the
Thin Wall Bolt

BLINDBOLT®

Full technical details and distributor information can be found on our website www.blindbolt.co.uk

JUNE 2025

All dimensions are stated in millimetres unless noted otherwise

Thin Wall bolts are used to clamp material up to a total maximum thickness of 16 mm, requiring access from one side only. Thin Wall bolts are used in close tolerance holes so joints do not slip.

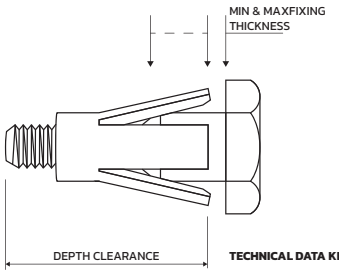
Thin Wall bolts have a high resistance in both shear and tension. Once installed, only a low profile head is visible externally. Thin Wall bolts are available in carbon steel with a zinc nickel finish or stainless steel.

CARBON STEEL WITH ZINC NICKEL FINISH

Carbon steel Thin Wall bolts are manufactured from steel with a minimum tensile strength of 690 N/mm² and a Property Class 10.9 set screw.

Thin Wall Bolt Product Specification

Product Code	Hole Diameter	Depth Clearance	Clamping Range	
			Min	Max
TW5ZF-10	8	35	2	10
TW5ZF-16	8	40	8	16
TW6ZF-10	10	35	2	10
TW6ZF-16	10	40	8	16
TW8ZF-10	13	45	2	10
TW8ZF-16	13	50	8	16



Design Resistance for Thin Wall Type Blind Bolts Design to BS 5950

TW Bolt Size	Set Screw Diameter (mm)	Collar Outside Diameter (mm)	Hole Diameter (mm)	Shear Resistance (kN)	Tension Resistance (kN)
TW5	5	7.8	8	13.2	4.8
TW6	6	9.5	10	19.5	14.1
TW8	8	12.6	13	34.5	25.6

Design Resistance for Thin Wall Type Blind Bolts Design to BS EN 1993

TW Bolt Size	Set Screw Diameter (mm)	Collar Outside Diameter (mm)	Hole Diameter (mm)	Shear Resistance (kN)	Tension Resistance (kN)
TW5	5	7.8	8	15.9	4.8
TW6	6	9.5	10	23.4	10.1
TW8	8	12.6	13	41.4	18.4

Design resistances in shear and tension are presented above. The resistance values may be compared directly with the ultimate loads applied to the fixing.

The bearing resistance may be calculated in accordance with the design standard, based on the external diameter of the collar, as given above.

Fixings subject to combined shear and tension should be verified in accordance with the design standard, using the design resistances presented above.

If tension is applied to a fixing in a relatively thin wall application, the deformation of the connected material should be considered at serviceability (working loads) and at the ultimate limit state, as deformation is likely to be the limiting feature of the connection.

TW Bolt - Fitting Instructions

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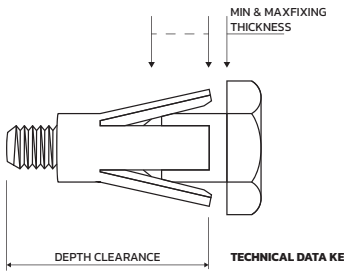
STAINLESS STEEL

Stainless steel Thin Wall bolts are manufactured from stainless steel with a minimum tensile strength of 700 N/mm² and a Property Class 70 set screw.

Thin Wall Bolt Product Specification

Product Code	Hole Diameter	Depth Clearance	Clamping Range	
			Min	Max
TW5ZF-10	8	35	2	10
TW5ZF-16	8	40	8	16
TW6ZF-10	10	35	2	10
TW6ZF-16	10	40	8	16
TW8ZF-10	13	45	2	10
TW8ZF-16	13	50	8	16



Design Resistance for Thin Wall Type Blind Bolts Design to BS 5950

TW Bolt Size	Set Screw Diameter (mm)	Collar Outside Diameter (mm)	Hole Diameter (mm)	Shear Resistance (kN)	Tension Resistance (kN)
TW5	5	7.8	8	11.6	7.0
TW6	6	9.5	10	17.3	9.8
TW8	8	12.6	13	30.4	17.9

Design Resistance for Thin Wall Type Blind Bolts Design to BS EN 1993

TW Bolt Size	Set Screw Diameter (mm)	Collar Outside Diameter (mm)	Hole Diameter (mm)	Shear Resistance (kN)	Tension Resistance (kN)
TW5	5	7.8	8	14.0	5.0
TW6	6	9.5	10	20.8	7.1
TW8	8	12.6	13	36.4	12.9

Design resistances in shear and tension are presented above. The resistance values may be compared directly with the ultimate loads applied to the fixing.

The bearing resistance may be calculated in accordance with the design standard, based on the external diameter of the collar, as given above.

Fixings subject to combined shear and tension should be verified in accordance with the design standard, using the design resistances presented above.

If tension is applied to a fixing in a relatively thin wall application, the deformation of the connected material should be considered at serviceability (working loads) and at the ultimate limit state, as deformation is likely to be the limiting feature of the connection.

Design resistances have been determined by test in accordance with BS EN 1990.

The testing and determination of the tabulated design resistances for carbon and stainless steel bolts was undertaken by the Steel Construction Institute. Tabulated values are design resistances (not characteristic values) and may be compared directly with the design loads without any partial factor.

TW Bolt - Fitting Instructions