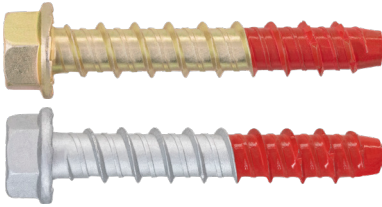




## BLUESCOPE STEEL™ ENDUROFRAME®



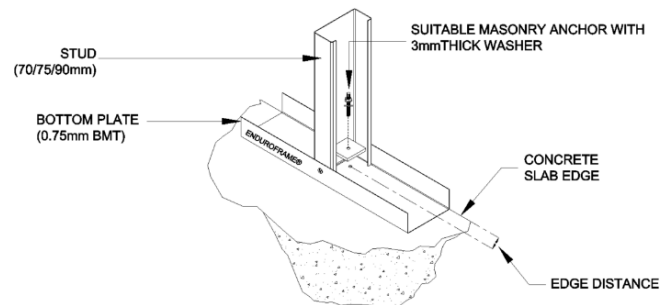
## THUNDERBOLT®PRO

Tensile Capacities of the Enduroframe® 70mm,75mm & 90mm framing system bottom plate (0.75mm BMT) concrete slab connection

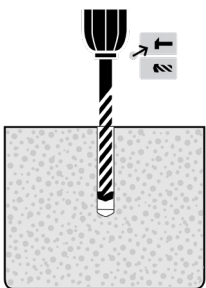
Anchor Diameter (mm)	Anchor Length (mm)	Nominal Embedment Depth (mm)	Effective Embedment Depth (mm)	Maximum Fixture Thickness (mm)	Drilled Hole Depth (mm)	Minimum Anchor Spacing (mm)	Maximum Torque Capacity (Nm)	Ultimate Limit State Tensile Design Load with edge reduction (kN) $\phi_{Nuc}$					
								35mm		45mm		60mm	
								20 MPa	25 MPa	20 MPa	25 MPa	20 MPa	25 MPa
6	45	40	30	5	50	35	160	2.6	2.9	3.1	3.5	3.1	3.5
	60	55	43	5	65			4.3	4.8	5	5.6	6.1	6.8
8	55	50	38	5	60	35	300	3.2	3.5	3.7	4.1	4.4	4.9
	100	65	51	35	75			5.1	5.7	5.8	6.5	6.9	7.8
10	60	55	42	5	65	50	400	-	-	4.8	5.4	5.9	6.7
	90	75	59	15	85			6.6	7.4	7.8	8.8		
	90	85	67	5	95			7.6	8.5	8.8	9.9		
12	80	75	58	5	90	75	650	-	-	6.6	7.4	7.7	8.7
	120	105	84	15	120			9.6	10.7	10.9	12.2		

### Notes:

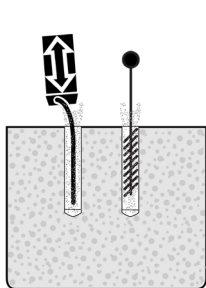
1. Tension Capacities are based on AS 5216 Cracked Concrete Failure Modes.
2. Tension Capacities are based on a fixture thickness of 3.75mm (3mm washer and bottom plate 0.75mm BMT).
3. Maximum Torque Capacity relates to the capacity of the Impact Screwdriver. Excessive torque during installation may damage the anchor.
4. 3mm washers are required for all hold downs unless stated otherwise by Bluescope Steel™



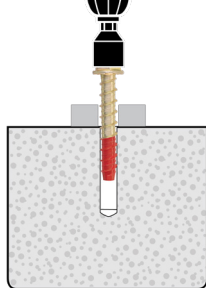
## INSTALLATION (SOLID CONCRETE)



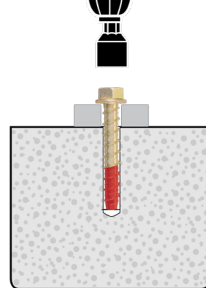
**DRILL HOLE**  
With the correct diameter carbide drill bit, drill a hole into the base material to the correct depth using a hammer drill in rotary and hammer mode.



**BLOW AND CLEAN**  
Using a hand pump, compressed air or a vacuum system, remove dust and debris from the drilled hole.



**INSTALL**  
Use a correct powered impact driver or a torque wrench that does not exceed the maximum torque  $T_{impact, max}$  or  $T_{inst, max}$  respectively. Attach an appropriately sized hex socket or six lob bit to the impact driver. Mount the screw anchor head in the socket / bit.



**APPLY TORQUE**  
Drive the screw anchor with an impact driver or a torque wrench through the fixture and into the drilled hole until the anchor head is seated against the fixture. The anchor must be snug tight after installation. Do not spin the socket off the anchor to disengage.