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PRODUCT DATASHEET

BI-METAL WING-DRILL TEK SCREW

Product Details

Designed for: *Fastening when stainless steel product is required e.g. in conjunction with aluminium sheeting/ panels and steel substrates*

Head style: *Countersunk*

Drive bit: *Phillips 3*

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

Shank material: *Stainless steel*

Material grade: *AISI A304*

Coating: *Electroplated zinc*



Bi-metal wing drill tek screw range – for light steel

| Product Code | Size | Drill point | Effective thread length | Drilling Capacity | Recommended drill speed | Timber thickness |
|---------------|-----------|-------------|-------------------------|-------------------|-------------------------|------------------|
| BMWD4.8-38-3 | 4.8x38mm | Tek 3 | 24.0mm | 1.2 – 3.5mm | 1500-2500 RPM | 6.0 – 22.0mm |
| BMWD5.5-50-3 | 5.5x50mm | Tek 3 | FULL | 1.2 – 3.5mm | 1500-2500 RPM | 13.0 – 30.0mm |
| BMWD5.5-62-3 | 5.5x62mm | Tek 3 | 40.0mm | 1.2 – 3.5mm | 1500-2500 RPM | 13.0 – 40.0mm |
| BMWD5.5-80-3 | 5.5x80mm | Tek 3 | 60.0mm | 1.2 – 3.5mm | 1500-2500 RPM | 25.0 – 60.0mm |
| BMWD5.5-100-3 | 5.5x100mm | Tek 3 | 60.0mm | 1.2 – 3.5mm | 1500-2500 RPM | 45.0 – 80.0mm |

Bi-metal wing drill tek screw range– for heavy steel

| Product Code | Size | Drill point | Effective thread length | Drilling Capacity | Recommended drill speed | Timber thickness |
|---------------|-----------|-------------|-------------------------|-------------------|-------------------------|------------------|
| BMWD5.5-65-5 | 5.5x65mm | Tek 5 | 36.0mm | 4.0 – 12.5mm | 1500-2500 RPM | 10.0 – 28.0mm |
| BMWD5.5-85-5 | 5.5x85mm | Tek 5 | 50.0mm | 4.0 – 12.5mm | 1500-2500 RPM | 30.0 – 50.0mm |
| BMWD5.5-110-5 | 5.5x110mm | Tek 5 | 50.0mm | 4.0 – 12.5mm | 1500-2500 RPM | 45.0 – 90.0mm |
| BMWD5.5-135-5 | 5.5x135mm | Tek 5 | 110.0mm | 4.0 – 12.5mm | 1500-2500 RPM | 45.0 – 100.0mm |

Technical Data

| Hardness Rating (Vickers scale) | | | Unfactored Mechanical Performance | | | Pullover Performance | |
|---------------------------------|------------------|---------------|-----------------------------------|------------------|----------------|----------------------|-------------------------|
| Diameter | Surface Hardness | Core Hardness | Diameter | Tensile Strength | Shear Strength | Diameter | Substrate – 50mm timber |
| 4.8mm | 390.0HV | 270.0HV | 4.8mm | 9.8kN | 8.2kN | 4.8mm | 1.6kN |
| 5.5mm | 390.0HV | 270.0HV | 5.5mm | 11.6kN | 9.8kN | 5.5mm | 3.0kN |

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 continued...

| 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 | 1.9kN | 2.7kN | 3.5kN | 4.5kN | 5.0kN | 6.3kN |
| 5.5mm | Tek 3 | 2.0kN | 2.4kN | 3.6kN | 4.3kN | 5.1kN | 6.7kN |

| 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 | 4.5kN | 5.9kN | 7.3kN | 8.9kN | 10.7kN | 11.9kN |

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



7485

Laboratory Contact Details

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