

## WFDOC/WFD Self-drilling screw with EPDM washer for fixing steel sheets in wooden substrate



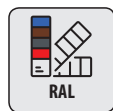
ETA-16/0443



### Description

Carbon-steel or stainless steel self-drilling screw with EPDM washer for fixing steel sheets and steel roof tiles in timber substrate.

### Protective coating / Material



### Technical parameters

|                    |                |                                   |
|--------------------|----------------|-----------------------------------|
| Screw diameter     | $d_w$ [mm]     | 4.8                               |
| Drilling capacity  | $t_{max}$ [mm] | 2x1.25                            |
| Spanner size (S)   | -              | SW 8                              |
| Head height        | k [mm]         | 4.5                               |
| Head diameter      | F [mm]         | 10.0                              |
| Tip length         | [mm]           | 5.0                               |
| Washer (D)         | WFDOC/WFD      | steel/EPDM (Z14)                  |
|                    |                | aluminium/EPDM (A14)*             |
|                    | WFD-D          | aluminium/EPDM (A14)              |
|                    |                | stainless/EPDM (S14)*             |
| A2-WFD             |                | aluminium/EPDM (A14)              |
|                    |                | stainless/EPDM (S14)*             |
| Screw material     | WFDOC/WFD      | heat-treated carbon steel         |
|                    | A2-WFD         | stainless steel A2/bimetal        |
| Protective coating | WFDOC/WFD      | galvanized zinc coating min. 12µm |
|                    | WFD-D/A2-WFD   | ceramic coating SQ                |
| Paint coating      | RAL            | powder min. 60 µm                 |
| Substrate material | timber         | min. C24                          |
| Technical approval | [-]            | ETA-16/0443                       |

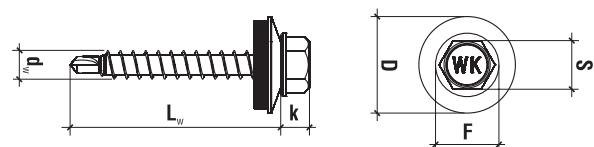
\* - made to order

### Features and advantages

|   |   |
|---|---|
| Self-drilling tip                                       | Ability of drilling plates of thickness up to 2.5 mm, short time of fixing  |
| EPDM washer   | It seals and secures the connection from corrosion  |
| Possibility of painting according to RAL Palette        | Permanent colour adjusted to roof covering, resistant to UV radiation and atmospheric conditions                                  |
| Branding of head of screw                               | WK feature at head of the screw facilitates the identification of our company as the producer and easy recognition of the product |
| Anti-corrosion coating - electro-galvanized (WFDOC/WFD) | Thickness of zinc coating min. 12 µm, guarantee of quality and high level of anti-corrosion protection                            |
| Anti-corrosion coating - ceramic coating (WFD-D)        | Very high level of anti-corrosion protection (several times higher than the traditional galvanization)                            |
| A2 stainless steel screws (A2-WFD)                      | Highest level of anti-corrosion protection - possibility of applying screws even in category of corrosiveness of C4               |

### Installation parameters

|                          |                |         |
|--------------------------|----------------|---------|
| Screw diameter           | $d_w$ [mm]     | 4.8     |
| Min. substrate thickness | $h_{min}$ [mm] | 20 / 30 |
| Fastener anchorage depth | $h_{eff}$ [mm] | 20 / 30 |
| Min. spacing             | $S_{min}$ [mm] | 50      |
| Min. edge distance       | $C_{min}$ [mm] | 25      |



### WFDOC/WFD Self-drilling screw with EPDM washer for fixing steel sheets in wooden substrate

| Ø   | Code                                  |               |                              |                              |                            |              | d <sub>w</sub> x L <sub>w</sub> [mm] | Max. effective length t <sub>fix</sub> [mm] |     |
|-----|---------------------------------------|---------------|------------------------------|------------------------------|----------------------------|--------------|--------------------------------------|---|-----|
|     | Zn BLUE                               | Zn BLUE RAL   | SUPER QUALITY SQ CERAMIC RAL | SUPER QUALITY SQ CERAMIC RAL | Min. order quantity WFD-D  | A2 bimetal   |                                      |   |     |
| 4.8 | WFDOC-48025                           | WFD-48025-RAL | WFD-D-48025                  | WFD-D-48025-RAL              | 300000                     | A2-WFD-48025 | 4.8 x 25                             | 1,25  | 250 |
|     | WFDOC-48035                           | WFD-48035-RAL | WFD-D-48035                  | WFD-D-48035-RAL              | 400000                     | A2-WFD-48035 | 4.8 x 35                             | 5   | 250 |
|     | WFDOC-48055                           | WFD-48055-RAL | WFD-D-48055                  | WFD-D-48055-RAL              | 300000                     | A2-WFD-48055 | 4.8 x 55                             | 25  | 200 |
|     | WFDOC-48060                           | WFD-48060-RAL | WFD-D-48060                  | WFD-D-48060-RAL              | 300000                     | A2-WFD-48060 | 4.8 x 60                             | 35  | 200 |
|     | WFDOC-48070                           | WFD-48070-RAL | WFD-D-48070                  | WFD-D-48070-RAL              | 300000                     | A2-WFD-48070 | 4.8 x 70                             | 45  | 200 |
|     | WFDOC-48080                           | WFD-48080-RAL | WFD-D-48080                  | WFD-D-48080-RAL              | 300000                     | A2-WFD-48080 | 4.8 x 80                             | 55  | 100 |
|     | WFDOC-48100                           | WFD-48100-RAL | WFD-D-48100                  | WFD-D-48100-RAL              | 300000                     | A2-WFD-48100 | 4.8 x 100                            | 75  | 100 |
|     | standard / made to order <sup>1</sup> |               | made to order <sup>2</sup>   |                              | made to order <sup>3</sup> |              |                                      |   |     |

<sup>1</sup> RAL colours other than our permanent offer (standard RAL colour chart) are available for orders of minimum 210000 pcs.

<sup>2</sup> Minimum order quantity per size & colour - shown in table

<sup>3</sup> Minimum order quantity per size - 108000pcs

How to read the code, e.g. WFDOC-48035?

|              |                |             |
|--------------|----------------|-------------|
| <b>WFDOC</b> | <b>48</b>      | <b>035</b>  |
| Type         | Diameter 4.8mm | Length 35mm |

How to read the code, e.g. WFD-D-48035-3011?

|            |                    |                |             |             |
|------------|--------------------|----------------|-------------|-------------|
| <b>WFD</b> | <b>D</b>           | <b>48</b>      | <b>035</b>  | <b>3011</b> |
| Type       | Ceramic coating SQ | Diameter 4.8mm | Length 35mm | RAL 3011    |

#### Standard RAL colour chart

| Ral No. | Colour          |
|---------|-----------------|
| 3005    | Wine red        |
| 3009    | Oxide red       |
| 3011    | Brown red       |
| 5005    | Signal blue     |
| 5010    | Gentian blue    |
| 6005    | Moss green      |
| 6020    | Chrome green    |
| 7016    | Anthracite grey |

| Ral No. | Colour          |
|---------|-----------------|
| 7024    | Graphite grey   |
| 8004    | Copper brown    |
| 8017    | Chocolate brown |
| 8019    | Grey brown      |
| 9003    | Signal white    |
| 9005    | Jet black       |
| 9006    | White aluminium |
| 9010    | Pure white      |

Note: The colours in the catalogue are for reference only and may slightly differ from the original RAL colours.

#### Characteristic pull-out / shear strength [kN]

| Substrate  | Anchorage depth h <sub>eff</sub> [mm] | Steel sheet thickness [mm] |             |             |             |             |             |
|------------|---------------------------------------|----------------------------|-------------|-------------|-------------|-------------|-------------|
|            |                                       | 0.50                       | 0.63        | 0.75        | 0.88        | 1.00        | 1.25        |
| Timber C24 | 20                                    | 1.24 / 1.10                | 1.24 / 1.50 | 1.24 / 1.74 | 1.24 / 1.74 | 1.24 / 1.74 | 1.24 / 1.74 |
|            | 30                                    | 1.73 / 1.10                | 1.73 / 1.50 | 1.73 / 1.74 | 1.73 / 1.74 | 1.73 / 1.74 | 1.73 / 1.74 |

Partial safety factor of 1.33 recommended