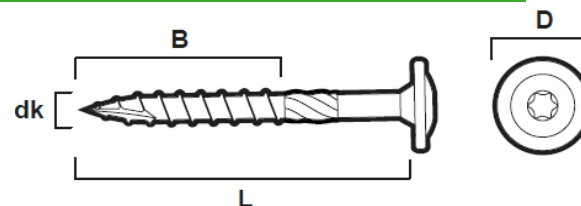


# LOAD CAPACITY

Wood screw WAF 5,0 - 10,0 mm. CorrSeal surface treatment

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## Conditions for tabulated load capacity

The tabulated values are calculated in accordance with Eurocode 5 (EN 1995-1-1:2004 incl. AC:2006, A1:2008 and A2:2014). The calculation assumes that the entire threaded part B is screwed into the underlying timber part and that it has at minimum the same thickness, i.e.  $t_2 \geq B$ . Furthermore it is assumed the two timber parts are made of the same timber quality class (e.g. C24). If the screw is subjected to both axial and shear load the total load capacity must be verified. The tabulated loads are for one screw, if more screws are used a reduction may be needed depending on spacing. The final design should consider edge and spacing distances.

## Recommended load

The recommended load given in unit [kg] can be applied directly since all safety factors have been considered incl. a factor on the applied load ( $\gamma = 1.4$ ). It is calculated for a permanent load and service class 3 (acc. to Eurocode 5), e.g. a location directly exposed to rain.

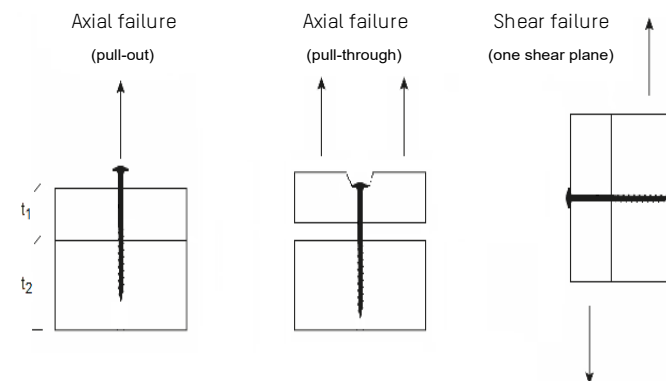
## Characteristic resistance

The characteristic resistance given in unit [kN] is intended for an engineer that wants to do a detailed analysis of the timber connection using the appropriate partial coefficients for design resistance based on load duration and service class in accordance with Eurocode 5 eq. (2.17):

$$R_d = k_{mod} \frac{R_k}{\gamma_M}$$

*All information in this document is given in accordance with known facts and information at the time of writing. The information is subject to change without further notification. The document is updated continuously in conjunction with regular revision or in the event of major-specific technical changes.*

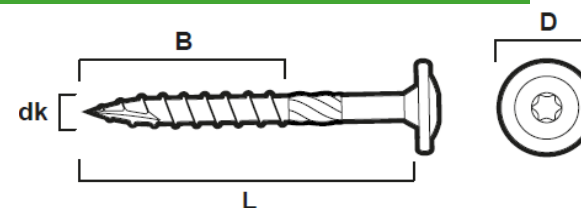
*All advice given by ESSVE should only be seen as guidance and does not mean that ESSVE can be held responsible for the advice provided. It is always the customer's own responsibility to decide on the choice of product, usage, application, etc. The supplier's advice is only a part of the customer's basis for decision making.*



# LOAD CAPACITY

Wood screw WAF 5,0 - 10,0 mm. CorrSeal surface treatment

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## Recommended load

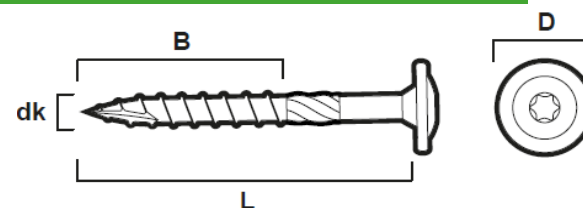
Intended for craftsmen

| Art. No. | CE-marking<br>EN 14592 | Dimension<br><br>dk × L<br>[mm] | Thread length<br><br>B<br>[mm] | Inner thread<br>diameter<br><br>d <sub>1</sub><br>[mm] | Head diameter<br><br>D<br>[mm] | Timber tickness<br>at screw head<br><br>t <sub>1</sub><br>[mm] | Timber tickness<br>at screw tip<br><br>t <sub>2</sub><br>[mm] | Axial direction<br>(pull-out/-through)<br><br>F <sub>ax,rec</sub><br>[kg] |     | Shear direction<br>(one shear plane)<br><br>F <sub>v,rec</sub><br>[kg] |     |
|----------|------------------------|---------------------------------|--------------------------------|--------------------------------------------------------|--------------------------------|----------------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------------------|-----|------------------------------------------------------------------------|-----|
|          |                        |                                 |                                |                                                        |                                |                                                                |                                                               | C14                                                                       | C24 | C14                                                                    | C24 |
| 113 192  | -                      | 5.0 × 30                        | 16                             | 3.0                                                    | 12                             | 14                                                             | 16                                                            | 30                                                                        | 35  | 15                                                                     | 20  |
| 113 194  | ✓                      | 5.0 × 40                        | 24                             | 3.0                                                    | 12                             | 16                                                             | 24                                                            | 45                                                                        | 55  | 20                                                                     | 25  |
| 113 196  | ✓                      | 5.0 × 50                        | 30                             | 3.0                                                    | 12                             | 20                                                             | 30                                                            | 55                                                                        | 65  | 30                                                                     | 35  |
| 113 198  | ✓                      | 5.0 × 60                        | 36                             | 3.0                                                    | 12                             | 24                                                             | 36                                                            | 70                                                                        | 80  | 35                                                                     | 40  |
| 113 200  | ✓                      | 5.0 × 70                        | 42                             | 3.0                                                    | 12                             | 28                                                             | 42                                                            | 80                                                                        | 95  | 40                                                                     | 45  |

# LOAD CAPACITY

Wood screw WAF 5,0 - 10,0 mm. CorrSeal surface treatment

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## Recommended load

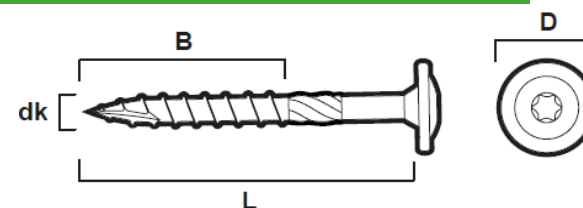
Intended for craftsmen

| Art. No. | CE-marking<br>EN 14592 | Dimension<br><br>dk × L<br>[mm] | Thread length<br><br>B<br>[mm] | Inner thread<br>diameter<br><br>d <sub>1</sub><br>[mm] | Head diameter<br><br>D<br>[mm] | Timber tickness<br>at screw head<br><br>t <sub>1</sub><br>[mm] | Timber tickness<br>at screw tip<br><br>t <sub>2</sub><br>[mm] | Axial direction<br>(pull-out/-through)<br><br>F <sub>ax,rec</sub><br>[kg] |     | Shear direction<br>(one shear plane)<br><br>F <sub>v,rec</sub><br>[kg] |     |
|----------|------------------------|---------------------------------|--------------------------------|--------------------------------------------------------|--------------------------------|----------------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------------------|-----|------------------------------------------------------------------------|-----|
|          |                        |                                 |                                |                                                        |                                |                                                                |                                                               | C14                                                                       | C24 | C14                                                                    | C24 |
| 113 100  | ✓                      | 6.0 × 40                        | 35                             | 3.8                                                    | 14                             | 5                                                              | 35                                                            | 70                                                                        | 80  | 5                                                                      | 10  |
| 113 102  | ✓                      | 6.0 × 50                        | 45                             | 3.8                                                    | 14                             | 5                                                              | 45                                                            | 90                                                                        | 105 | 5                                                                      | 10  |
| 113 104  | ✓                      | 6.0 × 60                        | 50                             | 3.8                                                    | 14                             | 10                                                             | 50                                                            | 100                                                                       | 115 | 15                                                                     | 20  |
| 113 106  | ✓                      | 6.0 × 70                        | 50                             | 3.8                                                    | 14                             | 20                                                             | 50                                                            | 100                                                                       | 115 | 35                                                                     | 40  |
| 113 108  | ✓                      | 6.0 × 80                        | 50                             | 3.8                                                    | 14                             | 30                                                             | 50                                                            | 100                                                                       | 115 | 50                                                                     | 60  |
| 113 110  | ✓                      | 6.0 × 90                        | 50                             | 3.8                                                    | 14                             | 40                                                             | 50                                                            | 100                                                                       | 115 | 55                                                                     | 65  |
| 113 112  | ✓                      | 6.0 × 100                       | 50                             | 3.8                                                    | 14                             | 50                                                             | 50                                                            | 100                                                                       | 115 | 60                                                                     | 70  |
| 113 114  | ✓                      | 6.0 × 120                       | 70                             | 3.8                                                    | 14                             | 50                                                             | 70                                                            | 105                                                                       | 125 | 60                                                                     | 70  |
| 113 116  | ✓                      | 6.0 × 140                       | 70                             | 3.8                                                    | 14                             | 70                                                             | 70                                                            | 105                                                                       | 125 | 60                                                                     | 70  |
| 113 118  | ✓                      | 6.0 × 160                       | 80                             | 3.8                                                    | 14                             | 80                                                             | 80                                                            | 105                                                                       | 125 | 60                                                                     | 70  |
| 113 120  | ✓                      | 6.0 × 180                       | 80                             | 3.8                                                    | 14                             | 100                                                            | 80                                                            | 105                                                                       | 125 | 60                                                                     | 70  |
| 113 122  | ✓                      | 6.0 × 200                       | 80                             | 3.8                                                    | 14                             | 120                                                            | 80                                                            | 105                                                                       | 125 | 60                                                                     | 70  |
| 113 124  | ✓                      | 6.0 × 220                       | 80                             | 3.8                                                    | 14                             | 140                                                            | 80                                                            | 105                                                                       | 125 | 60                                                                     | 70  |

# LOAD CAPACITY

Wood screw WAF 5,0 - 10,0 mm. CorrSeal surface treatment

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## Recommended load

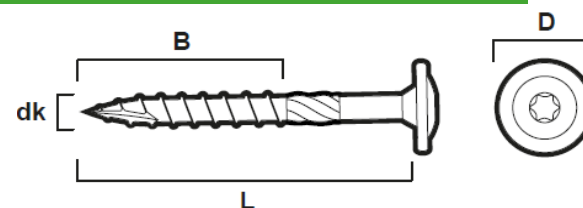
Intended for craftsmen

| Art. No. | CE-marking<br>EN 14592 | Dimension<br><br>dk × L<br>[mm] | Thread length<br><br>B<br>[mm] | Inner thread<br>diameter<br><br>d <sub>1</sub><br>[mm] | Head diameter<br><br>D<br>[mm] | Timber tickness<br>at screw head<br><br>t <sub>1</sub><br>[mm] | Timber tickness<br>at screw tip<br><br>t <sub>2</sub><br>[mm] | Axial direction<br>(pull-out/-through)<br><br>F <sub>ax,rec</sub><br>[kg] |     | Shear direction<br>(one shear plane)<br><br>F <sub>v,rec</sub><br>[kg] |     |
|----------|------------------------|---------------------------------|--------------------------------|--------------------------------------------------------|--------------------------------|----------------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------------------|-----|------------------------------------------------------------------------|-----|
|          |                        |                                 |                                |                                                        |                                |                                                                |                                                               | C14                                                                       | C24 | C14                                                                    | C24 |
| 113 125  | ✓                      | 8.0 × 40                        | 35                             | 5.3                                                    | 22                             | 5                                                              | 35                                                            | 85                                                                        | 100 | 10                                                                     | 10  |
| 113 126  | ✓                      | 8.0 × 50                        | 45                             | 5.3                                                    | 22                             | 5                                                              | 45                                                            | 110                                                                       | 125 | 10                                                                     | 10  |
| 113 128  | ✓                      | 8.0 × 60                        | 50                             | 5.3                                                    | 22                             | 10                                                             | 50                                                            | 120                                                                       | 140 | 20                                                                     | 25  |
| 113 130  | ✓                      | 8.0 × 70                        | 50                             | 5.3                                                    | 22                             | 20                                                             | 50                                                            | 120                                                                       | 140 | 45                                                                     | 55  |
| 113 132  | ✓                      | 8.0 × 80                        | 50                             | 5.3                                                    | 22                             | 30                                                             | 50                                                            | 120                                                                       | 140 | 65                                                                     | 80  |
| 113 134  | ✓                      | 8.0 × 90                        | 50                             | 5.3                                                    | 22                             | 40                                                             | 50                                                            | 120                                                                       | 140 | 70                                                                     | 85  |
| 113 136  | ✓                      | 8.0 × 100                       | 50                             | 5.3                                                    | 22                             | 50                                                             | 50                                                            | 120                                                                       | 140 | 75                                                                     | 90  |
| 113 138  | ✓                      | 8.0 × 120                       | 70                             | 5.3                                                    | 22                             | 50                                                             | 70                                                            | 170                                                                       | 200 | 95                                                                     | 110 |
| 113 140  | ✓                      | 8.0 × 150                       | 80                             | 5.3                                                    | 22                             | 70                                                             | 80                                                            | 195                                                                       | 225 | 110                                                                    | 125 |
| 113 142  | ✓                      | 8.0 × 170                       | 80                             | 5.3                                                    | 22                             | 90                                                             | 80                                                            | 195                                                                       | 225 | 110                                                                    | 125 |
| 113 144  | ✓                      | 8.0 × 200                       | 80                             | 5.3                                                    | 22                             | 120                                                            | 80                                                            | 195                                                                       | 225 | 110                                                                    | 125 |
| 113 145  | ✓                      | 8.0 × 220                       | 80                             | 5.3                                                    | 22                             | 140                                                            | 80                                                            | 195                                                                       | 225 | 110                                                                    | 125 |
| 113 146  | ✓                      | 8.0 × 240                       | 80                             | 5.3                                                    | 22                             | 160                                                            | 80                                                            | 195                                                                       | 225 | 110                                                                    | 125 |
| 113 148  | ✓                      | 8.0 × 280                       | 80                             | 5.3                                                    | 22                             | 200                                                            | 80                                                            | 195                                                                       | 225 | 110                                                                    | 125 |
| 113 149  | ✓                      | 8.0 × 300                       | 80                             | 5.3                                                    | 22                             | 220                                                            | 80                                                            | 195                                                                       | 225 | 110                                                                    | 125 |
| 113 150  | ✓                      | 8.0 × 320                       | 80                             | 5.3                                                    | 22                             | 240                                                            | 80                                                            | 195                                                                       | 225 | 110                                                                    | 125 |

# LOAD CAPACITY

Wood screw WAF 5,0 - 10,0 mm. CorrSeal surface treatment

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## Recommended load

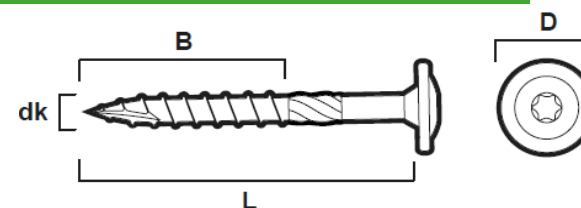
Intended for craftsmen

| Art. No. | CE-marking<br>EN 14592 | Dimension<br><br>dk × L<br>[mm] | Thread length<br><br>B<br>[mm] | Inner thread<br>diameter<br><br>d <sub>1</sub><br>[mm] | Head diameter<br><br>D<br>[mm] | Timber tickness<br>at screw head<br><br>t <sub>1</sub><br>[mm] | Timber tickness<br>at screw tip<br><br>t <sub>2</sub><br>[mm] | Axial direction<br>(pull-out/-through)<br><br>F <sub>ax,rec</sub><br>[kg] |     | Shear direction<br>(one shear plane)<br><br>F <sub>v,rec</sub><br>[kg] |     |
|----------|------------------------|---------------------------------|--------------------------------|--------------------------------------------------------|--------------------------------|----------------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------------------|-----|------------------------------------------------------------------------|-----|
|          |                        |                                 |                                |                                                        |                                |                                                                |                                                               | C14                                                                       | C24 | C14                                                                    | C24 |
| 113 176  | -                      | 10.0 × 40                       | 35                             | 6.3                                                    | 26                             | 5                                                              | 35                                                            | 115                                                                       | 135 | 10                                                                     | 15  |
| 113 178  | ✓                      | 10.0 × 50                       | 45                             | 6.3                                                    | 26                             | 5                                                              | 45                                                            | 150                                                                       | 175 | 10                                                                     | 15  |
| 113 180  | ✓                      | 10.0 × 60                       | 50                             | 6.3                                                    | 26                             | 10                                                             | 50                                                            | 165                                                                       | 190 | 25                                                                     | 35  |
| 113 182  | ✓                      | 10.0 × 70                       | 50                             | 6.3                                                    | 26                             | 20                                                             | 50                                                            | 165                                                                       | 190 | 55                                                                     | 70  |
| 113 156  | ✓                      | 10.0 × 80                       | 70                             | 6.3                                                    | 26                             | 10                                                             | 70                                                            | 230                                                                       | 270 | 25                                                                     | 35  |
| 113 158  | ✓                      | 10.0 × 100                      | 70                             | 6.3                                                    | 26                             | 30                                                             | 70                                                            | 230                                                                       | 270 | 85                                                                     | 105 |
| 113 160  | ✓                      | 10.0 × 120                      | 70                             | 6.3                                                    | 26                             | 50                                                             | 70                                                            | 230                                                                       | 270 | 135                                                                    | 155 |
| 113 162  | ✓                      | 10.0 × 140                      | 90                             | 6.3                                                    | 26                             | 50                                                             | 90                                                            | 300                                                                       | 350 | 145                                                                    | 175 |
| 113 164  | ✓                      | 10.0 × 160                      | 90                             | 6.3                                                    | 26                             | 70                                                             | 90                                                            | 300                                                                       | 350 | 170                                                                    | 195 |
| 113 168  | ✓                      | 10.0 × 180                      | 90                             | 6.3                                                    | 26                             | 90                                                             | 90                                                            | 300                                                                       | 350 | 180                                                                    | 200 |
| 113 170  | ✓                      | 10.0 × 200                      | 90                             | 6.3                                                    | 26                             | 110                                                            | 90                                                            | 300                                                                       | 350 | 180                                                                    | 200 |
| 113 172  | ✓                      | 10.0 × 220                      | 90                             | 6.3                                                    | 26                             | 130                                                            | 90                                                            | 300                                                                       | 350 | 180                                                                    | 200 |
| 113 174  | ✓                      | 10.0 × 240                      | 90                             | 6.3                                                    | 26                             | 150                                                            | 90                                                            | 300                                                                       | 350 | 180                                                                    | 200 |

# LOAD CAPACITY

Wood screw WAF 5,0 - 10,0 mm. CorrSeal surface treatment

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## Characteristic resistance

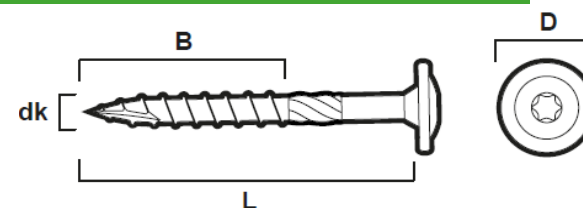
Intended for engineers

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|----------|------------------------|---------------------------------|--------------------------------|--------------------------------------------------------|--------------------------------|----------------------------------------------------------------|---------------------------------------------------------------|--------------------------------------------------------------------------|-----|-----------------------------------------------------------------------|-----|
|          |                        |                                 |                                |                                                        |                                |                                                                |                                                               | C14                                                                      | C24 | C14                                                                   | C24 |
| 113 192  | -                      | 5.0 × 30                        | 16                             | 3.0                                                    | 12                             | 14                                                             | 16                                                            | 1.1                                                                      | 1.3 | 0.6                                                                   | 0.7 |
| 113 194  | ✓                      | 5.0 × 40                        | 24                             | 3.0                                                    | 12                             | 16                                                             | 24                                                            | 1.7                                                                      | 2.0 | 0.9                                                                   | 1.1 |
| 113 196  | ✓                      | 5.0 × 50                        | 30                             | 3.0                                                    | 12                             | 20                                                             | 30                                                            | 2.1                                                                      | 2.5 | 1.1                                                                   | 1.3 |
| 113 198  | ✓                      | 5.0 × 60                        | 36                             | 3.0                                                    | 12                             | 24                                                             | 36                                                            | 2.6                                                                      | 3.0 | 1.3                                                                   | 1.5 |
| 113 200  | ✓                      | 5.0 × 70                        | 42                             | 3.0                                                    | 12                             | 28                                                             | 42                                                            | 3.0                                                                      | 3.5 | 1.5                                                                   | 1.7 |

# LOAD CAPACITY

Wood screw WAF 5,0 - 10,0 mm. CorrSeal surface treatment

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## Characteristic resistance

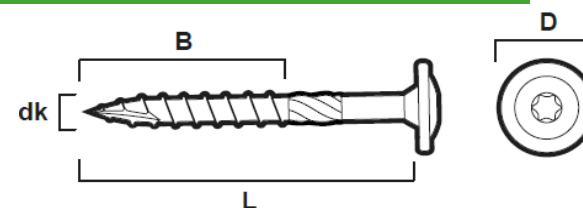
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| Art. No. | CE-marking<br>EN 14592 | Dimension<br><br>dk × L<br>[mm] | Thread length<br><br>B<br>[mm] | Inner thread<br>diameter<br><br>d <sub>1</sub><br>[mm] | Head diameter<br><br>D<br>[mm] | Timber tickness<br>at screw head<br><br>t <sub>1</sub><br>[mm] | Timber tickness<br>at screw tip<br><br>t <sub>2</sub><br>[mm] | Axial direction<br>(pull-out/-through)<br><br>F <sub>ax,Rk</sub><br>[kN] |     | Shear direction<br>(one shear plane)<br><br>F <sub>v,Rk</sub><br>[kN] |     |
|----------|------------------------|---------------------------------|--------------------------------|--------------------------------------------------------|--------------------------------|----------------------------------------------------------------|---------------------------------------------------------------|--------------------------------------------------------------------------|-----|-----------------------------------------------------------------------|-----|
|          |                        |                                 |                                |                                                        |                                |                                                                |                                                               | C14                                                                      | C24 | C14                                                                   | C24 |
| 113 100  | ✓                      | 6.0 × 40                        | 35                             | 3.8                                                    | 14.0                           | 5                                                              | 35                                                            | 2.5                                                                      | 2.9 | 0.3                                                                   | 0.4 |
| 113 102  | ✓                      | 6.0 × 50                        | 45                             | 3.8                                                    | 14.0                           | 5                                                              | 45                                                            | 3.2                                                                      | 3.8 | 0.3                                                                   | 0.4 |
| 113 104  | ✓                      | 6.0 × 60                        | 50                             | 3.8                                                    | 14.0                           | 10                                                             | 50                                                            | 3.6                                                                      | 4.2 | 0.6                                                                   | 0.8 |
| 113 106  | ✓                      | 6.0 × 70                        | 50                             | 3.8                                                    | 14.0                           | 20                                                             | 50                                                            | 3.6                                                                      | 4.2 | 1.3                                                                   | 1.6 |
| 113 108  | ✓                      | 6.0 × 80                        | 50                             | 3.8                                                    | 14.0                           | 30                                                             | 50                                                            | 3.6                                                                      | 4.2 | 1.9                                                                   | 2.2 |
| 113 110  | ✓                      | 6.0 × 90                        | 50                             | 3.8                                                    | 14.0                           | 40                                                             | 50                                                            | 3.6                                                                      | 4.2 | 2.1                                                                   | 2.4 |
| 113 112  | ✓                      | 6.0 × 100                       | 50                             | 3.8                                                    | 14.0                           | 50                                                             | 50                                                            | 3.6                                                                      | 4.2 | 2.2                                                                   | 2.5 |
| 113 114  | ✓                      | 6.0 × 120                       | 70                             | 3.8                                                    | 14.0                           | 50                                                             | 70                                                            | 3.8                                                                      | 4.5 | 2.3                                                                   | 2.6 |
| 113 116  | ✓                      | 6.0 × 140                       | 70                             | 3.8                                                    | 14.0                           | 70                                                             | 70                                                            | 3.8                                                                      | 4.5 | 2.3                                                                   | 2.6 |
| 113 118  | ✓                      | 6.0 × 160                       | 80                             | 3.8                                                    | 14.0                           | 80                                                             | 80                                                            | 3.8                                                                      | 4.5 | 2.3                                                                   | 2.6 |
| 113 120  | ✓                      | 6.0 × 180                       | 80                             | 3.8                                                    | 14.0                           | 100                                                            | 80                                                            | 3.8                                                                      | 4.5 | 2.3                                                                   | 2.6 |
| 113 122  | ✓                      | 6.0 × 200                       | 80                             | 3.8                                                    | 14.0                           | 120                                                            | 80                                                            | 3.8                                                                      | 4.5 | 2.3                                                                   | 2.6 |
| 113 124  | ✓                      | 6.0 × 220                       | 80                             | 3.8                                                    | 14.0                           | 140                                                            | 80                                                            | 3.8                                                                      | 4.5 | 2.3                                                                   | 2.6 |

# LOAD CAPACITY

Wood screw WAF 5,0 - 10,0 mm. CorrSeal surface treatment

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## Characteristic resistance

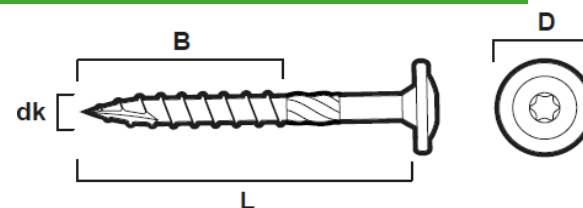
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|----------|------------------------|---------------------------------|--------------------------------|--------------------------------------------------------|--------------------------------|----------------------------------------------------------------|---------------------------------------------------------------|--------------------------------------------------------------------------|-----|-----------------------------------------------------------------------|-----|
|          |                        |                                 |                                |                                                        |                                |                                                                |                                                               | C14                                                                      | C24 | C14                                                                   | C24 |
| 113 125  | ✓                      | 8.0 × 40                        | 35                             | 5.3                                                    | 22                             | 5                                                              | 35                                                            | 3.1                                                                      | 3.6 | 0.4                                                                   | 0.5 |
| 113 126  | ✓                      | 8.0 × 50                        | 45                             | 5.3                                                    | 22                             | 5                                                              | 45                                                            | 4.0                                                                      | 4.6 | 0.4                                                                   | 0.5 |
| 113 128  | ✓                      | 8.0 × 60                        | 50                             | 5.3                                                    | 22                             | 10                                                             | 50                                                            | 4.4                                                                      | 5.1 | 0.8                                                                   | 1.0 |
| 113 130  | ✓                      | 8.0 × 70                        | 50                             | 5.3                                                    | 22                             | 20                                                             | 50                                                            | 4.4                                                                      | 5.1 | 1.6                                                                   | 2.0 |
| 113 132  | ✓                      | 8.0 × 80                        | 50                             | 5.3                                                    | 22                             | 30                                                             | 50                                                            | 4.4                                                                      | 5.1 | 2.5                                                                   | 3.0 |
| 113 134  | ✓                      | 8.0 × 90                        | 50                             | 5.3                                                    | 22                             | 40                                                             | 50                                                            | 4.4                                                                      | 5.1 | 2.6                                                                   | 3.1 |
| 113 136  | ✓                      | 8.0 × 100                       | 50                             | 5.3                                                    | 22                             | 50                                                             | 50                                                            | 4.4                                                                      | 5.1 | 2.8                                                                   | 3.3 |
| 113 138  | ✓                      | 8.0 × 120                       | 70                             | 5.3                                                    | 22                             | 50                                                             | 70                                                            | 6.2                                                                      | 7.2 | 3.4                                                                   | 4.0 |
| 113 140  | ✓                      | 8.0 × 150                       | 80                             | 5.3                                                    | 22                             | 70                                                             | 80                                                            | 7.0                                                                      | 8.2 | 4.0                                                                   | 4.5 |
| 113 142  | ✓                      | 8.0 × 170                       | 80                             | 5.3                                                    | 22                             | 90                                                             | 80                                                            | 7.0                                                                      | 8.2 | 4.0                                                                   | 4.5 |
| 113 144  | ✓                      | 8.0 × 200                       | 80                             | 5.3                                                    | 22                             | 120                                                            | 80                                                            | 7.0                                                                      | 8.2 | 4.0                                                                   | 4.5 |
| 113 145  | ✓                      | 8.0 × 220                       | 80                             | 5.3                                                    | 22                             | 140                                                            | 80                                                            | 7.0                                                                      | 8.2 | 4.0                                                                   | 4.5 |
| 113 146  | ✓                      | 8.0 × 240                       | 80                             | 5.3                                                    | 22                             | 160                                                            | 80                                                            | 7.0                                                                      | 8.2 | 4.0                                                                   | 4.5 |
| 113 148  | ✓                      | 8.0 × 280                       | 80                             | 5.3                                                    | 22                             | 200                                                            | 80                                                            | 7.0                                                                      | 8.2 | 4.0                                                                   | 4.5 |
| 113 149  | ✓                      | 8.0 × 300                       | 80                             | 5.3                                                    | 22                             | 220                                                            | 80                                                            | 7.0                                                                      | 8.2 | 4.0                                                                   | 4.5 |
| 113 150  | ✓                      | 8.0 × 320                       | 80                             | 5.3                                                    | 22                             | 240                                                            | 80                                                            | 7.0                                                                      | 8.2 | 4.0                                                                   | 4.5 |

# LOAD CAPACITY

Wood screw WAF 5,0 - 10,0 mm. CorrSeal surface treatment

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## Characteristic resistance

Intended for engineers

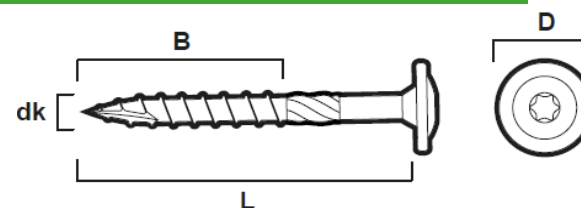
| Art. No. | CE-marking<br>EN 14592 | Dimension<br><br>dk × L<br>[mm] | Thread length<br><br>B<br>[mm] | Inner thread<br>diameter<br><br>d <sub>1</sub><br>[mm] | Head diameter<br><br>D<br>[mm] | Timber tickness<br>at screw head<br><br>t <sub>1</sub><br>[mm] | Timber tickness<br>at screw tip<br><br>t <sub>2</sub><br>[mm] | Axial direction<br>(pull-out/-through)<br><br>F <sub>ax,Rk</sub><br>[kN] |      | Shear direction<br>(one shear plane)<br><br>F <sub>v,Rk</sub><br>[kN] |     |
|----------|------------------------|---------------------------------|--------------------------------|--------------------------------------------------------|--------------------------------|----------------------------------------------------------------|---------------------------------------------------------------|--------------------------------------------------------------------------|------|-----------------------------------------------------------------------|-----|
|          |                        |                                 |                                |                                                        |                                |                                                                |                                                               | C14                                                                      | C24  | C14                                                                   | C24 |
| 113 176  | -                      | 10.0 × 40                       | 35                             | 6.3                                                    | 26                             | 5                                                              | 35                                                            | 4.2                                                                      | 4.9  | 0.5                                                                   | 0.6 |
| 113 178  | ✓                      | 10.0 × 50                       | 45                             | 6.3                                                    | 26                             | 5                                                              | 45                                                            | 5.4                                                                      | 6.3  | 0.5                                                                   | 0.6 |
| 113 180  | ✓                      | 10.0 × 60                       | 50                             | 6.3                                                    | 26                             | 10                                                             | 50                                                            | 6.0                                                                      | 7.0  | 1.1                                                                   | 1.3 |
| 113 182  | ✓                      | 10.0 × 70                       | 50                             | 6.3                                                    | 26                             | 20                                                             | 50                                                            | 6.0                                                                      | 7.0  | 2.1                                                                   | 2.5 |
| 113 156  | ✓                      | 10.0 × 80                       | 70                             | 6.3                                                    | 26                             | 10                                                             | 70                                                            | 8.4                                                                      | 9.7  | 1.1                                                                   | 1.3 |
| 113 158  | ✓                      | 10.0 × 100                      | 70                             | 6.3                                                    | 26                             | 30                                                             | 70                                                            | 8.4                                                                      | 9.7  | 3.2                                                                   | 3.8 |
| 113 160  | ✓                      | 10.0 × 120                      | 70                             | 6.3                                                    | 26                             | 50                                                             | 70                                                            | 8.4                                                                      | 9.7  | 4.9                                                                   | 5.7 |
| 113 162  | ✓                      | 10.0 × 140                      | 90                             | 6.3                                                    | 26                             | 50                                                             | 90                                                            | 10.8                                                                     | 12.5 | 5.3                                                                   | 6.4 |
| 113 164  | ✓                      | 10.0 × 160                      | 90                             | 6.3                                                    | 26                             | 70                                                             | 90                                                            | 10.8                                                                     | 12.5 | 6.1                                                                   | 7.1 |
| 113 168  | ✓                      | 10.0 × 180                      | 90                             | 6.3                                                    | 26                             | 90                                                             | 90                                                            | 10.8                                                                     | 12.5 | 6.5                                                                   | 7.3 |
| 113 170  | ✓                      | 10.0 × 200                      | 90                             | 6.3                                                    | 26                             | 110                                                            | 90                                                            | 10.8                                                                     | 12.5 | 6.5                                                                   | 7.3 |
| 113 172  | ✓                      | 10.0 × 220                      | 90                             | 6.3                                                    | 26                             | 130                                                            | 90                                                            | 10.8                                                                     | 12.5 | 6.5                                                                   | 7.3 |
| 113 174  | ✓                      | 10.0 × 240                      | 90                             | 6.3                                                    | 26                             | 150                                                            | 90                                                            | 10.8                                                                     | 12.5 | 6.5                                                                   | 7.3 |

# LOAD CAPACITY

Wood screw WAF 5,0 - 10,0 mm. CorrSeal surface treatment

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## Conversion factors for load-duration and service classes

The conversion factors can be used to re-calculated the recommended load in the tables for other load-durations and service classes. The conversion factors are based on the factor  $k_{mod}$  in Eurocode 5.

Load-duration classes can differ between different countries due to climate-based loads (snow, wind).

## Conversion factors from permanent load duration in service class 3

| Load-duration | Examples of loading      | Service class 1-2 | Service class 3 |
|---------------|--------------------------|-------------------|-----------------|
| Permanent     | Self-weight              | 1.20              | 1.00            |
| Long-term     | Storage                  | 1.40              | 1.10            |
| Medium-term   | Imposed floor load, snow | 1.60              | 1.30            |
| Short-term    | Snow, wind               | 1.80              | 1.40            |
| Instantaneous | Wind, accidental load    | 2.20              | 1.80            |

## Corrosion protection

Rules and best practice for corrosion protection may differ among European countries. The end-user should ensure that the corrosion protection is suitable for the current application.

## Conversion to different timber quality

Re-calculation of load capacity in the axial direction for a different timber quality (characteristic density) is possible according to the formula below:

$$F_{ax(\rho_{k,1})} \times \left( \frac{\rho_{k,2}}{\rho_{k,1}} \right)^{0,8} = F_{ax(\rho_{k,2})}$$

If for example the load capacity in axial direction is 60 kg in C14-timber the load capacity in C35-timber is increased to:

$$60kg \times \left( \frac{400}{290} \right)^{0,8} = 75kg$$

Re-calculation for load capacity in the shear direction in the same way is however not possible. For guidance please contact ESSVE technical support.

| Material | Density<br>$\rho_k$<br>[kg/m <sup>3</sup> ] |
|----------|---------------------------------------------|
| C14      | 290                                         |
| C18      | 320                                         |
| C24      | 350                                         |
| C30      | 380                                         |
| C35      | 400                                         |
| C40      | 420                                         |