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# PRODUCT DATASHEET

## TEK SCREW HEX HEAD

### Product Details

Designed for: *Fixing cladding/roofing applications to hot/cold rolled purlins/rails. Fastening liner panels and general components to steel.*

Head style: *Hexagonal*

Drive bit: *5/16" hexagonal*

Thread form: *Single, coarse thread (Tek 3)/fine thread (Tek 5)*

Shank material: *Carbon steel*

Material grade: *AISI C1022*

Coating: *500hr Evoshield®*



### Tek 3 range – for light steel

| Product Code  | Size      | Drill point | Effective thread length | Drilling Capacity | Recommended drill speed |
|---------------|-----------|-------------|-------------------------|-------------------|-------------------------|
| TSHW4.8-16-3  | 4.8x16mm  | Tek 3       | 8mm                     | 1.2 – 3.5mm       | 1500-2500 RPM           |
| TSHW5.5-25-3  | 5.5x25mm  | Tek 3       | 16mm                    | 1.2 – 3.5mm       | 1500-2500 RPM           |
| TSHW5.5-32-3  | 5.5x32mm  | Tek 3       | 24mm                    | 1.2 – 3.5mm       | 1500-2500 RPM           |
| TSHW5.5-38-3  | 5.5x38mm  | Tek 3       | 30mm                    | 1.2 – 3.5mm       | 1500-2500 RPM           |
| TSHW5.5-50-3  | 5.5x50mm  | Tek 3       | 42mm                    | 1.2 – 3.5mm       | 1500-2500 RPM           |
| TSHW5.5-75-3  | 5.5x75mm  | Tek 3       | 66mm                    | 1.2 – 3.5mm       | 1500-2500 RPM           |
| TSHW5.5-100-3 | 5.5x100mm | Tek 3       | 90mm                    | 1.2 – 3.5mm       | 1500-2500 RPM           |

### Tek 5 range – for heavy steel

| Product Code  | Size      | Drill point | Effective thread length | Drilling Capacity | Recommended drill speed |
|---------------|-----------|-------------|-------------------------|-------------------|-------------------------|
| TSHW5.5-32-5  | 5.5x32mm  | Tek 5       | 12mm                    | 4.0 – 12.5mm      | 1500-2500 RPM           |
| TSHW5.5-38-5  | 5.5x38mm  | Tek 5       | 18mm                    | 4.0 – 12.5mm      | 1500-2500 RPM           |
| TSHW5.5-50-5  | 5.5x50mm  | Tek 5       | 30mm                    | 4.0 – 12.5mm      | 1500-2500 RPM           |
| TSHW5.5-75-5  | 5.5x75mm  | Tek 5       | 55mm                    | 4.0 – 12.5mm      | 1500-2500 RPM           |
| TSHW5.5-100-5 | 5.5x100mm | Tek 5       | 80mm                    | 4.0 – 12.5mm      | 1500-2500 RPM           |

NOTE: The results expressed in the datasheet are taken as mean loads from a range of empirical tests and are ultimate unfactored loads. Each specifier or end user should make his/ her own decision on what safety factors to use relevant to their design application (such as BS 5950, EN 1991, etc).

Errors and Omissions Excepted.

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## Technical Data

| Tek 3 range – Unfactored pull out values |             |                 |       |       |       |       |       |
|--|-------------|-----------------|-------|-------|-------|-------|-------|
| Diameter                                 | Drill point | Steel Thickness |       |       |       |       |       |
|  |             | 1.2mm           | 1.6mm | 2.0mm | 2.5mm | 3.0mm | 4.0mm |
| 4.8mm                                    | Tek 3       | 1.2kN           | 1.6kN | 2.0kN | 3.0kN | 3.9kN | 4.5kN |
| 5.5mm                                    | Tek 3       | 1.7kN           | 1.9kN | 2.4kN | 4.6kN | 6.5kN | 7.6kN |

| Tek 5 range – Unfactored pull out values |             |                 |       |        |        |        |        |
|--|-------------|-----------------|-------|--------|--------|--------|--------|
| Diameter                                 | Drill point | Steel Thickness |       |        |        |        |        |
|  |             | 4.0mm           | 5.0mm | 6.0mm  | 8.0mm  | 10.0mm | 12.5mm |
| 5.5mm                                    | Tek 5       | 6.5kN           | 7.8kN | 10.0kN | 11.5kN | 12.0kN | 13.5kN |

| Hardness Rating (Vickers scale) |                  |               | Ultimate Mechanical Performance |                  |                | Pullover Performance |                |                |
|---------------------------------|------------------|---------------|---------------------------------|------------------|----------------|----------------------|----------------|----------------|
| Diameter                        | Surface Hardness | Core Hardness | Diameter                        | Tensile Strength | Shear Strength | Diameter             | In 0.6mm steel | In 1.2mm steel |
| 4.8mm                           | 630.0HV          | 445.0HV       | 4.8mm                           | 9.5kN            | 6.4kN          | 4.8mm                | 2.8kN          | 3.6kN          |
| 5.5mm                           | 615.5HV          | 440.0HV       | 5.5mm                           | 15.9kN           | 10.3kN         | 5.5mm                | 3.0kN          | 4.4kN          |

# ABOUT OUR TESTING

All test results were derived from empirical testing performed by ETAS (Evolution Testing & Analytical Services), a UKAS (United Kingdom Accreditation Service) accredited testing laboratory (Accreditation No. 7485). The following tests were performed to the following standards.

### Testing Procedures

| Test/ Parameter             | Standard/ Method/ Procedure  |
|-----------------------------|--|
| Ultimate Tensile            | <b>ISO 6892-1: 2009</b><br>"Metallic materials – tensile testing – Part 1: Method of test at room temperature".              |
| Ultimate Shear              | <b>MIL-STD-1312-13</b><br>"Military Standard: Fastener test method (Method 13) Double shear test".                           |
| Pull Out (Withdrawal Force) | <b>EN 14566: 2009</b><br>"Mechanical fasteners for gypsum plasterboard systems. Definitions, requirements and test methods". |
| Pull Over                   | <b>EN 14592: 2008</b><br>"Timber structures. Dowel type fasteners. Requirements".  |
| Hardness                    | <b>ISO 650 7-1: 2005</b><br>"Metallic materials – Vickers hardness test – Part 1: Test method".                              |
| Corrosion Resistance        | <b>EN ISO 9227: 2012</b><br>"Corrosion tests in artificial atmospheres. Salt spray tests".                                   |
| Drilling Time Test          | <b>EN 14566: 2009</b><br>"Mechanical fasteners for gypsum plasterboard systems. Definitions, requirements and test methods". |



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### Laboratory Contact Details

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