

SHIELD ANCHORS - TECHNICAL DATA



Product Information	Material	Typical Applications
<p>The TIMco Shield Anchor is a traditional expansion anchor with four piece segment body and captive expansion cone.</p> <p>Available as body only, stud projecting bolt or loose bolt</p> <p>Versatile anchor type for most solid masonry substrates.</p>	<p>Bolt Grade 8.8</p> <p>Stud Grade 4.8</p> <p>Body: Pressed Steel</p> <p>Washer: DIN 125</p> <p>Nut: DIN 934</p> <p>Zinc Plated</p>	<p>Structural steel</p> <p>Storage systems</p> <p>Barriers & Balustrade</p> <p>Racking</p> <p>Hand rails</p>

Range Data

SHIELD ONLY				
SIZE	Anchor Hole Size	Shield Length	Min Hole Depth mm	Clearance hole in fixture
M6	12	40	50	8
M8	14	50	60	10
M10	16	60	70	12
M12	20	80	90	14
M16	24	105	125	18

LOOSE BOLT					
SIZE	Anchor Hole Size	Shield Length	Max Fixture Thickness mm	Min Hole Depth mm	Clearance hole in fixture
M6 x 10	12	40	10	50	8
M6 x 25	12	40	25	50	8
M6 x 40	12	40	40	50	8
M8 x 10	14	50	10	60	10
M8 x 25	14	50	25	60	10
M8 x 40	14	50	40	60	10
M10 x 10	16	60	10	70	12
M10 x 25	16	60	25	70	12
M10 x 50	16	60	50	70	12
M10 x 75	16	60	75	70	12
M12 x 10	20	80	10	90	14
M12 x 25	20	80	25	90	14
M12 x 40	20	80	40	90	14
M12 x 60	20	80	60	90	14
M16 x 15	24	105	15	125	18
M16 x 30	24	105	30	125	18
M16 x 60	24	105	60	125	18

PROJECTING BOLT					
SIZE	Anchor Hole Size	Shield Length	Max Fixture Thickness mm	Min Hole Depth mm	Clearance hole in fixture
M6 x 10	12	40	10	50	8
M6 x 25	12	40	25	50	8
M6 x 60	12	40	60	50	8
M8 x 10	14	50	10	60	10
M8 x 25	14	50	25	60	10
M8 x 60	14	50	60	60	10
M10 x 15	16	60	15	70	12
M10 x 30	16	60	30	70	12
M10 x 60	16	60	60	70	12
M12 x 15	20	80	15	90	14
M12 x 30	20	80	30	90	14
M12 x 75	20	80	75	90	14
M16 x 35	24	105	35	125	18

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PERFORMANCE DATA

Dimensions				Concrete C20 / C25			Brickwork > 20N/mm ² *	
Size	Centre Spacing mm	Edge Distance mm	Minimum Concrete Thickness mm	Rec Load Tension kN	Rec Load Shear kN	Rec Torque Nm	Rec Load Brickwork Tension or Shear kN	Rec Torque Nm
M6	130		100	3.00	2	5	1.75	3
M8	150		100	4.50	4	15	2.25	7
M10	180		100	7.00	8	30	3.00	15
M12	250		120	10.00	10	45	4.25	23
M16	325		190	19.00	20	100	-	-

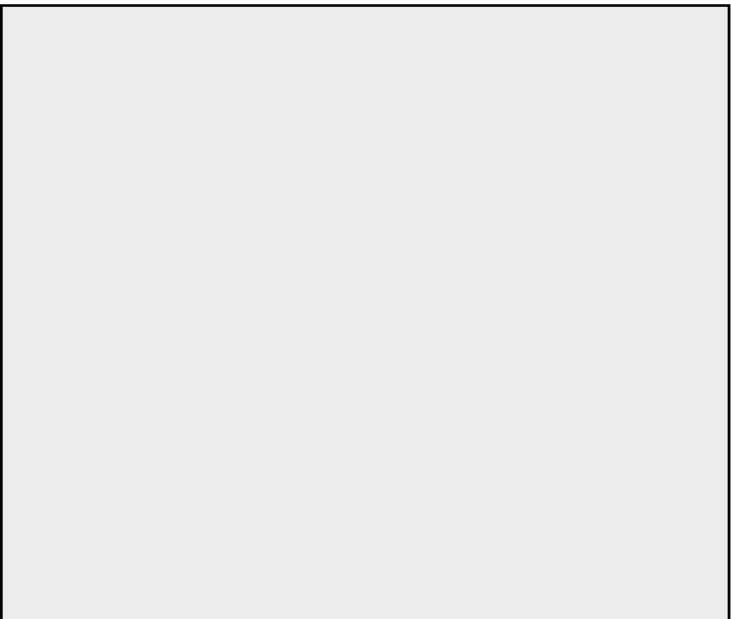
* For Brickwork fix in the centre line of bricks 35 to 40 mm from ends and avoid top three courses, edge bricks, part bricks and mortar joints

CENTRE TO CENTRE SPACING: For Tensile and Shear loads

Shield Anchor: Standard embedment: Axial spacing Tension & Shear

	M6	M8	M10	M12	M16
Axial mm					
60	0.75				
65	0.77				
75	0.81	0.75			
80	0.83	0.77			
90	0.88	0.80	0.75		
100	0.92	0.83	0.78		
120	1.00	0.90	0.83	0.75	
150		1.00	0.92	0.81	
160			0.94	0.83	0.75
180			1.00	0.88	0.79
210				0.94	0.83
240				1.00	0.88
310					1.00
Smin	65	75	90	120	160
H min	100	100	100	120	190
hef	40	50	60	80	105

Notes



EDGE DISTANCE: Tensile loads and Shear loads away from edge

Shield Anchor: Standard embedment: Edge Distance / Tension

	M6	M8	M10	M12	M16
Edge mm					
45	0.69				
50	0.74				
60	0.84	0.67			
70	0.94	0.74	0.68		
80	1.00	0.81	0.74		
90		0.88	0.80	0.69	
100		0.95	0.87	0.74	0.67
110		1.00	0.93	0.79	0.72
120			1.00	0.84	0.76
150				1.00	0.89
180					1.00
210					
C Min	45	60	70	90	100
H min	100	100	100	120	190
hef	40	50	60	80	105

EDGE DISTANCE: Shear loads towards edge

Shield Anchor: Standard embedment: Edge Distance / Shear

	M6	M8	M10	M12	M16
Edge mm					
60	0.53				
70	0.63				
80	0.73	0.53			
90	0.79	0.63			
100	0.92	0.73	0.53		
110	1.00	0.78	0.60		
120		0.89	0.63	0.53	
140		1.00	0.75	0.67	
170			0.89	0.83	0.54
200			1.00	0.94	0.63
240				1.00	0.77
300					0.92
340					1.00
C Min	60	80	100	120	170
H min	100	100	100	120	190
hef	40	50	60	80	105