



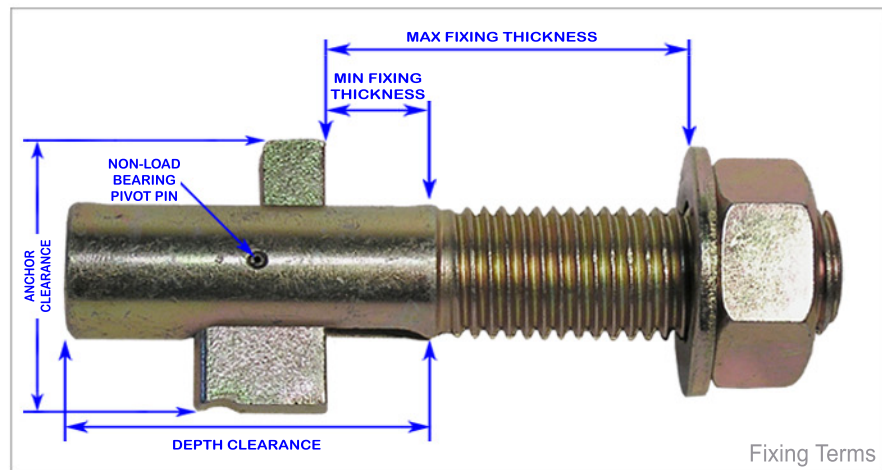
Printing Date: 12th July 2012

BLIND BOLT PRODUCT SPECIFICATION ZINC & YELLOW / DORRELTECH

Bolt Size	Box Qty	Hole Diameter	Fixing Thickness Min	Max	Anchor Clearance	Depth Clearance	Minimum Hole Centers
M8 x 50	50	9	9	24	19	25	20
M10 x 60	40	11	10	30	23	30	20
M10 x 130	20	11	55	100	23	30	20
M12 x 70	20	13	12	35	26	35	25
M12 x 120	20	13	30	85	26	35	25
M12 x 180	20	13	80	140	26	35	25
M16 x 90*	20	17	13	43	36	43	35
M16 x 130*	20	17	40	75	36	43	35
M16 x 180*	20	17	55	125	36	43	35
M20 x 110*	10	22	21	56	44	56	48
M20 x 140*	10	22	51	86	44	56	48
M20 x 160*	10	22	65	100	44	56	48
M20 x 180*	10	22	80	120	44	56	48
M20 x 250*	10	22	130	185	44	56	48
M24 x 130*	5	26	21	66	53	64	48



* = We strongly recommend the use of our safety gauges when installing these bolts!





Printing Date: 24th July 2009

ZINC & YELLOW BLIND BOLTS DESIGN TO BS 5950-1

Diameter	Tension Capacity (P_t (kN))	Shear Capacity Over Thread ($P_{s, thread}$ (kN))	Shear Capacity Over Slot ($P_{s, slot}$ (kN))	Bearing Capacity in 10mm Plate	
				S275 (P_b (kN))	S355 (P_b (kN))
M8	6.9	14.9	9.3	20.7	24.8
M10	12.9	23.2	15.9	27.6	33.0
M12	18.8	33.7	22.0	32.2	38.5
M16	40.2	62.7	42.9	46.0	55.0
M20	57.9	97.9	63.4	55.2	66.0
M24	82.4	141.0	87.8	64.4	77.0

These values are suitable for design to BS 5950-1 and can be used without further reduction for comparison to factored loads. Bearing resistances for different plate thicknesses can be calculated by scaling the values in proportion to the thickness, but should only be used where the distance from the centre line of the hole to the end of the plate is greater than 1.25d. Combined tension and shear should satisfy the following equation:

$$\frac{F_s}{P_s} + \frac{F_t}{P_t} \leq 1.4$$

ZINC & YELLOW BLIND BOLTS DESIGN TO BS EN 1993-1-8

Diameter	Tension Resistance (F_t, R_d (kN))	Shear Resistance Over Thread ($F_v, R_d, thread$ (kN))	Shear Resistance Over Slot ($F_v, R_d, slot$ (kN))
M8	6.9	14.6	11.1
M10	12.9	23.2	19.0
M12	18.8	33.7	26.3
M16	40.1	62.7	51.5
M20	57.8	97.9	76.1
M24	82.3	141.0	105.4

These are design values for use with BS EN 1993-1-8, and a partial safety factor of $\gamma_{M2} = 1.25$ has already been applied. Bearing resistances should be calculated from BS EN 1993-1-8, Table 3.4, taking d as the nominal diameter of the bolt. Combined shear and tension should satisfy the following equation:

$$\frac{F_{v, Ed}}{F_{v, Rd}} + \frac{F_{t, Ed}}{1.4 F_{t, Rd}} \leq 1.0$$



THE ABOVE TENSION RESISTANCES MAKE NO ALLOWANCE FOR THE DEFORMATION OR YIELD OF THE CONNECTED PARTS. AN APPROPRIATE DESIGN MODEL FOR CONNECTIONS IN HOLLOW SECTIONS CAN BE FOUND IN JOINTS IN STEEL CONSTRUCTION: SIMPLE CONNECTIONS.

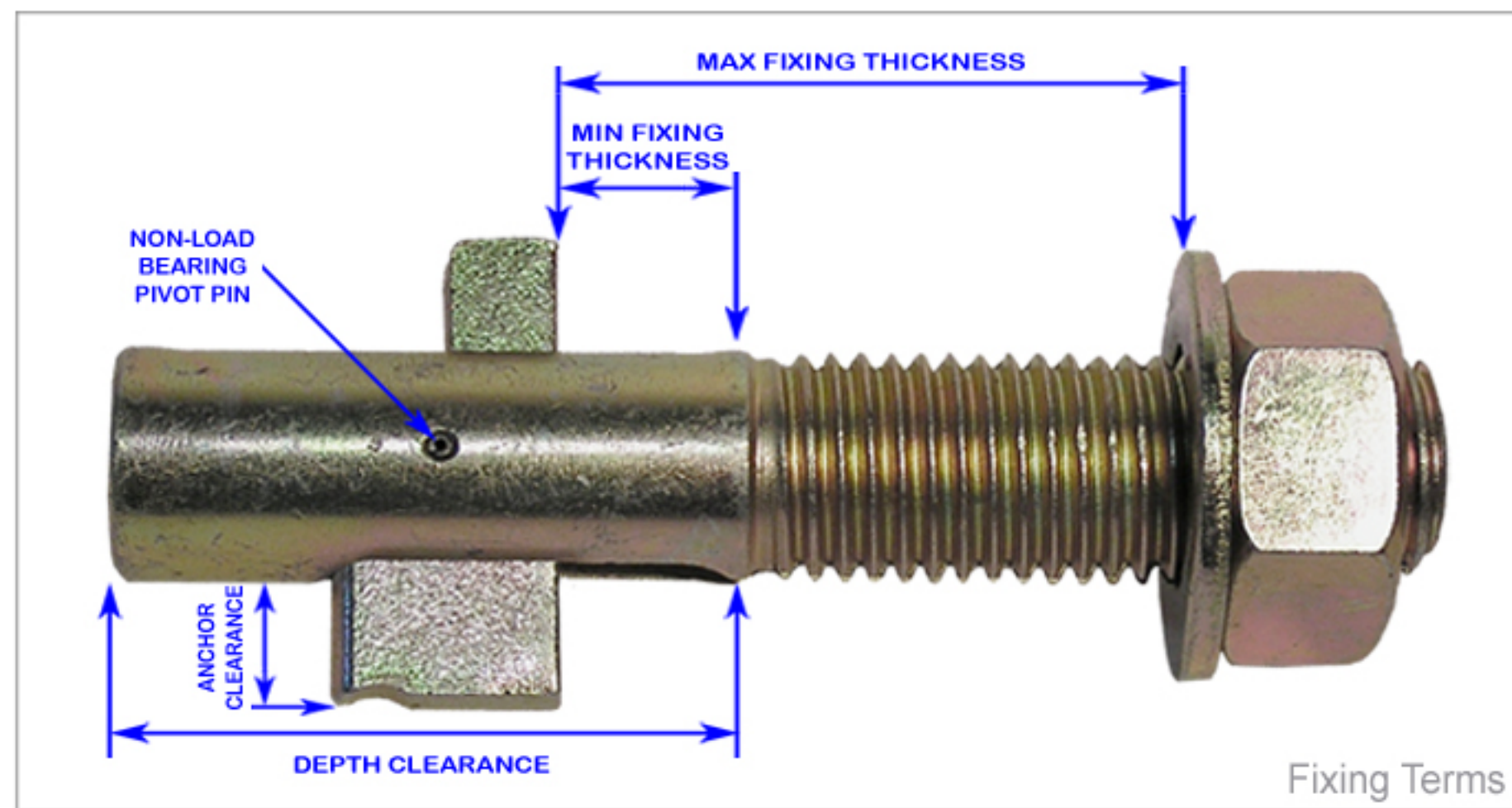


BLIND BOLT PRODUCT SPECIFICATION A4 STAINLESS STEEL

Bolt Size	Box Qty	Hole Diameter	Fixing Thickness		Anchor Clearance	Depth Clearance	Minimum Hole Centers
			Min	Max			
M8 x 50	50	9	9	24	19	25	20
M10 x 60	40	11	10	30	23	30	20
M12 x 90	20	13	12	55	23	30	20
M16 x 100*	20	17	13	53	26	35	25



* = We strongly recommend the use of our safety gauges when installing these bolts!



Fixing Terms

A4 STAINLESS STEEL BLIND BOLT

Diameter	ULTIMATE Tensile (kN)	ULTIMATE Shear (kN) (Over Thread)	ULTIMATE Shear (kN) (Over Slot)	MAXIMUM Torque (Nm)
M 8	9.6	18.6	10.1	5.5
M 10	12.2	22.8	28.4	12
M 12	16.9	33.6	34.7	19
M 16	31.4	61.1	46.1	59

