THROUGHBOLT NA STAINLESS STEEL A4

The Stainless Steel Through bolt is a torque controlled through fixing suitable for use in concrete from C20/25 to C50/60. Manufactured from Grade A4-316 Stainless Steel it offers good corrosion resistance outdoors and in wet internal conditions together with excellent load bearing capacities.

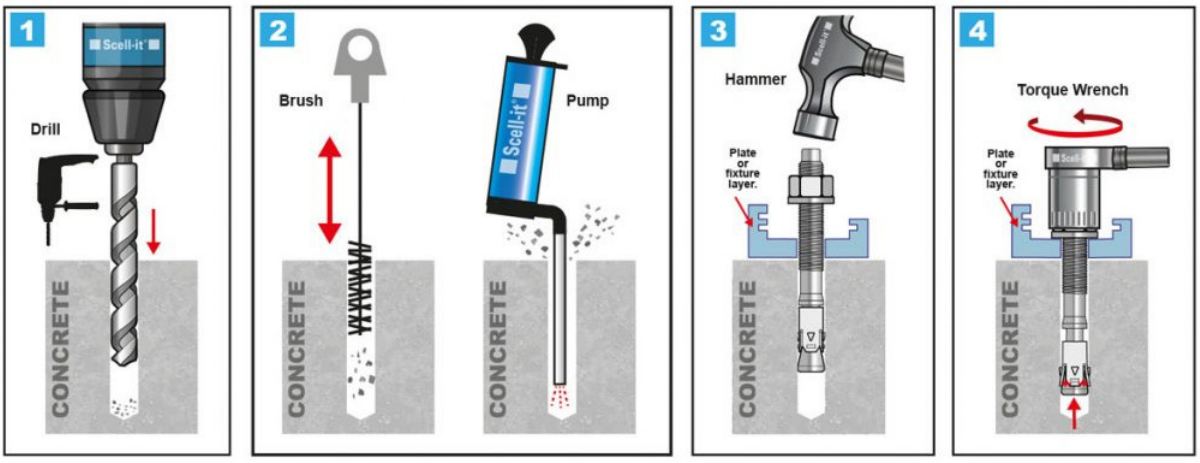
FEATURES

- Through fixing
- Suitable for indoor and outdoor use
- Medium to Heavy Duty applications
- Torque controlled expansion
- Supplied pre-assembled for rapid installation

RANGE DATA

Part Number	Thread Diameter mm	Anchor Length mm	Hole Diameter mm	Maximum Fixlure Thickness mm	Fixture Clearance Hole mm	Thread Length mm	Embedment Depth mm	Mimimum Hole Depth mm	Minimum Structure Thickness mm	Tightening Torque Nm
NA-TBA4-08075	8	75	8	10	9	25	55	65	100	15
NA-TBA4-08100		100		30		25				
NA-TBA4-08120		120		55		25				
NA-TBA4-10080	10	85	10	10	12	30	60	70	100	25
NA-TBA4-10100		105		30		30				
NA-TBA4-10120		120		50		30				
NA-TBA4-12100	12	105	12	10	14	35	80	90	130	50
NA-TBA4-12120		120		20		35				
NA-TBA4-12140		140		50		35				
NA-TBA4-16125	16	130	16	10	18	40	98	110	170	100
NA-TBA4-16145		145		30		40				

INSTALLATION



1. Drill the hole
Drilling must follow manufacturer's recommended values for depth and diameter of anchor.

2. Clean the hole
Remove dust and debris from the hole with a pump and/or a suitably sized brush (preferably a wire brush).

3. Place the anchor
Place the anchor through the fixture/material to be fixed
and into the hole, at the correct angle.

4. Apply torque
Tighten the anchor to recommended torque with a torque wrench.

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PERFORMANCE DATA (20/25 Concrete)

Thread Diameter mm	Characteristic Resistance kN		Design Resistance kN		Approved Load kN		Spacing mm	Edge Distance mm	
	Tensile	Shear	Tensile	Shear	Tensile	Shear	Tensile & Shear	Temile	Shear
6	7.5	7.	5.0	5.6	3.6	4.0	35	35	100
8	12.0	12.0	8.0	9.6	5.7	6.9	85	85	165
10	16.0	16.8	10.7	11.2	7.6	8.0	130	115	180
12	25.0	27.0	16.7	21.6	11.9	15.4	175	160	280
16	36.1	50.0	24.0	40.0	17.2	28.6	240	205	420
20	50.4	86.0	33.6	61.4	24.0	43.9	300	280	515

Shear Loads towards a free edge are for single anchors where Spacing > 3 x Edge Distance

Reduced Design Resistance (kN) • Divide Loads by *1.4 for* Approved Loads

Edge Distance (C20/25 Concrete) for single anchors

Edge mm	Tensile Resistance						Shear Resistance					
	M6	M8	M10	M12	M16	M20	M6	M8	M10	M12	M16	M20
35	5.0						1.6					
50		6.0					2.7	3.0				
55		6.3					3.1	3.4	3.7			
65		6.8					3.9	4.4	4.8			
75		7.5	8.1				4.5	5.0	5.5	6.6		
85		8.0	8.7				5.0	5.6	6.1	8.0	9.1	
9			9.4				5.5	6.1	6.7	8.9	10.7	
100			9.7				5.6	6.4	6.9	9.3	11.6	13.0
115			10.7	13.3				7.2	7.8	10.4	13.6	16.0
125				14.1				7.7	8.4	11.2	14.6	18.1
135				14.8				8.2	8.9	11.9	15.5	20.2
160				16.7	20.0			9.4	10.3	13.7	17.9	23.2
165					20.4			9.6	10.5	14.1	18.4	23.8
170					20.9				10.8	14.4	18.8	24.4
180					21.8				11.2	15.1	19.8	25.6
200					23.6	26.7				16.5	21.6	28.0
205					24.0	26.8				16.9	22.0	28.6
230						29.0				18.6	24.2	31.4
250						30.8				19.9	26.0	33.7
280						33.6				21.6	28.5	37.0
300											30.2	39.2
320											31.9	41.4
370											36.0	46.7
420											40.0	51.9
470												57.0
470												60.0
515												61.4

Spacing (C20/25 Concrete)

Spacing mm	Tensile Resistance per Pair of Anchors					
	M6	M8	M10	M12	M16	M20
35	10.0	12.4				
40		12.8				
45		13.2	14.7			
50		13.5	15.1			
60		14.3	15.8	23.0		
65		14.6	16.2	23.5		
75		15.4	17.0	24.4		
80		15.8	17.4	24.8	32.1	
85		16.0	17.8	25.3	32.6	
100			18.9	26.6	34.1	44.8
105			19.3	27.1	34.6	45.4
110			19.7	27.5	35.1	45.9
115			20.1	28.0	35.6	46.5
130			21.3	29.4	37.1	48.2
150				31.2	39.1	50.4
175				33.3	41.6	53.2
200					44.1	56.0
215					45.6	57.7
230					47.1	59.4
240					48.1	60.5
270						63.8
300						67.2

Influence of Concrete Strength

Concrete Strength		C20/25	C25/30	C30/37	C40/50	C45/55	C50/60
Cylinder	N/mm²	20	25	30	40	4	50
Cube	N/mm²	25	30	37	50	55	60
Factor		1	1.1	1.22	1.41	1.48	1.55

When using concrete factors check all other information to ensure Steel Tensile and Shear Resistance is not exceeded

Steel Design Resistance for single anchor

		M6	M8	M10	M12	M16	M20
Tension	kN	6.6	12.0	20.0	29.3	58.6	79.7
Shear	kN	5.6	9.6	11.2	21.6	40.0	61.4

Anchor Mechanical Properties

		M6	M8	M10	M12	M16	M20
Tensile Strength	N/mm²	700	700	700	700	700	700
Yield Strength	N/mm²	450	450	450	450	450	450
Nut A/F	mm	10	13	17	19	24	30
Washer Diameter	mm	12	17	21	24	30	37