

Technical data sheet

SIMPSON

Strong-Tie

THD

High capacity undercut anchor, concrete screw

Undercut anchor for heavy duty

Features

Material

- Electro-galvanized steel

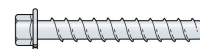
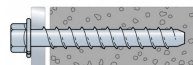
Benefits

- Quicker installation than expansion anchor
- aesthetic hexagonal head
- Large
- Thread design undercuts to efficiently transfer the load to the base material
- Standard fractional sizes
- Specialized heat-treating process creates tip hardness for better cutting without compromising the ductility
- No special drill bit required — designed to install using standard-sized ANSI tolerance drill bits
- Testing shows the Titen HD® installs in concrete with 50% less torque than competitor anchors
- Hex-washer head requires no separate washer and provides a clean installed appearance
- Removable — ideal for temporary anchoring (e.g., formwork, bracing) or applications where fixtures may need to be moved (reuse of the anchor to achieve listed load values is not recommended)

Applications

Suitable On

- Cracked and uncracked concrete



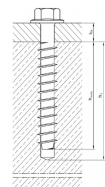
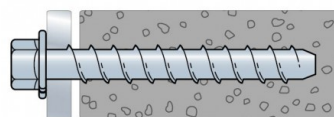
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Product Dimensions

References	Item Code	Ø Thread [mm]	Total Length [mm]	Max. Fixture Thickness [mm]	Maximum diameter of hole in the fixture [mm]	Ø drilling hole x min. drilling depth [mm]	Weight [kg]
THD M8-70/5	THD08070	10.3	70	5	12	8 x 75	-
THD M8-80/15	THD08080	10.3	80	15	12	8 x 75	-
THD M8-100/35	THD08100	10.3	100	35	12	8 x 75	-
THD M8-120/55	THD08120	10.3	120	55	12	8 x 75	-
THD M8-160/95	THD08160	10.3	160	95	12	8 x 75	0.073
THD M10-80/5	THD10080	12.5	80	5	14	10 x 85	-
THD M10-100/25	THD10100	12.5	100	25	14	10 x 85	-
THD M10-120/45	THD10120	12.5	120	45	14	10 x 85	-

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Design Resistance

References	Design resistance																	Bearing capacity [kN]
	Tension - N_{Rd} [kN]								Shear - V_{Rd} [kN]									
	Cracked concrete				Non-cracked concrete				Cracked concrete				Non-cracked concrete					
	C20/25	C30/37	C40/50	C50/60	C20/25	C30/37	C40/50	C50/60	C20/25	C30/37	C40/50	C50/60	C20/25	C30/37	C40/50	C50/60		
THD M8-70/5	3.3	4.1	4.7	5.2	4.2	5.1	5.9	6.5	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	2	
THD M8-80/15	3.3	4.1	4.7	5.2	4.2	5.1	5.9	6.5	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	2	
THD M8-100/35	3.3	4.1	4.7	5.2	4.2	5.1	5.9	6.5	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	2	
THD M8-120/55	3.3	4.1	4.7	5.2	4.2	5.1	5.9	6.5	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	2	
THD M8-160/95	3.3	4.1	4.7	5.2	4.2	5.1	5.9	6.5	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	2	
THD M10-80/5	4.2	5.1	5.9	6.5	5.8	7.1	8.2	9	18.3	18.3	18.3	18.3	18.3	18.3	18.3	18.3	5	
THD M10-100/25	4.2	5.1	5.9	6.5	5.8	7.1	8.2	9	18.3	18.3	18.3	18.3	18.3	18.3	18.3	18.3	5	
THD M10-120/45	4.2	5.1	5.9	6.5	5.8	7.1	8.2	9	18.3	18.3	18.3	18.3	18.3	18.3	18.3	18.3	5	

- 1) The design resistances have been calculated using the partial safety factors for resistances stated in ETA-12/0060.
- 2) The recommended loads have been calculated using the partial safety factors for resistances stated in ETA-12/0060 and with a partial safety factor for actions of $\gamma_F=1.4$.
- 3) The load figures are valid for unreinforced concrete and reinforced concrete with a rebar spacing $s \geq 15$ cm (ϕ diameter) or with a rebar spacing $s \geq 10$ cm, if the rebar diameter is 10 mm or smaller.
- 4) "For combined tension and shear loads or anchor groups and/or in case of edge influence, a calculation per ETAG 001, Annex C, design method A or according to CEN/TS 1992-4:2009 design method A shall be performed. Anchors under fire exposures are to be designed in accordance with EOTA -TR 020:2004 or CEN/TS 1992-4:2009 Annex D. For details see ETA-12/0060.

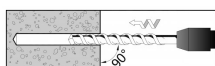
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Installation

Installation

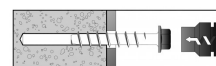
- Drill a hole in the base material using a carbide drill bit the same diameter as the nominal diameter of the anchor to be installed. Drill the hole to the specified embedment depth plus minimum hole depth overall (see table below right) to allow the thread tapping dust to settle, and blow it clean using compressed air. (Overhead installations need not be blown clean.) Alternatively, drill the hole deep enough to accommodate embedment depth and the dust from drilling and tapping.
- Insert the anchor through the fixture and into the hole.
- Tighten the anchor into the base material until the hex-washer head contacts the fixture.



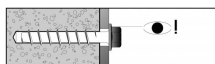
Drill hole



Clean hole



Setting screw anchor with an impact screw driver



Check connection

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