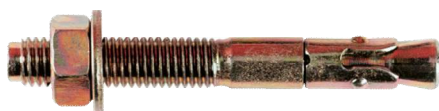




Throughbolt B.Z.P.

Specification



Product Information

A zinc plated, yellow passivated, torque controlled through fixing suitable for use in non-cracked concrete range between C20/25 & C50/60.

Features

Through Fixing
 Medium to heavy duty loads
 Torque controlled expansion
 Supplied pre-assembled for rapid installation

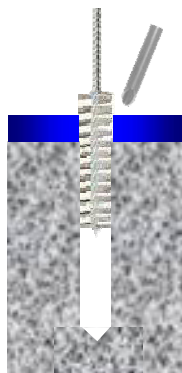
Range Data

Part Number	Thread Diam	Anchor Length	Hole Diam	Maximum Fixture Thickness	Fixture Clearance Hole	Thread Length	Embedment Depth	Minimum Hole Depth	Structure Thickness	Installation Torque
mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	Nm
TB06045	6	45	6	5	7	20	30	35	100	6
TB06055		55		15		30				
TB06085		85		45		60				
TB08050	8	50	8	5	9	20	35	40	100	10
TB08065		65		20		35				
TB08080		80		35		50				
TB08100		100		55		70				
TB08130		130		85		85				
TB10065	10	65	10	8	12	25	45	50	125	28
TB10075		75		18		35				
TB10090		90		33		50				
TB10100		100		43		50				
TB10120		120		63		80				
TB12080	12	80	12	5	14	30	60	65	170	34
TB12100		100		25		50				
TB12120		120		45		70				
TB12140		140		65		90				
TB12180		180		105		90				
TB16105	16	105	16	10	18	60	75	85	200	85
TB16125		125		30		65				
TB16150		150		55		90				
TB16175		175		80		90				
TB16220		220		125		90				
TB20130	20	130	20	20	22	60	85	100	240	160
TB20160		160		50		60				
TB20215		215		105		60				
TB24180	24	180	24	45	26	65	105	120	300	280
TB24260		260		125		65				

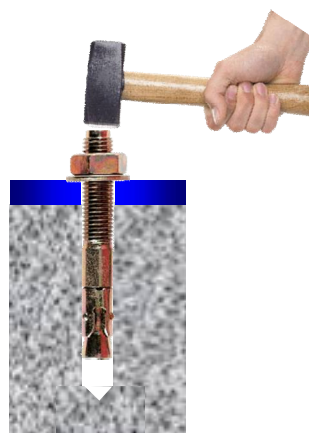
Installation Instructions



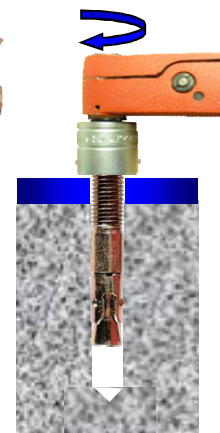
Position fixture and drill correct diameter hole to correct depth



Clean hole by brushing and blowing to remove all dust and drilling debris



Insert assembled anchor through fixture into concrete



Tighten with torque wrench to recommended torque



Non-Cracked concrete

Performance Data (20/25 Concrete)									
Thread Diam	Characteristic Resistance		Design Resistance		Recommended Resistance ($\gamma_F=1.4$)		Design Spacing	Design Edge Distance	
mm	kN		kN		kN		mm	mm	
	Tensile	Shear	Tensile	Shear	Tensile	Shear	Tensile & Shear	Tensile	Shear
6	5.5	5.0	3.0	3.7	2.2	2.4	70	35	70
8	7.4	9.2	4.1	4.9	2.9	3.5	85	45	85
10	11.2	14.5	6.2	7.5	4.4	5.4	110	55	100
12	17.9	21.2	9.8	11.8	7.0	8.4	150	75	115
16	23.8	33.4	13.2	20.0	9.4	14.3	170	95	165
20	30.1	49.0	16.7	29.3	11.8	20.9	215	110	200
24	40.9	70.6	22.7	42.3	16.2	30.1	260	130	230

Shear Loads towards a free edge are for single anchors where Spacing $\geq 3 \times$ Edge Distance

For variations in structure thickness, reduced spacing and edge calculations download the free [Anchor Calculation Program](http://www.jcpfixings.co.uk) from www.jcpfixings.co.uk

Influence of concrete strength

Concrete strength		C20/25	C25/30	C30/37	C40/50	C45/55	C50/60
Cylinder	N/mm ²	20	25	30	40	45	50
Cube	N/mm ²	25	30	37	50	55	60
Factor		1.0	1.1	1.22	1.41	1.48	1.55