $f_{head,k}$ [N/mm <sup>2</sup> ]	Withdrawal $f_{ax,k}$ [N/mm <sup>2</sup> ]	Yield moment $M_{y,k}$ [Nmm]
8.58	2.45	11101



Minimum embedment in base member: 37mm (lateral load)  
 Smooth shank nails not suitable for permanent axial loading

See Datasheet Appendix for guidance on spacing etc.. and Eurocode 5 for complete rules on timber member dimensions etc..


- To obtain characteristic head pull-through capacity multiply factor by  $d_h^2$
- For withdrawal capacity multiply factor by base material embedment and fastener nominal diameter
- Values based on characteristic wood density of 350kg/m<sup>3</sup>



Nail type: **4.6mm diameter smooth shank**  
 Finish: **Electro-galvanised 5µm**  
 Collation: **21° plastic strip**

Collation: thermoplastic strip  
**Suitable for these tools:-**  
 Haubold RN160, RN220

Nail lengths\*: 145 to 220mm  
 Nails per strip: 22

For fixing timber, OSB or plywood to timber 

### CORROSION PROTECTION

Label colour on packaging	Eurocode 5 service class	Finish
	Service Class 2 Protected Outdoor 	Electro-galvanised ≥ 5µm

Eurocode 5 only details minimum protection, it does not consider local environmental conditions, we recommend that you refer to ISO12944 part 2 to determine the appropriate corrosion protection. See appendix for details.

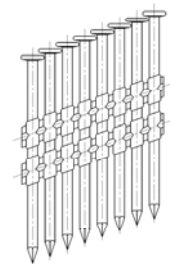
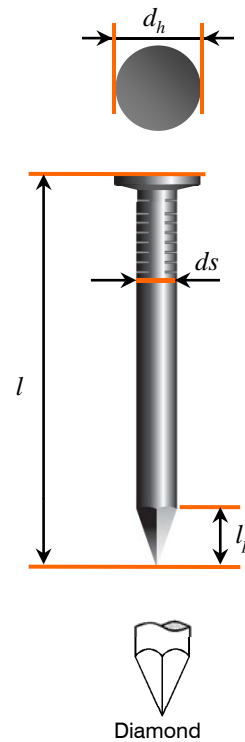
### NAIL PROPERTIES / DIMENSIONS

- Tensile strength of wire: min 700 N/mm<sup>2</sup>
- Shank diameter ( $d_s$ )\*: 4.6mm
- Head diameter ( $d_h$ )\*: 9.2mm
- Standard nail lengths\* ( $l$ );-  
 $l$  (mm) 145 160
- Standard point: diamond
- Point length  $l_p$ : 5.1mm

- Tolerances according to EN14592 for nail length, nail diameter and head diameter
- See tool manuals for min and max nail lengths

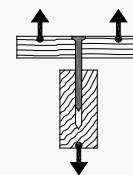
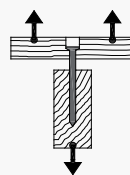
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### CHARACTERISTIC PARAMETERS FOR CALCULATION TO EUROCODE 5

Head pull-through $f_{head,k}$ [N/mm <sup>2</sup> ]	Withdrawal $f_{ax,k}$ [N/mm <sup>2</sup> ]	Yield moment $M_{y,k}$ [Nmm]
8.58	2.45	11101



Minimum embedment in base member: 37mm (lateral load)  
 Smooth shank nails not suitable for permanent axial loading

See Datasheet Appendix for guidance on spacing etc.. and Eurocode 5 for complete rules on timber member dimensions etc..

- To obtain characteristic head pull-through capacity multiply factor by  $d_h^2$
- For withdrawal capacity multiply factor by base material embedment and fastener nominal diameter
- Values based on characteristic wood density of 350kg/m<sup>3</sup>






Nail type: **5.0mm diameter smooth shank**  
 Finish: **Bright**  
 Collation: **21° plastic strip**

Collation: thermoplastic strip  
**Suitable for these tools:-**  
 Haubold RN160, RN220

Nail lengths\*: 145 to 220mm  
 Nails per strip: 22

For fixing timber, OSB or plywood to timber 

### CORROSION PROTECTION

Label colour on packaging	Eurocode 5 service class	Finish
	Service Class 2 Protected Outdoor 	Bright (no protection)

Eurocode 5 only details minimum protection, it does not consider local environmental conditions, we recommend that you refer to ISO12944 part 2 to determine the appropriate corrosion protection. See appendix for details.

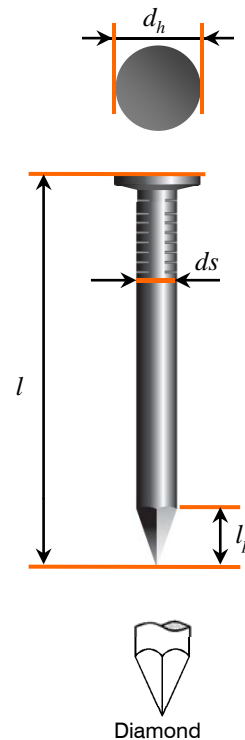
### NAIL PROPERTIES / DIMENSIONS

- Tensile strength of wire: min 700 N/mm<sup>2</sup>
- Shank diameter ( $d_s$ )\*: 5.0mm
- Head diameter ( $d_h$ )\*: 9.2mm
- Standard nail lengths\* ( $l$ );-  
 $l$  (mm) 160 180 200 220
- Standard point: diamond
- Point length  $l_p$ : 5.5mm

- Tolerances according to EN14592 for nail length, nail diameter and head diameter
- See tool manuals for min and max nail lengths

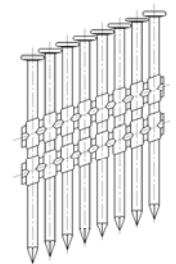
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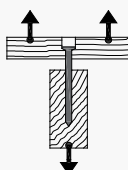
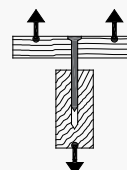



**CE**  
 EN14592

**Ü**  
 DIN1052



### CHARACTERISTIC PARAMETERS FOR CALCULATION TO EUROCODE 5

Head pull-through $f_{head,k}$ [N/mm <sup>2</sup> ]	Withdrawal $f_{ax,k}$ [N/mm <sup>2</sup> ]	Yield moment $M_{y,k}$ [Nmm]
8.58	2.45	13789
		

Minimum embedment in base member: 40mm (lateral load)  
 Smooth shank nails not suitable for permanent axial loading

See Datasheet Appendix for guidance on spacing etc.. and Eurocode 5 for complete rules on timber member dimensions etc..


- To obtain characteristic head pull-through capacity multiply factor by  $d_h^2$
- For withdrawal capacity multiply factor by base material embedment and fastener nominal diameter
- Values based on characteristic wood density of 350kg/m<sup>3</sup>



Nail type: **5.0mm diameter smooth shank**  
 Finish: **Electro-galvanised 5µm**  
 Collation: **21° plastic strip**

Collation: thermoplastic strip  
**Suitable for these tools:-**  
 Haubold RN160, RN220

Nail lengths\*: 145 to 220mm  
 Nails per strip: 22

For fixing timber, OSB or plywood to timber 

### CORROSION PROTECTION

Label colour on packaging	Eurocode 5 service class	Finish
	Service Class 2 Protected Outdoor 	Electro-galvanised ≥ 5µm

Eurocode 5 only details minimum protection, it does not consider local environmental conditions, we recommend that you refer to ISO12944 part 2 to determine the appropriate corrosion protection. See appendix for details.

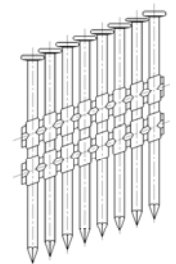
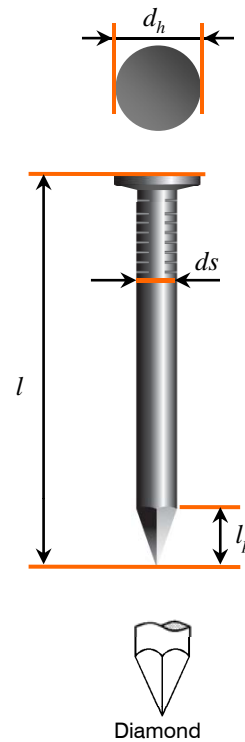
### NAIL PROPERTIES / DIMENSIONS

- Tensile strength of wire: min 700 N/mm<sup>2</sup>
- Shank diameter ( $d_s$ )\*: 5.0mm
- Head diameter ( $d_h$ )\*: 9.2mm
- Standard nail lengths\* ( $l$ );-  
 $l$  (mm) 160 180 200 220
- Standard point: diamond
- Point length  $l_p$ : 5.5mm

- Tolerances according to EN14592 for nail length, nail diameter and head diameter
- See tool manuals for min and max nail lengths

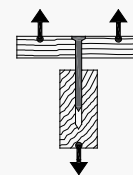
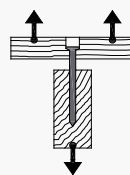
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### CHARACTERISTIC PARAMETERS FOR CALCULATION TO EUROCODE 5

Head pull-through $f_{head,k}$ [N/mm <sup>2</sup> ]	Withdrawal $f_{ax,k}$ [N/mm <sup>2</sup> ]	Yield moment $M_{y,k}$ [Nmm]
8.58	2.45	13789



Minimum embedment in base member: 40mm (lateral load)  
 Smooth shank nails not suitable for permanent axial loading

See Datasheet Appendix for guidance on spacing etc.. and Eurocode 5 for complete rules on timber member dimensions etc..

- To obtain characteristic head pull-through capacity multiply factor by  $d_h^2$
- For withdrawal capacity multiply factor by base material embedment and fastener nominal diameter
- Values based on characteristic wood density of 350kg/m<sup>3</sup>



Nail type: **3.4mm diameter screw shank**  
 Finish: **Bright**  
 Collation: **21° plastic strip**

Collation: thermoplastic strip


Suitable for these tools:-

DuoFast DFSN100.1, CN350B, DF90S

Haubold RN100, RN130

Nail lengths\*: 80 to 130mm

Nails per strip: 28

For fixing timber, OSB or plywood to timber 

### CORROSION PROTECTION

Label colour on packaging	Eurocode 5 service class	Finish
	Service Class 1 Indoor use 	Bright (no protection)

Eurocode 5 only details minimum protection, it does not consider local environmental conditions, we recommend that you refer to ISO12944 part 2 to determine the appropriate corrosion protection. See appendix for details.

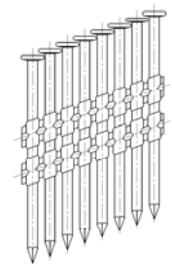
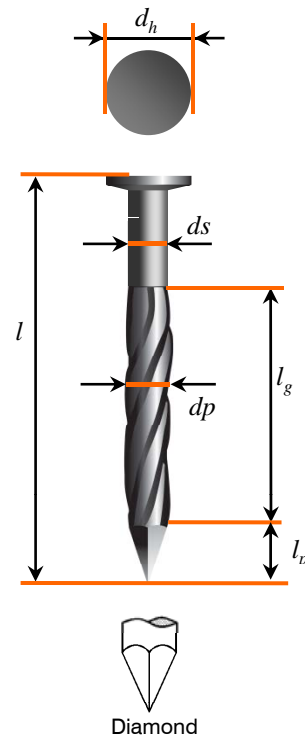
### NAIL PROPERTIES / DIMENSIONS

- Tensile strength of wire: min 700 N/mm<sup>2</sup>
- Shank diameter ( $d_s$ )\*: 3.4mm
- Profile diameter ( $d_p$ ): 3.6mm
- Head diameter ( $d_h$ )\*: 8.2mm
- Standard nail lengths\* ( $l$ ) / Profiled length\* ( $l_g$ );-  
 $l$  (mm) 90 100  
 $l_g$  (mm) 75 75
- Standard point: diamond
- Point length  $l_p$ : 3.7mm

- Tolerances according to EN14592 for nail length, nail diameter and head diameter
- See tool manuals for min and max nail lengths

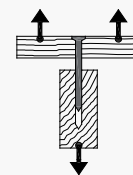
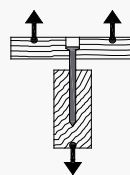
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### CHARACTERISTIC PARAMETERS FOR CALCULATION TO EUROCODE 5

Head pull-through $f_{head,k}$ [N/mm <sup>2</sup> ]	Withdrawal $f_{ax,k}$ [N/mm <sup>2</sup> ]	Yield moment $M_{y,k}$ [Nmm]
15.26	6.35	5821



Minimum embedment in base member: 21mm (lateral load)  
 Minimum embedment in base member: 28mm (axial load)

See Datasheet Appendix for guidance on spacing etc.. and Eurocode 5 for complete rules on timber member dimensions etc..

- To obtain characteristic head pull-through capacity multiply factor by  $d_h^2$
- For withdrawal capacity multiply factor by base material embedment and fastener nominal diameter
- Values based on characteristic wood density of 350kg/m<sup>3</sup>



Nail type: **3.4mm diameter screw shank**  
 Finish: **Electro-galvanised 5µm**  
 Collation: **21° plastic strip**

Collation: thermoplastic strip


Suitable for these tools:-

DuoFast DFSN100.1, CN350B, DF90S

Haubold RN100, RN130

Nail lengths\*: 80 to 130mm

Nails per strip: 28

For fixing timber, OSB or plywood to timber 

### CORROSION PROTECTION

Label colour on packaging	Eurocode 5 service class	Finish
	Service Class 1 Indoor use 	Electro-galvanised $\geq 5\mu\text{m}$

Eurocode 5 only details minimum protection, it does not consider local environmental conditions, we recommend that you refer to ISO12944 part 2 to determine the appropriate corrosion protection. See appendix for details.

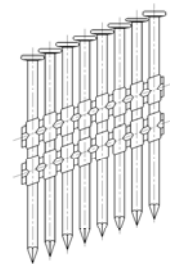
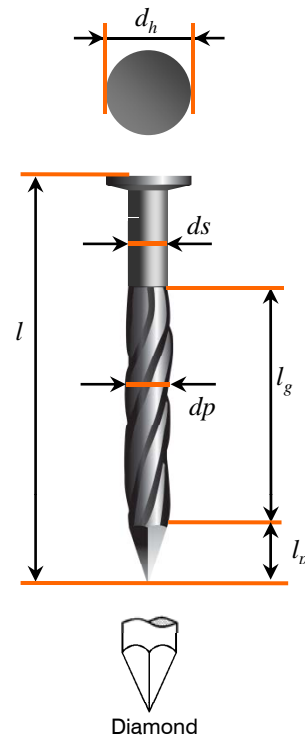
### NAIL PROPERTIES / DIMENSIONS

- Tensile strength of wire: min 700 N/mm<sup>2</sup>
- Shank diameter ( $d_s$ )\*: 3.4mm
- Profile diameter ( $d_p$ ): 3.6mm
- Head diameter ( $d_h$ )\*: 8.2mm
- Standard nail lengths\* ( $l$ ) / Profiled length\* ( $l_g$ );-  
 $l$  (mm) 90 100  
 $l_g$  (mm) 75 75
- Standard point: diamond
- Point length  $l_p$ : 3.7mm

- Tolerances according to EN14592 for nail length, nail diameter and head diameter
- See tool manuals for min and max nail lengths

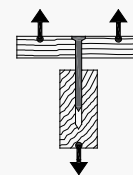
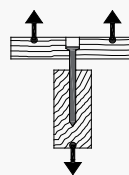
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### CHARACTERISTIC PARAMETERS FOR CALCULATION TO EUROCODE 5

Head pull-through $f_{head,k}$ [N/mm <sup>2</sup> ]	Withdrawal $f_{ax,k}$ [N/mm <sup>2</sup> ]	Yield moment $M_{y,k}$ [Nmm]
15.26	6.35	5821



Minimum embedment in base member: 21mm (lateral load)  
 Minimum embedment in base member: 28mm (axial load)

See Datasheet Appendix for guidance on spacing etc.. and Eurocode 5 for complete rules on timber member dimensions etc..

- To obtain characteristic head pull-through capacity multiply factor by  $d_h^2$
- For withdrawal capacity multiply factor by base material embedment and fastener nominal diameter
- Values based on characteristic wood density of 350kg/m<sup>3</sup>



Nail type: **3.8mm diameter screw shank**  
 Finish: **Bright**  
 Collation: **21° plastic strip**


Collation: thermoplastic strip

Suitable for these tools:-


Haubold RN130, RN160

Nail lengths\*: 100 to 130mm

Nails per strip: 28

For fixing timber, OSB or plywood to timber 

### CORROSION PROTECTION

Label colour on packaging	Eurocode 5 service class	Finish
	Service Class 1 Indoor use 	Bright (no protection)

Eurocode 5 only details minimum protection, it does not consider local environmental conditions, we recommend that you refer to ISO12944 part 2 to determine the appropriate corrosion protection. See appendix for details.

### NAIL PROPERTIES / DIMENSIONS

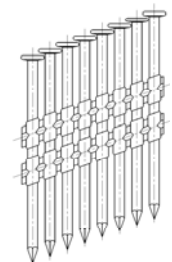
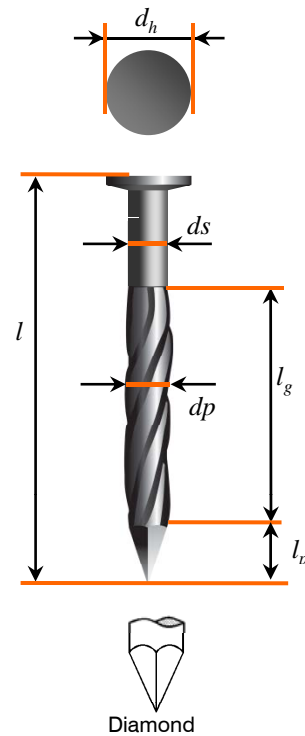
- Tensile strength of wire: min 700 N/mm<sup>2</sup>
- Shank diameter ( $d_s$ )\*: 3.8mm
- Profile diameter ( $d_p$ ): 4.0mm
- Head diameter ( $d_h$ )\*: 8.2mm
- Standard nail lengths\* ( $l$ ) / Profiled length\* ( $l_g$ );-  

$l$ (mm)	100	120	130
$l_g$ (mm)	75	75	75
- Standard point: diamond
- Point length  $l_p$ : 4.2mm

- Tolerances according to EN14592 for nail length, nail diameter and head diameter
- See tool manuals for min and max nail lengths

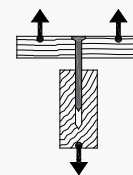
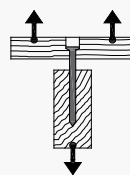
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### CHARACTERISTIC PARAMETERS FOR CALCULATION TO EUROCODE 5

Head pull-through $f_{head,k}$ [N/mm <sup>2</sup> ]	Withdrawal $f_{ax,k}$ [N/mm <sup>2</sup> ]	Yield moment $M_{y,k}$ [Nmm]
15.08	5.45	7992



Minimum embedment in base member: 23mm (lateral load)  
 Minimum embedment in base member: 31mm (axial load)

See Datasheet Appendix for guidance on spacing etc.. and Eurocode 5 for complete rules on timber member dimensions etc..

- To obtain characteristic head pull-through capacity multiply factor by  $d_h^2$
- For withdrawal capacity multiply factor by base material embedment and fastener nominal diameter
- Values based on characteristic wood density of 350kg/m<sup>3</sup>



Nail type: **3.8mm diameter screw shank**  
 Finish: **Electro-galvanised 5µm**  
 Collation: **21° plastic strip**

Collation: thermoplastic strip

**Suitable for these tools:-**

**Haubold RN160**

Nail lengths\*: 100 to 130mm

Nails per strip: 28

For fixing timber, OSB or plywood to timber

### CORROSION PROTECTION

Label colour on packaging	Eurocode 5 service class	Finish
	Service Class 1 Indoor use	Electro-galvanised $\geq 5\mu\text{m}$

Eurocode 5 only details minimum protection, it does not consider local environmental conditions, we recommend that you refer to ISO12944 part 2 to determine the appropriate corrosion protection. See appendix for details.

### NAIL PROPERTIES / DIMENSIONS

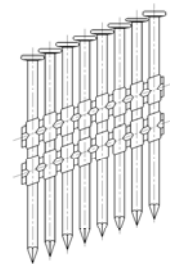
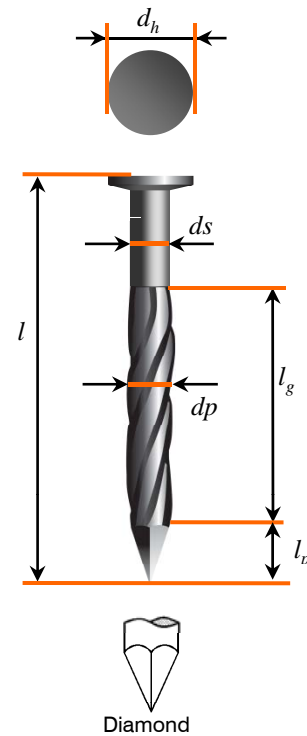
- Tensile strength of wire: min 700 N/mm<sup>2</sup>
  - Shank diameter ( $d_s$ ): 3.8mm
  - Profile diameter ( $d_p$ ): 4.0mm
  - Head diameter ( $d_h$ ): 8.2mm
  - Standard nail lengths\* ( $l$ ) / Profiled length\* ( $l_g$ ); -
- |            |     |     |     |
|------------|-----|-----|-----|
| $l$ (mm)   | 100 | 120 | 130 |
| $l_g$ (mm) | 75  | 75  | 75  |
- Standard point: diamond
  - Point length  $l_p$ : 4.2mm

- Tolerances according to EN14592 for nail length, nail diameter and head diameter
- See tool manuals for min and max nail lengths

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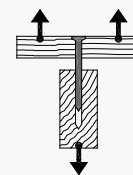
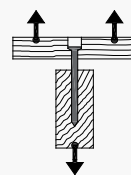
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**CE**  
EN14592



### CHARACTERISTIC PARAMETERS FOR CALCULATION TO EUROCODE 5

Head pull-through $f_{head,k}$ [N/mm <sup>2</sup> ]	Withdrawal $f_{ax,k}$ [N/mm <sup>2</sup> ]	Yield moment $M_{y,k}$ [Nmm]
15.08	5.45	7992



Minimum embedment in base member: 23mm (lateral load)  
 Minimum embedment in base member: 31mm (axial load)

See Datasheet Appendix for guidance on spacing etc.. and Eurocode 5 for complete rules on timber member dimensions etc..


- To obtain characteristic head pull-through capacity multiply factor by  $d_h^2$
- For withdrawal capacity multiply factor by base material embedment and fastener nominal diameter
- Values based on characteristic wood density of 350kg/m<sup>3</sup>





Nail type: 4.2mm diameter screw shank  
 Finish: Bright  
 Collation: 21° plastic strip

Collation: thermoplastic strip  
 Suitable for these tools:-  
 Haubold RN160

Nail lengths\*: 100 to 160mm  
 Nails per strip: 22

For fixing timber, OSB or plywood to timber 

### CORROSION PROTECTION

Label colour on packaging	Eurocode 5 service class	Finish
	Service Class 2 Protected Outdoor 	Bright (no protection)

Eurocode 5 only details minimum protection, it does not consider local environmental conditions, we recommend that you refer to ISO12944 part 2 to determine the appropriate corrosion protection. See appendix for details.

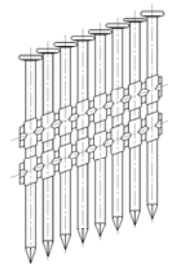
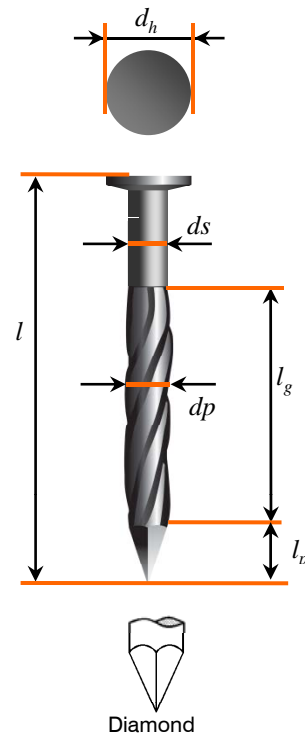
### NAIL PROPERTIES / DIMENSIONS

- Tensile strength of wire: min 700 N/mm<sup>2</sup>
- Shank diameter ( $d_s$ ): 4.2mm
- Profile diameter ( $d_p$ ): 4.4mm
- Head diameter ( $d_h$ ): 8.3mm
- Standard nail lengths\* ( $l$ ) / Profiled length\* ( $l_g$ ); -  
 $l$  (mm) 145  
 $l_g$  (mm) 75
- Standard point: diamond
- Point length  $l_p$ : 4.6mm

- Tolerances according to EN14592 for nail length, nail diameter and head diameter
- See tool manuals for min and max nail lengths

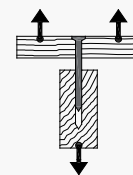
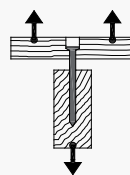
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### CHARACTERISTIC PARAMETERS FOR CALCULATION TO EUROCODE 5

Head pull-through $f_{head,k}$ [N/mm <sup>2</sup> ]	Withdrawal $f_{ax,k}$ [N/mm <sup>2</sup> ]	Yield moment $M_{y,k}$ [Nmm]
15.08	6.58	9216



Minimum embedment in base member: 26mm (lateral load)  
 Minimum embedment in base member: 34mm (axial load)

See Datasheet Appendix for guidance on spacing etc.. and Eurocode 5 for complete rules on timber member dimensions etc..

- To obtain characteristic head pull-through capacity multiply factor by  $d_h^2$
- For withdrawal capacity multiply factor by base material embedment and fastener nominal diameter
- Values based on characteristic wood density of 350kg/m<sup>3</sup>



Nail type: **3.4mm diameter ring shank**  
 Finish: **Bright**  
 Collation: **21° plastic strip**

Collation: thermoplastic strip


Suitable for these tools:-

DuoFast DFSN100.1, CN350B, DF90S

Haubold RN130

Nail lengths\*: 80 to 130mm

Nails per strip: 28

For fixing timber, OSB or plywood to timber 

### CORROSION PROTECTION

Label colour on packaging	Eurocode 5 service class	Finish
	Service Class 1 Indoor use 	Bright (no protection)

Eurocode 5 only details minimum protection, it does not consider local environmental conditions, we recommend that you refer to ISO12944 part 2 to determine the appropriate corrosion protection. See appendix for details.

### NAIL PROPERTIES / DIMENSIONS

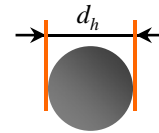
- Tensile strength of wire: min 700 N/mm<sup>2</sup>
- Shank diameter ( $d_s$ ): 3.4mm
- Profile diameter ( $d_p$ ): 3.6mm
- Head diameter ( $d_h$ ): 8.2mm
- Standard nail lengths\* ( $l$ ) / Profiled length\* ( $l_g$ ); -  

$l$ (mm)	90	100	130
$l_g$ (mm)	75	75	75
- Standard point: diamond
- Point length  $l_p$ : 3.7mm

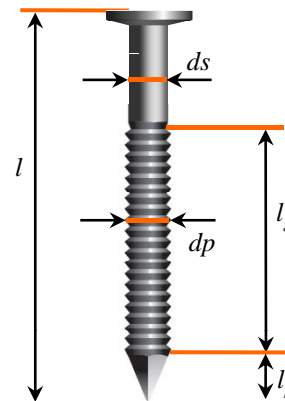
- Tolerances according to EN14592 for nail length, nail diameter and head diameter
- See tool manuals for min and max nail lengths

Haubold is a brand of the ITW Group  
 ITW reserves the right to change specification without notice  
 All design using this data should be carried out by a qualified structural engineer,  
 subject to relevant National and European standards or regulations

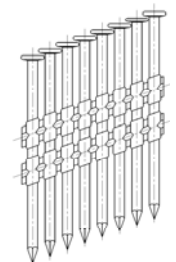
Issue date 08.03.2011 © ITW



**CE**  
EN14592

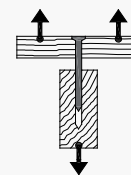
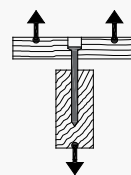


**Ü**  
DIN1052  
VHT 3.4-2/17  
Klasse 3C



### CHARACTERISTIC PARAMETERS FOR CALCULATION TO EUROCODE 5

Head pull-through $f_{head,k}$ [N/mm <sup>2</sup> ]	Withdrawal $f_{ax,k}$ [N/mm <sup>2</sup> ]	Yield moment $M_{y,k}$ [Nmm]
15.26	7.24	4441



Minimum embedment in base member: 21mm (lateral load)  
 Minimum embedment in base member: 28mm (axial load)

See Datasheet Appendix for guidance on spacing etc.. and Eurocode 5 for complete rules on timber member dimensions etc..

- To obtain characteristic head pull-through capacity multiply factor by  $d_h^2$
- For withdrawal capacity multiply factor by base material embedment and fastener nominal diameter
- Values based on characteristic wood density of 350kg/m<sup>3</sup>





Nail type: **3.4mm diameter ring shank**  
 Finish: **Electro-galvanised 5µm**  
 Collation: **21° plastic strip**

Collation: thermoplastic strip


Suitable for these tools:-

DuoFast DFSN100.1, CN350B, DF90S

Haubold RN130

Nail lengths\*: 90 to 130mm

Nails per strip: 28

For fixing timber, OSB or plywood to timber 

### CORROSION PROTECTION

Label colour on packaging	Eurocode 5 service class	Finish
	Service Class 1 Indoor use 	Electro-galvanised $\geq 5\mu\text{m}$

Eurocode 5 only details minimum protection, it does not consider local environmental conditions, we recommend that you refer to ISO12944 part 2 to determine the appropriate corrosion protection. See appendix for details.

### NAIL PROPERTIES / DIMENSIONS

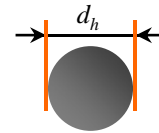
- Tensile strength of wire: min 700 N/mm<sup>2</sup>
- Shank diameter ( $d_s$ )\*: 3.4mm
- Profile diameter ( $d_p$ ): 3.6mm
- Head diameter ( $d_h$ )\*: 8.2mm
- Standard nail lengths\* ( $l$ ) / Profiled length\* ( $l_g$ );-  

$l$ (mm)	90	100	130
$l_g$ (mm)	75	75	75
- Standard point: diamond
- Point length  $l_p$ : 3.7mm

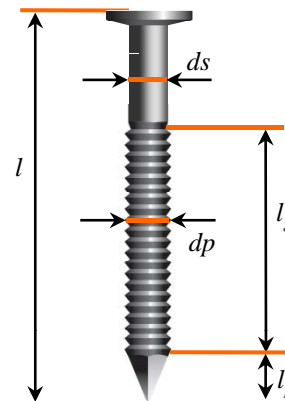
- Tolerances according to EN14592 for nail length, nail diameter and head diameter
- See tool manuals for min and max nail lengths

Haubold is a brand of the ITW Group  
 ITW reserves the right to change specification without notice  
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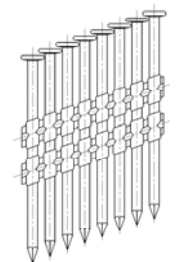
Issue date 08.03.2011 © ITW



**CE**  
EN14592

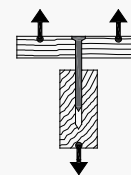
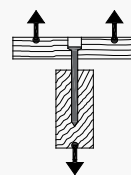


**Ü**  
DIN1052  
VHT 3.4-2/18  
Klasse 3C



### CHARACTERISTIC PARAMETERS FOR CALCULATION TO EUROCODE 5

Head pull-through $f_{head,k}$ [N/mm <sup>2</sup> ]	Withdrawal $f_{ax,k}$ [N/mm <sup>2</sup> ]	Yield moment $M_{y,k}$ [Nmm]
15.26	8.74	4441



Minimum embedment in base member: 21mm (lateral load)  
 Minimum embedment in base member: 28mm (axial load)

See Datasheet Appendix for guidance on spacing etc.. and Eurocode 5 for complete rules on timber member dimensions etc..

- To obtain characteristic head pull-through capacity multiply factor by  $d_h^2$
- For withdrawal capacity multiply factor by base material embedment and fastener nominal diameter
- Values based on characteristic wood density of 350kg/m<sup>3</sup>



Nail type: **3.8mm diameter ring shank**  
 Finish: **Bright**  
 Collation: **21° plastic strip**

Collation: thermoplastic strip

Suitable for these tools:-

Haubold RN130, RN160

Nail lengths\*: 100 to 130mm

Nails per strip: 28

For fixing timber, OSB or plywood to timber 

### CORROSION PROTECTION

Label colour on packaging	Eurocode 5 service class	Finish
	Service Class 1 Indoor use 	Bright (no protection)

Eurocode 5 only details minimum protection, it does not consider local environmental conditions, we recommend that you refer to ISO12944 part 2 to determine the appropriate corrosion protection. See appendix for details.

### NAIL PROPERTIES / DIMENSIONS

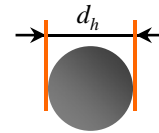
- Tensile strength of wire: min 700 N/mm<sup>2</sup>
- Shank diameter ( $d_s$ ): 3.8mm
- Profile diameter ( $d_p$ ): 4.1mm
- Head diameter ( $d_h$ ): 8.2mm
- Standard nail lengths\* ( $l$ ) / Profiled length\* ( $l_g$ ); -  

$l$ (mm)	100	120	130
$l_g$ (mm)	75	75	75
- Standard point: diamond
- Point length  $l_p$ : 4.2mm

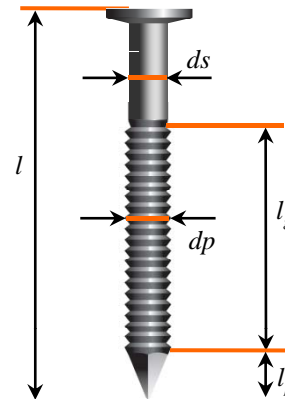
- Tolerances according to EN14592 for nail length, nail diameter and head diameter
- See tool manuals for min and max nail lengths

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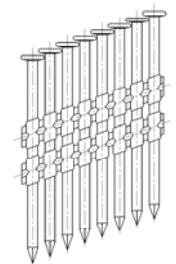
Issue date 08.03.2011 © ITW



**CE**  
EN14592

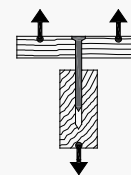
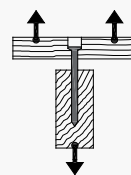


**Ü**  
DIN1052  
VHT 3.4-2/19  
Klasse 3C



### CHARACTERISTIC PARAMETERS FOR CALCULATION TO EUROCODE 5

Head pull-through $f_{head,k}$ [N/mm <sup>2</sup> ]	Withdrawal $f_{ax,k}$ [N/mm <sup>2</sup> ]	Yield moment $M_{y,k}$ [Nmm]
15.08	7.2	6541



Minimum embedment in base member: 23mm (lateral load)  
 Minimum embedment in base member: 30mm (axial load)

See Datasheet Appendix for guidance on spacing etc.. and Eurocode 5 for complete rules on timber member dimensions etc..

- To obtain characteristic head pull-through capacity multiply factor by  $d_h^2$
- For withdrawal capacity multiply factor by base material embedment and fastener nominal diameter
- Values based on characteristic wood density of 350kg/m<sup>3</sup>



Nail type: **3.8mm diameter ring shank**  
 Finish: **Electro-galvanised 5µm**  
 Collation: **21° plastic strip**


Collation: thermoplastic strip

Suitable for these tools:-

Haubold RN130, RN160

Nail lengths\*: 100 to 130mm

Nails per strip: 28

For fixing timber, OSB or plywood to timber 

### CORROSION PROTECTION

Label colour on packaging	Eurocode 5 service class	Finish
	Service Class 1 Indoor use 	Electro-galvanised $\geq 5\mu\text{m}$

Eurocode 5 only details minimum protection, it does not consider local environmental conditions, we recommend that you refer to ISO12944 part 2 to determine the appropriate corrosion protection. See appendix for details.

### NAIL PROPERTIES / DIMENSIONS

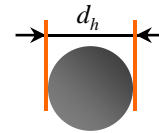
- Tensile strength of wire: min 700 N/mm<sup>2</sup>
- Shank diameter ( $d_s$ ): 3.8mm
- Profile diameter ( $d_p$ ): 4.1mm
- Head diameter ( $d_h$ ): 8.2mm
- Standard nail lengths\* ( $l$ ) / Profiled length\* ( $l_g$ ); -  

$l$ (mm)	100	120	130
$l_g$ (mm)	75	75	75
- Standard point: diamond
- Point length  $l_p$ : 4.2mm

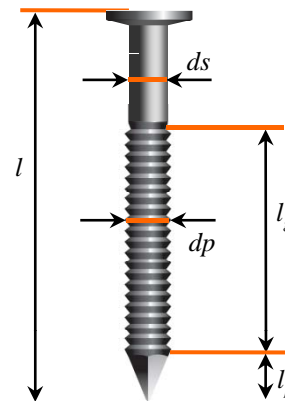
- Tolerances according to EN14592 for nail length, nail diameter and head diameter
- See tool manuals for min and max nail lengths

Haubold is a brand of the ITW Group  
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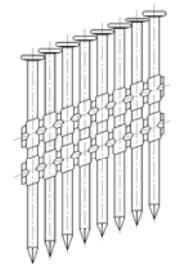
Issue date 08.03.2011 © ITW



**CE**  
EN14592

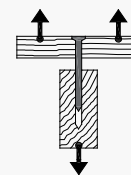
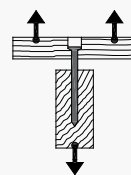


**Ü**  
DIN1052  
VHT 3.4-2/20  
Klasse 3C



### CHARACTERISTIC PARAMETERS FOR CALCULATION TO EUROCODE 5

Head pull-through $f_{head,k}$ [N/mm <sup>2</sup> ]	Withdrawal $f_{ax,k}$ [N/mm <sup>2</sup> ]	Yield moment $M_{y,k}$ [Nmm]
15.08	7.51	6541



Minimum embedment in base member: 23mm (lateral load)  
 Minimum embedment in base member: 30mm (axial load)

See Datasheet Appendix for guidance on spacing etc.. and Eurocode 5 for complete rules on timber member dimensions etc..


- To obtain characteristic head pull-through capacity multiply factor by  $d_h^2$
- For withdrawal capacity multiply factor by base material embedment and fastener nominal diameter
- Values based on characteristic wood density of 350kg/m<sup>3</sup>





Nail type: 4.2mm diameter ring shank  
 Finish: **Bright**  
 Collation: 21° plastic strip

Collation: thermoplastic strip  
**Suitable for these tools:-**  
 Haubold RN160

Nail lengths\*: 100 to 160mm  
 Nails per strip: 22

For fixing timber, OSB or plywood to timber 

### CORROSION PROTECTION

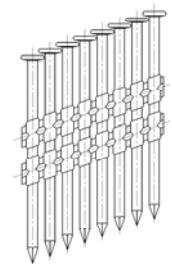
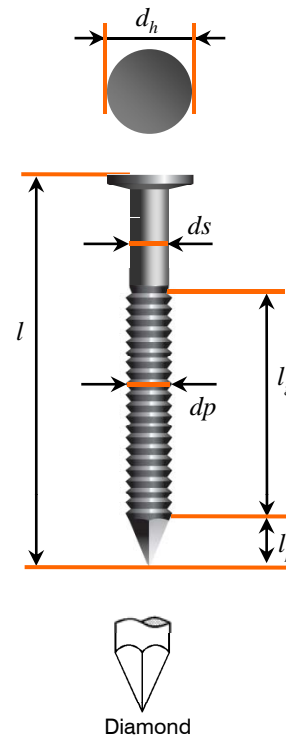
Label colour on packaging	Eurocode 5 service class	Finish
	Service Class 2 Protected Outdoor 	Bright (no protection)

Eurocode 5 only details minimum protection, it does not consider local environmental conditions, we recommend that you refer to ISO12944 part 2 to determine the appropriate corrosion protection. See appendix for details.

### NAIL PROPERTIES / DIMENSIONS

- Tensile strength of wire: min 700 N/mm<sup>2</sup>
  - Shank diameter ( $d_s$ ): 4.2mm
  - Profile diameter ( $d_p$ ): 4.5mm
  - Head diameter ( $d_h$ ): 8.3mm
  - Standard nail lengths\* ( $l$ ) / Profiled length\* ( $l_g$ ); -
- |            |     |     |     |     |
|------------|-----|-----|-----|-----|
| $l$ (mm)   | 120 | 130 | 145 | 160 |
| $l_g$ (mm) | 75  | 75  | 75  | 75  |
- Standard point: diamond
  - Point length  $l_p$ : 4.6mm

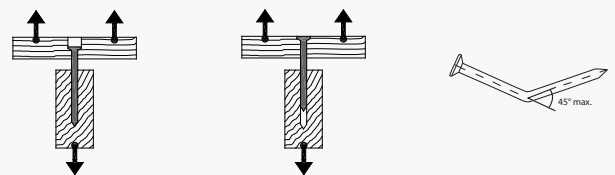
- Tolerances according to EN14592 for nail length, nail diameter and head diameter
- See tool manuals for min and max nail lengths



### CHARACTERISTIC PARAMETERS FOR CALCULATION TO EUROCODE 5

Head pull-through $f_{head,k}$ [N/mm <sup>2</sup> ]	Withdrawal $f_{ax,k}$ [N/mm <sup>2</sup> ]	Yield moment $M_{y,k}$ [Nmm]
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Please contact us for latest performance data



Minimum embedment in base member: 26mm (lateral load)  
 Minimum embedment in base member: 34mm (axial load)

See Datasheet Appendix for guidance on spacing etc.. and Eurocode 5 for complete rules on timber member dimensions etc..


- To obtain characteristic head pull-through capacity multiply factor by  $d_h^2$
- For withdrawal capacity multiply factor by base material embedment and fastener nominal diameter
- Values based on characteristic wood density of 350kg/m<sup>3</sup>



Nail type: **4.2mm diameter ring shank**  
 Finish: **Electro-galvanised 5µm**  
 Collation: **21° plastic strip**

Collation: thermoplastic strip  
**Suitable for these tools:-**  
**Haubold RN160**

Nail lengths\*: 100 to 160mm  
 Nails per strip: 22

For fixing timber, OSB or plywood to timber 

### CORROSION PROTECTION

Label colour on packaging	Eurocode 5 service class	Finish
	Service Class 2 Protected Outdoor 	Electro-galvanised ≥ 5µm

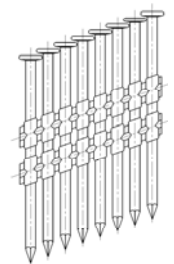
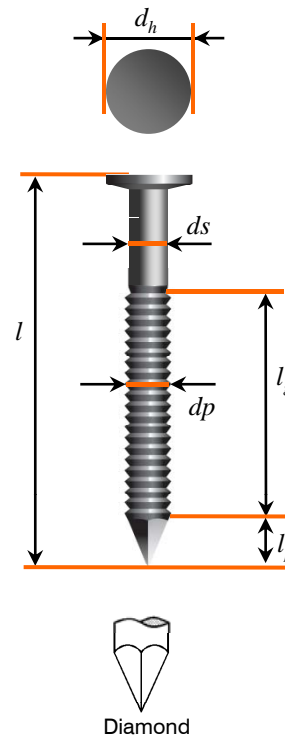
Eurocode 5 only details minimum protection, it does not consider local environmental conditions, we recommend that you refer to ISO12944 part 2 to determine the appropriate corrosion protection. See appendix for details.

### NAIL PROPERTIES / DIMENSIONS

- Tensile strength of wire: min 700 N/mm<sup>2</sup>
- Shank diameter ( $d_s$ ): 4.2mm
- Profile diameter ( $d_p$ ): 4.5mm
- Head diameter ( $d_h$ ): 8.3mm
- Standard nail lengths\* ( $l$ ) / Profiled length\* ( $l_g$ ); -  

$l$ (mm)	120	130	145	160
$l_g$ (mm)	75	75	75	75
- Standard point: diamond
- Point length  $l_p$ : 4.6mm

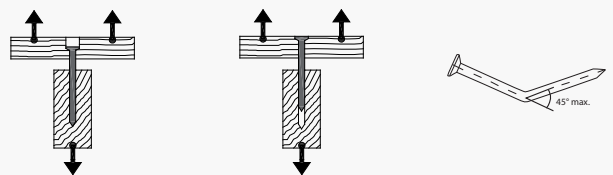
- Tolerances according to EN14592 for nail length, nail diameter and head diameter
- See tool manuals for min and max nail lengths



### CHARACTERISTIC PARAMETERS FOR CALCULATION TO EUROCODE 5

Head pull-through $f_{head,k}$ [N/mm <sup>2</sup> ]	Withdrawal $f_{ax,k}$ [N/mm <sup>2</sup> ]	Yield moment $M_{y,k}$ [Nmm]
--	---	---------------------------------

Please contact us for latest performance data



Minimum embedment in base member: 26mm (lateral load)  
 Minimum embedment in base member: 34mm (axial load)

See Datasheet Appendix for guidance on spacing etc.. and Eurocode 5 for complete rules on timber member dimensions etc..

- To obtain characteristic head pull-through capacity multiply factor by  $d_h^2$
- For withdrawal capacity multiply factor by base material embedment and fastener nominal diameter
- Values based on characteristic wood density of 350kg/m<sup>3</sup>



Nail type: **4.6mm diameter ring shank**  
 Finish: **Bright**  
 Collation: **21° plastic strip**

Collation: thermoplastic strip  
**Suitable for these tools:-**  
 Haubold RN160, RN220

Nail lengths\*: 145 to 220mm  
 Nails per strip: 22

For fixing timber, OSB or plywood to timber 

### CORROSION PROTECTION

Label colour on packaging	Eurocode 5 service class	Finish
	Service Class 2 Protected Outdoor 	Bright (no protection)

Eurocode 5 only details minimum protection, it does not consider local environmental conditions, we recommend that you refer to ISO12944 part 2 to determine the appropriate corrosion protection. See appendix for details.

### NAIL PROPERTIES / DIMENSIONS

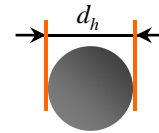
- Tensile strength of wire: min 700 N/mm<sup>2</sup>
- Shank diameter ( $d_s$ )\*: 4.6mm
- Profile diameter ( $d_p$ ): 4.9mm
- Head diameter ( $d_h$ )\*: 9.2mm
- Standard nail lengths\* ( $l$ ) / Profiled length\* ( $l_g$ ); -  

$l$ (mm)	145	160
$l_g$ (mm)	75	75
- Standard point: diamond
- Point length  $l_p$ : 5.1mm

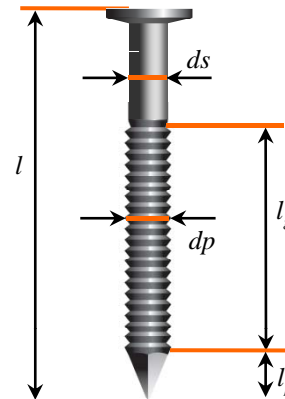
- Tolerances according to EN14592 for nail length, nail diameter and head diameter
- See tool manuals for min and max nail lengths

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 ITW reserves the right to change specification without notice  
 All design using this data should be carried out by a qualified structural engineer,  
 subject to relevant National and European standards or regulations

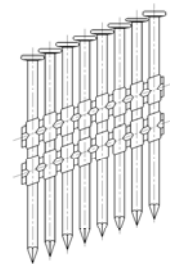
Issue date 08.03.2011 © ITW



**CE**  
 EN14592

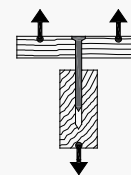
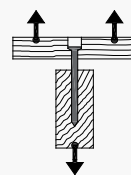


**Ü**  
 DIN1052  
 VHT 3.4-2/278  
 Klasse 3C



### CHARACTERISTIC PARAMETERS FOR CALCULATION TO EUROCODE 5

Head pull-through $f_{head,k}$ [N/mm <sup>2</sup> ]	Withdrawal $f_{ax,k}$ [N/mm <sup>2</sup> ]	Yield moment $M_{y,k}$ [Nmm]
17.91	9.19	8882



Minimum embedment in base member: 28mm (lateral load)  
 Minimum embedment in base member: 37mm (axial load)

See Datasheet Appendix for guidance on spacing etc.. and Eurocode 5 for complete rules on timber member dimensions etc..


- To obtain characteristic head pull-through capacity multiply factor by  $d_h^2$
- For withdrawal capacity multiply factor by base material embedment and fastener nominal diameter
- Values based on characteristic wood density of 350kg/m<sup>3</sup>



Nail type: **4.6mm diameter ring shank**  
 Finish: **Electro-galvanised 5µm**  
 Collation: **21° plastic strip**

Collation: thermoplastic strip  
**Suitable for these tools:-**  
 Haubold RN160, RN220

Nail lengths\*: 145 to 220mm  
 Nails per strip: 22

For fixing timber, OSB or plywood to timber 

### CORROSION PROTECTION

Label colour on packaging	Eurocode 5 service class	Finish
	Service Class 2 Protected Outdoor 	Electro-galvanised ≥ 5µm

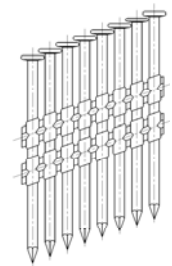
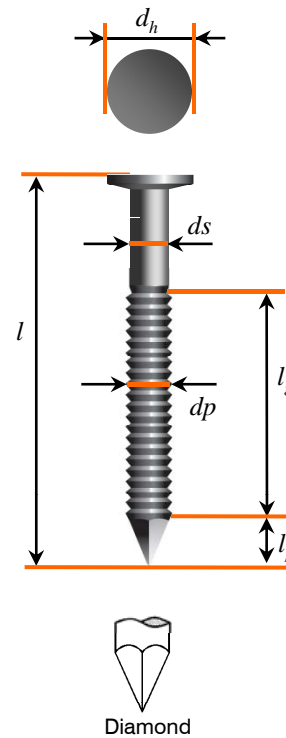
Eurocode 5 only details minimum protection, it does not consider local environmental conditions, we recommend that you refer to ISO12944 part 2 to determine the appropriate corrosion protection. See appendix for details.

### NAIL PROPERTIES / DIMENSIONS

- Tensile strength of wire: min 700 N/mm<sup>2</sup>
- Shank diameter ( $d_s$ )\*: 4.6mm
- Profile diameter ( $d_p$ ): 4.9mm
- Head diameter ( $d_h$ )\*: 9.2mm
- Standard nail lengths\* ( $l$ ) / Profiled length\* ( $l_g$ );-  

$l$ (mm)	145	160
$l_g$ (mm)	75	75
- Standard point: diamond
- Point length  $l_p$ : 5.1mm

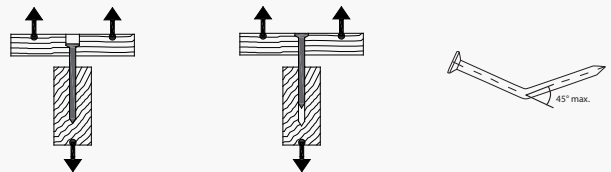
- Tolerances according to EN14592 for nail length, nail diameter and head diameter
- See tool manuals for min and max nail lengths



### CHARACTERISTIC PARAMETERS FOR CALCULATION TO EUROCODE 5

Head pull-through $f_{head,k}$ [N/mm <sup>2</sup> ]	Withdrawal $f_{ax,k}$ [N/mm <sup>2</sup> ]	Yield moment $M_{y,k}$ [Nmm]
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Please contact us for latest performance data



Minimum embedment in base member: 28mm (lateral load)  
 Minimum embedment in base member: 37mm (axial load)

See Datasheet Appendix for guidance on spacing etc.. and Eurocode 5 for complete rules on timber member dimensions etc..


- To obtain characteristic head pull-through capacity multiply factor by  $d_h^2$
- For withdrawal capacity multiply factor by base material embedment and fastener nominal diameter
- Values based on characteristic wood density of 350kg/m<sup>3</sup>



Nail type: **5.0mm diameter ring shank**  
 Finish: **Bright**  
 Collation: **21° plastic strip**

Collation: thermoplastic strip  
**Suitable for these tools:-**  
 Haubold RN160, RN220

Nail lengths\*: 145 to 220mm  
 Nails per strip: 22

For fixing timber, OSB or plywood to timber 

### CORROSION PROTECTION

Label colour on packaging	Eurocode 5 service class	Finish
	Service Class 2 Protected Outdoor 	Bright (no protection)

Eurocode 5 only details minimum protection, it does not consider local environmental conditions, we recommend that you refer to ISO12944 part 2 to determine the appropriate corrosion protection. See appendix for details.

### NAIL PROPERTIES / DIMENSIONS

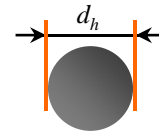
- Tensile strength of wire: min 700 N/mm<sup>2</sup>
- Shank diameter ( $d_s$ ): 5.0mm
- Profile diameter ( $d_p$ ): 5.3mm
- Head diameter ( $d_h$ ): 9.2mm
- Standard nail lengths\* ( $l$ ) / Profiled length\* ( $l_g$ ); -  

$l$ (mm)	160	180	200	220
$l_g$ (mm)	75	75	75	75
- Standard point: diamond
- Point length  $l_p$ : 5.5mm

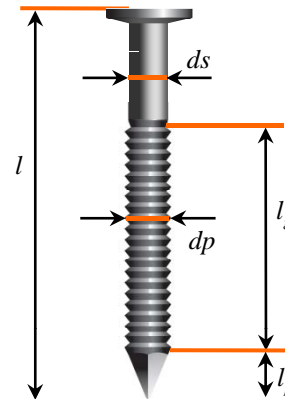
- Tolerances according to EN14592 for nail length, nail diameter and head diameter
- See tool manuals for min and max nail lengths

Haubold is a brand of the ITW Group  
 ITW reserves the right to change specification without notice  
 All design using this data should be carried out by a qualified structural engineer,  
 subject to relevant National and European standards or regulations

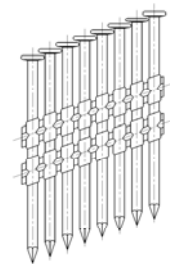
Issue date 08.03.2011 © ITW



**CE**  
 EN14592

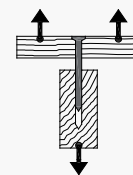
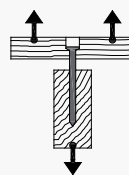


**Ü**  
 DIN1052  
 VHT 3.4-2/279  
 Klasse 3C



### CHARACTERISTIC PARAMETERS FOR CALCULATION TO EUROCODE 5

Head pull-through $f_{head,k}$ [N/mm <sup>2</sup> ]	Withdrawal $f_{ax,k}$ [N/mm <sup>2</sup> ]	Yield moment $M_{y,k}$ [Nmm]
16.01	12.65	14098



Minimum embedment in base member: 30mm (lateral load)  
 Minimum embedment in base member: 40mm (axial load)

See Datasheet Appendix for guidance on spacing etc.. and Eurocode 5 for complete rules on timber member dimensions etc..

- To obtain characteristic head pull-through capacity multiply factor by  $d_h^2$
- For withdrawal capacity multiply factor by base material embedment and fastener nominal diameter
- Values based on characteristic wood density of 350kg/m<sup>3</sup>






Nail type: 5.0mm diameter ring shank  
 Finish: Electro-galvanised 12µm  
 Collation: 21° plastic strip

Collation: thermoplastic strip  
 Suitable for these tools:-  
 Haubold RN160, RN220

Nail lengths\*: 145 to 220mm  
 Nails per strip: 22

For fixing timber, OSB or plywood to timber 

### CORROSION PROTECTION

Label colour on packaging	Eurocode 5 service class	Finish
	Service Class 2 Protected Outdoor	Electro-galvanised ≥ 12µm

Eurocode 5 only details minimum protection, it does not consider local environmental conditions, we recommend that you refer to ISO12944 part 2 to determine the appropriate corrosion protection. See appendix for details.

### NAIL PROPERTIES / DIMENSIONS

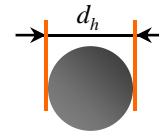
- Tensile strength of wire: min 700 N/mm<sup>2</sup>
- Shank diameter ( $d_s$ ): 5.0mm
- Profile diameter ( $d_p$ ): 5.3mm
- Head diameter ( $d_h$ ): 9.2mm
- Standard nail lengths\* ( $l$ ) / Profiled length\* ( $l_g$ ); -  

$l$ (mm)	160	180	200	220
$l_g$ (mm)	75	75	75	75
- Standard point: diamond
- Point length  $l_p$ : 5.5mm

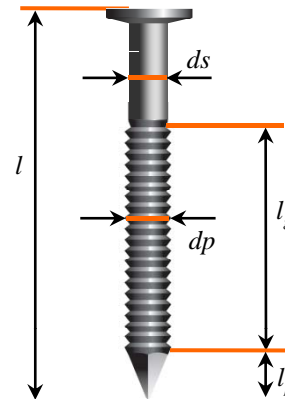
- Tolerances according to EN14592 for nail length, nail diameter and head diameter
- See tool manuals for min and max nail lengths

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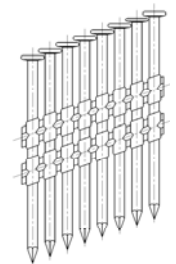
CE  
 EN14592



U  
 DIN1052  
 VHT 3.4-2/280  
 Klasse 3C

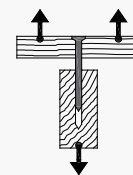
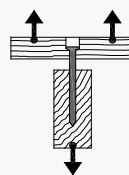


Diamond



### CHARACTERISTIC PARAMETERS FOR CALCULATION TO EUROCODE 5

Head pull-through $f_{head,k}$ [N/mm <sup>2</sup> ]	Withdrawal $f_{ax,k}$ [N/mm <sup>2</sup> ]	Yield moment $M_{y,k}$ [Nmm]
16.01	11.28	14098



Minimum embedment in base member: 30mm (lateral load)  
 Minimum embedment in base member: 40mm (axial load)

See Datasheet Appendix for guidance on spacing etc.. and Eurocode 5 for complete rules on timber member dimensions etc..

- To obtain characteristic head pull-through capacity multiply factor by  $d_h^2$
- For withdrawal capacity multiply factor by base material embedment and fastener nominal diameter
- Values based on characteristic wood density of 350kg/m<sup>3</sup>