UNIFIX

THUNDERBOLT™

HEXSTONE LIMITED

Features

Through Fixing, Undercutting action, Expansion free, Fast and secure installation

Base Material

C20/25 to C50/60 Non-Cracked concrete, Hollow concrete planks, Solid brickwork, Concrete blocks, Natural stone.

Range Data

Countersunk

Zinc plated and yellow passivated min 5µm

					Shallow Embedment		Deep Embedment			
Part Number	Drill Diam	Thread Diam	Anchor Length	Fixture Clearance Hole	Maximum Fixture Thickness	Minimum Hole Depth	Maximum Fixture Thickness	Minimum Hole Depth	Torx Drive	Tightening Torque
	mm	mm	mm	mm	mm	mm	mm	mm		Nm
V35137	5	6	30	7	5	35	N/A	50	T25	15
V35138			50		25		13			
V35139			75		50		38			
V35140			100		75		63			
V35141	6	8	50	10	20	40	5	55	T30	25
V35142			75		45		30			
V35143			100		70		55			
V35144			130		100		85			
V35145			150		120		105			

Flange Head

Zinc plated and yellow passivated min 5µm

					Shallow Embedment		Deep Embedment			
Part Number	Drill Diam	Thread Diam	Anchor Length	Fixture Clearance Hole	Maximum Fixture Thickness	Minimum Hole Depth	Maximum Fixture Thickness	Minimum Hole Depth	Drive	Tightening Torque
	mm	mm	mm	mm	mm	mm	mm	mm	mm	Nm
V35146	5	6	30	7	5	35	N/A	50	8	15
V35147			50		25		13			
V35148			75		50		38			
V35149			100		75		63			
V35173	6	8	30	10	0(5)	40(35)	N/A	55	10	25
V35150			50		20		5			
V35151			75		45		30			
V35152			100		70		55			
V35153			130		100		85			
V35154			150		120		105			

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Range Data

Hexagon Head

Zinc plated and yellow passivated min 5µm

					Shallow Embedment		Deep Embedment			
Part Number	Drill Diam	Thread Diam	Anchor Length	Fixture Clearance Hole	Maximum Fixture Thickness	Minimum Hole Depth	Maximum Fixture Thickness	Minimum Hole Depth	Head A/F	Tightening Torque
	mm	mm	mm	mm	mm	mm	mm	mm	mm	Nm
V35155	8	10	60	12	20	55	N/A	75	15	40
V35156			75		35		15			
V35157			100		60		40			
V35158			130		90		70			
V35159			150		110		90			
V35160	10	12	60	14	10	70	N/A	95	17	60
V35161			75		25		N/A			
V35162			100		50		25			
V35163			130		80		55			
V35164			150		100		75			
V35165	12	14	75	16	15	85	N/A	115	19	80
V35166			100		40		10			
V35167			130		70		40			
V35168			150		90		60			
V35169			200		140		110			
V35174	14	16	75	18	5	100	N/A	125	24	90
V35175			100		30		5			
V35176			130		60		35			
V35177			150		80		55			
V35178			200		130		105			

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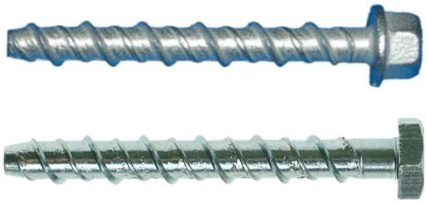
Range Data



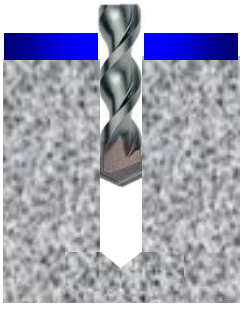
Flange Head 6mm

Hexagon Head 8mm, 10mm, 12mm & 16mm

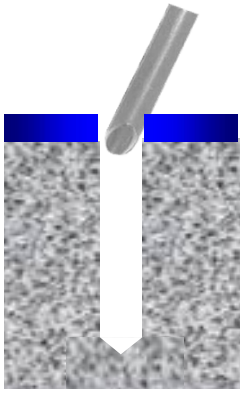
Mechanical Galvanised min 40µm

					Shallow Embedment		Deep Embedment			
Part Number	Drill Diam	Thread Diam	Anchor Length	Fixture Clearance Hole	Maximum Fixture Thickness	Minimum Hole Depth	Maximum Fixture Thickness	Minimum Hole Depth	Drive	Tightening Torque
	mm	mm	mm	mm	mm	mm	mm	mm	mm	Nm
V71783	6	8	50	10	20	40	5	55	10	25
V71784			75		45		30			
V71785			100		70		55			
V71786	8	10	60	12	20	55	N/A	75	15	40
V71787			100		60		40			
V71788			150		110		90			
V71789	10	12	60	14	10	70	N/A	95	17	60
V71790			100		50		25			
V71791			150		100		75			
V71792	12	14	100	16	40	85	10	115	19	80
V71793			150		90		60			
V71794			200		140		110			
V35170	16	18	100	20	20	110	N/A	145	27	100
V35171			150		70		35			
V35172			200		120		85			

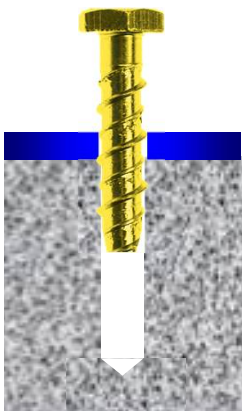
Installation Instructions



Position fixture and drill correct diameter hole to correct depth



Blow out dust and drilling debris from hole



Insert anchor through fixture into concrete using suitable impact wrench

Tighten with torque wrench to recommended torque

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Shallow Embedment

Performance Data (C20/25 non-cracked Concrete)												
Drill Diam mm	Embedment Depth mm	Minimum Concrete Thickness mm	Characteristic Resistance kN		Design Resistance kN		Approved Resistance kN		Spacing mm	mm	Edge Distance mm	
			Tensile	Shear	Tensile	Shear	Tensile	Shear	Tensile	Shear	Tensile	Shear
5	25	100	3.1	3.2	1.7	2.0	1.2	1.4	50	50	30	40
6	30	100	3.9	3.8	2.1	2.5	1.5	1.7	60	60	40	40
8	40	100	6.3	6.3	3.4	4.2	2.4	3.0	70	80	50	50
10	50	100	9.3	9.1	5.0	6.0	3.5	4.2	100	100	60	70
12	60	100	12.5	12.7	6.9	8.4	4.9	6.0	120	120	70	90
14	70	100	15.3	15.2	8.4	10.3	6.0	7.3	130	140	80	110
16	80	105	19.0	18.9	10.3	12.4	7.3	8.8	160	160	110	120

Deep Embedment

Performance Data (C20/25 non-cracked Concrete)												
Drill Diam mm	Embedment Depth mm	Minimum Concrete Thickness mm	Characteristic Resistance kN		Design Resistance kN		Approved Resistance kN		Spacing mm	mm	Edge Distance mm	
			Tensile	Shear	Tensile	Shear	Tensile	Shear	Tensile	Shear	Tensile	Shear
5	37	100	5.0	6.6	2.7	4.4	1.9	3.1	40	80	30	60
6	45	100	7.5	8.7	4.1	5.6	2.9	4.0	70	90	40	70
8	60	120	10.0	13.7	5.5	9.1	3.9	6.5	70	130	50	90
10	75	125	15.0	20.0	8.3	13.1	5.9	9.3	90	160	60	120
12	90	140	19.0	40.5	10.5	32.3	7.5	23.0	90	160	70	300
14	95	170	22.0	54.1	12.2	35.7	8.7	25.5	130	200	80	300
16	115	190	34.0	74.9	18.8	49.9	13.4	35.6	200	250	110	390

Influence of concrete strength

		8, 10 & 12mm			14 & 16mm		
Concrete strength		C30/37	C40/50	C50/60	C30/37	C40/50	C50/60
Cylinder	N/mm^2	30	40	50	20	40	50
Cube	N/mm^2	37	50	60	25	50	60
Factor		1.17	1.32	1.42	1.22	1.41	1.55

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