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PRODUCT DATASHEET

A4 STAINLESS STEEL MULTI-FIX SCREW

Product Details

<i>Designed for:</i>	Fixing timber battens, trunking, track and general components into concrete, masonry and timber
<i>Head style:</i>	5/16" Hexagonal
<i>Material grade:</i>	AISI 316/ A4
<i>Shank Material:</i>	Stainless Steel

A4 stainless steel multi-fix product range

Product Code	Size	Drill Point	Box Quantity	Carton Quantity
A4HH6.3-32-GP	6.3mm x 32mm	Gash Point	100	1,000
A4HH6.3-45-GP	6.3mm x 45mm	Gash Point	100	1,000
A4HH6.3-57-GP	6.3mm x 57mm	Gash Point	100	1,000
A4HH6.3-70-GP	6.3mm x 70mm	Gash Point	100	1,000
A4HH6.3-82-GP	6.3mm x 82mm	Gash Point	100	1,000
A4HH6.3-100-GP	6.3mm x 100mm	Gash Point	100	1,000

Technical Data

Hardness Rating (Vickers scale)			Unfactored Mechanical Performance		
Diameter	Surface Hardness	Core Hardness	Diameter	Tensile Strength	Shear Strength
6.3mm	577.4 HV0.3	465.1 HV0.3	6.3mm	18.7kN	8.9kN

Ultimate pull out loading from steel			
Steel substrate (S275 JR mild steel)			
Major diameter	Steel thickness	Steel thickness	Steel thickness
6.3mm	0.7mm	1.0mm	1.2mm
Force	1.0kN	1.4kN	2.0kN



Technical Data continued...

Ultimate pull out loading from timber			
Major diameter	Timber grade	Embedment depth	Load
6.3mm	C16	25.0mm	2.3kN
		35.0mm	3.7kN

Ultimate Loading: Withdrawal Resistance (Concrete and Masonry Substrates)			
Embedment Depth (mm)	C25/30 Concrete (30N/mm2)	Aerated Concrete Block (7N/mm2)	Class A Engineering Brick (75 N/mm2)
25.0	2,850 N	650 N	3,690
35.0	6,890 N	1,010 N	9,670

Characteristic/ Safe Loading: Withdrawal Resistance (Concrete and Masonry Substrates, $\gamma = 3.0$)			
Embedment depth (mm)	C25/30 Concrete (30N/mm2)	Aerated Concrete Block (7N/mm2)	Class A Engineering Brick (75 N/mm2)
25.0	950 N	210 N	1,230
35.0	2,290 N	330 N	3,220

Concrete and masonry setting information		
Substrate type	Category	Data
All	Nominal embedment depth	35.0mm
Non cracked concrete (>30N/mm2)	Minimum base material thickness Minimum screw spacing Minimum edge distance	100.0mm 55.0mm 55.0mm
Cracked concrete (>30N/mm2)	Minimum base thickness Minimum screw spacing Minimum edge distance	100.0mm 40.0mm 55.0mm

Influence of Compressive Strength on Withdrawal Resistance (Reduction Factors)									
Nominal Anchor Diameter (mm)	Drill Hole Diameter (mm)	Embedment Depth (mm)	Compressive Strength – Cube (EN 1992)						
			C20/25	C25/30	C30/37	C35/45	C40/50	C45/55	≥C50/60
6.3	5.15	25/0	0.6	1.0			1.2		1.3
		35.0	0.7	1.0	1.1	1.2	1.3	1.4	1.5

Influence of edge distance on loadings (reduction factor)										
Percentage of stated minimum	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Reduction factor	N/A	N/A	N/A	N/A	N/A	0.75	0.80	0.85	0.90	1.00

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.

ABOUT OUR TESTING



All performance figures were derived from empirical testing (where applicable) performed by Evolution Testing Services (a trading name of Evolution Fasteners (UK) Ltd), which is a UKAS accredited testing laboratory (Accreditation No. 7485). The following tests were performed in the preparation of this datasheet (note that tests marked "NC" are not included on our Schedule of Accreditation):



7485

Testing Procedures

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

Laboratory Contact Details

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