Titen Turbo™
Concrete and Masonry Screw Anchor

SIMPSON Strong-Tie®

Easy, Fast and Reliable

You've Got to Drive It to Believe It!

Available in Blue, Bronze, Silver, White... And Introducing a NEW Black-Coated Version.

(800) 999-5099
strongtie.com

Smooth driving with less torque while providing superior holding power

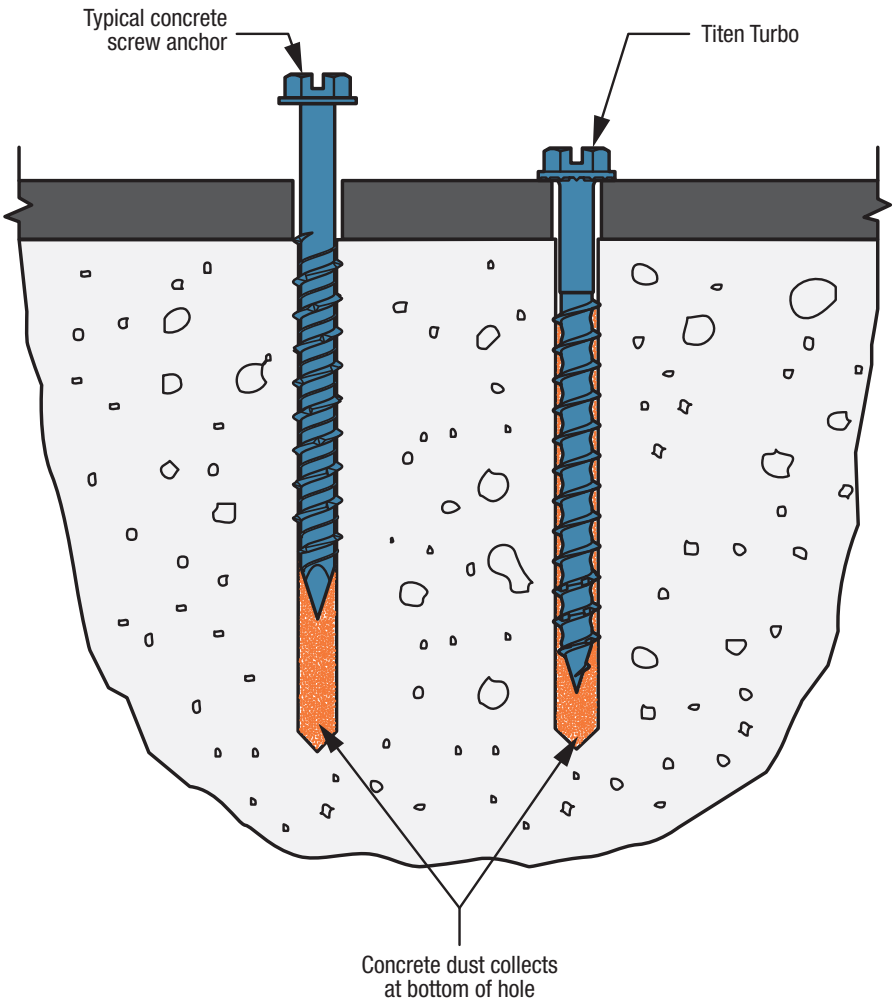
We asked contractors how we could improve on existing concrete screws, and the result of the feedback is the Titen Turbo screw anchor for concrete and masonry. Titen Turbo delivers what pros want — consistently trouble-free installation, and fastening strength they can depend on.

6-lobe drive

Titen Turbo Flat-Head Screw
US Patent 11,002,305

Titen Turbo Hex-Head Screw
US Patent 11,002,305

Titen Turbo Trim-Head Screw
US Patent 11,002,305



Torque Reduction Channel Displaces Dust for Trouble-Free Installation

The secret behind the performance of the Titen Turbo screw anchor lies in its patented thread design, which enables smooth driving with less torque while providing superior holding power. The revolutionary Torque Reduction Channel between the threads gives drilling dust a place to go, thereby significantly reducing torque-related issues like binding, stripping and snapping without compromising strength.

Titen Turbo™ Concrete and Masonry Screw Anchor

Features

- Patented Torque Reduction Channel that displaces dust where it can't obstruct the thread action, reducing the likelihood of binding in the hole.
- Available with either a hex head or, for a flush profile, a 6-lobe-drive countersunk flat head or trim head.
- 6-lobe drive provides positive bit engagement resulting in easy installations and long bit life.
- 6-lobe bit included in packaging for countersunk flat-head and trim-head version.
- Superior tension load performance.
- Matched-tolerance bit not required; use a standard ANSI drill bit for installation.
- Serrated screw point for fast starts when fastening wood.
- Designed for installation with an impact driver or cordless drill. Installation using the Titen Turbo Installation Tool is recommended.
- Use in dry interior environments only.
- Code listed in accordance with ICC-ES AC193 for uncracked concrete and ICC-ES AC106 for masonry applications without cleaning dust from predrilled holes.

Codes:

IAPMO UES ER-712 (uncracked concrete)
(City of LA Supplement within ER-712);

IAPMO UES ER-716 (masonry)
(City of LA Supplement within ER-716);

FL16230 (concrete and masonry)

Material: Carbon steel

Coating: Zinc plating with baked-on ceramic coating

Versatile Applications

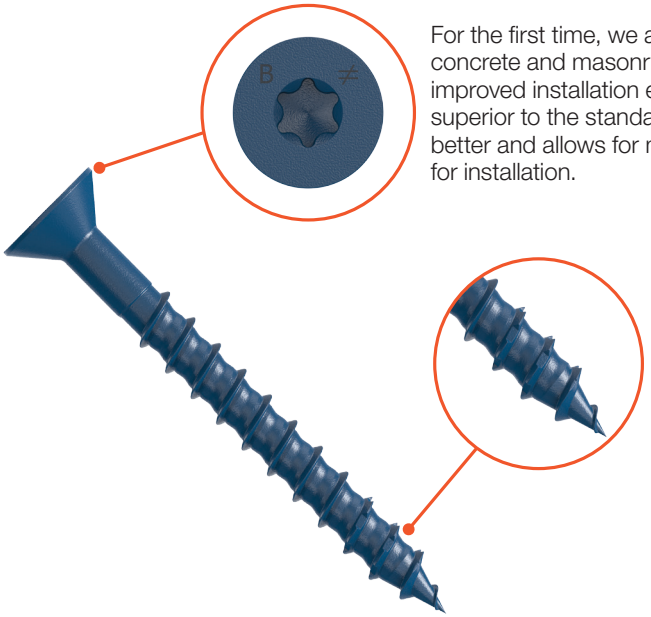
Sliding door track installation

Window frames

Furring strips

Anatomy of the Titen Turbo (TNT) Concrete and Masonry Screw Anchor

Next Generation TNT screw anchor designed to improve installation experience with lower torque and higher loads than the competition.



For the first time, we are introducing a 6-lobe drive concrete and masonry screw anchor to provide improved installation experience. This design is superior to the standard Phillip's bit as it grabs better and allows for more torque to be provided for installation.

The revolutionary Torque Reduction Channel features a patented asymmetrical thread design with dust channel that allows more space for dust.

Serration on leading threads to effectively cut the concrete or masonry.

Pointed tip for easy attachment of wood to concrete or for wood-to-wood applications.

Blue Titen Turbo Product Data (3/16" diameter)

Size	Head Style	Model No.	Drill Bit Dia.	Quantity	
				Pack	Carton
3/16 x 1 1/4	1/4" Hex	TNT18114H	5/32"	100	1,600
3/16 x 1 3/4		TNT18134H		100	500
3/16 x 2 1/4		TNT18214H		100	500
3/16 x 2 3/4		TNT18234H		100	500
3/16 x 3 1/4		TNT18314H		100	400
3/16 x 3 3/4		TNT18334H		100	400
3/16 x 1 1/4	T25 6-Lobe Flat	TNT18114TF	5/32"	100	1,600
3/16 x 1 3/4		TNT18134TF		100	500
3/16 x 2 1/4		TNT18214TF		100	500
3/16 x 2 3/4		TNT18234TF		100	500
3/16 x 3 1/4		TNT18314TF		100	400
3/16 x 3 3/4		TNT18334TF		100	400

Blue Titen Turbo Product Data (1/4" diameter)

Size	Head Style	Model No.	Drill Bit Dia.	Quantity	
				Pack	Carton
1/4 x 1 1/4	5/16" Hex	TNT25114H	3/16"	100	1,600
1/4 x 1 3/4		TNT25134H		100	500
1/4 x 2 1/4		TNT25214H		100	500
1/4 x 2 3/4		TNT25234H		100	500
1/4 x 3 1/4		TNT25314H		100	400
1/4 x 3 3/4		TNT25334H		100	400
1/4 x 4		TNT25400H		100	400
1/4 x 5		TNT25500H		100	400
1/4 x 6		TNT25600H		100	400
1/4 x 1 1/4	T30 6-Lobe Flat	TNT25114TF	3/16"	100	1,600
1/4 x 1 3/4		TNT25134TF		100	500
1/4 x 2 1/4		TNT25214TF		100	500
1/4 x 2 3/4		TNT25234TF		100	500
1/4 x 3 1/4		TNT25314TF		100	400
1/4 x 3 3/4		TNT25334TF		100	400
1/4 x 4		TNT25400TF		100	400

Black Titen Turbo Product Data (3/16" diameter)

Size	Head Style	Model No.	Drill Bit Dia.	Quantity	
				Pack	Carton
3/16 x 1 1/4	1/4" Hex	TNTBL18114H	5/32"	100	1,600
3/16 x 1 3/4		TNTBL18134H		100	500
3/16 x 2 3/4		TNTBL18234H		100	500
3/16 x 3 1/4		TNTBL18314H		100	400
3/16 x 1 1/4	T25 6-Lobe Flat	TNTBL18114TF	5/32"	100	1600
3/16 x 1 3/4		TNTBL18134TF		100	500
3/16 x 2 1/4		TNTBL18214TF		100	500
3/16 x 2 3/4		TNTBL18234TF		100	500
3/16 x 3 1/4		TNTBL18314TF		100	400

Black Titen Turbo Product Data (1/4" diameter)

Size	Head Style	Model No.	Drill Bit Dia.	Quantity	
				Pack	Carton
1/4 x 1 1/4	1/4" Hex	TNTBL25114H	3/16"	100	1,600
1/4 x 1 3/4		TNTBL25134H		100	500
1/4 x 2 1/4		TNTBL25214H		100	500
1/4 x 2 3/4		TNTBL25234H		100	500
1/4 x 3 1/4		TNTBL25314H		100	400
1/4 x 3 3/4		TNTBL25334H		100	400
1/4 x 4		TNTBL25400H		100	400
1/4 x 1 3/4	T30 6-Lobe Flat	TNTBL25134TF	3/16"	100	500
1/4 x 2 1/4		TNTBL25214TF		100	500
1/4 x 2 3/4		TNTBL25234TF		100	500
1/4 x 3 1/4		TNTBL25314TF		100	400
1/4 x 4		TNTBL25400TF		100	400

White Titen Turbo Product Data (3⁄16" diameter)

Size	Head Style	Model No.	Drill Bit Dia.	Quantity	
				Pack	Carton
3⁄16 x 1 1⁄4	T25 6-Lobe Flat	TNTW18114TF	5⁄32"	100	1,600
3⁄16 x 1 3⁄4		TNTW18134TF		100	500
3⁄16 x 2 1⁄4		TNTW18214TF		100	500
3⁄16 x 2 3⁄4		TNTW18234TF		100	500
3⁄16 x 3 1⁄4		TNTW18314TF		100	400
3⁄16 x 3 3⁄4		TNTW18334TF		100	400

White Titen Turbo Product Data (1⁄4" diameter)

Size	Head Style	Model No.	Drill Bit Dia.	Quantity	
				Pack	Carton
1⁄4 x 1 1⁄4	T30 6-Lobe Flat	TNTW25114TF	3⁄16"	100	1,600
1⁄4 x 1 3⁄4		TNTW25134TF		100	500
1⁄4 x 2 1⁄4		TNTW25214TF		100	500
1⁄4 x 2 3⁄4		TNTW25234TF		100	500
1⁄4 x 3 1⁄4		TNTW25314TF		100	400
1⁄4 x 3 3⁄4		TNTW25334TF		100	400
1⁄4 x 2 3⁄4	T25 6-Lobe Trim	TNTW25234TTR	3⁄16"	100	500
1⁄4 x 2 3⁄4		TNTW25234TTRB		1,000	—
1⁄4 x 3 1⁄4		TNTW25314TTR		100	400
1⁄4 x 3 1⁄4		TNTW25314TTRB		1,000	—

Silver Titen Turbo Product Data (6-Lobe Flat Head)

Size	Head Style	Model No.	Drill Bit Dia.	Quantity Box
3⁄16 x 1 3⁄4	T25 6-Lobe Flat	TNTS18134TFB	5⁄32"	1,000
3⁄16 x 2 3⁄4		TNTS18234TFB		1,000
3⁄16 x 3 3⁄4		TNTS18334TFB		1,000
1⁄4 x 2 3⁄4	T30 6-Lobe Flat	TNTS25234TFB	3⁄16"	1,000
1⁄4 x 3 1⁄4		TNTS25314TFB		1,000

Bronze Titen Turbo Product Data (6-Lobe Trim Head)

Size	Head Style	Model No.	Bit Size	Quantity	
				Box	Carton
1⁄4 x 2 3⁄4	T25 6-Lobe Trim	TNTB25234TTR	3⁄16"	100	500
1⁄4 x 2 3⁄4		TNTB25234TTRB		1,000	—
1⁄4 x 3 1⁄4		TNTB25314TTR		100	400
1⁄4 x 3 1⁄4		TNTB25314TTRB		1,000	—

Titen Turbo Installation Information and Additional Data[1]

Characteristic	Symbol	Units	Nominal Anchor Diameter (in.)	
			3⁄16	1⁄4
Installation Information				
Drill Bit Diameter	d	in.	5⁄32	3⁄16
Minimum Baseplate Clearance Hole Diameter	d_c	in.	1⁄4	5⁄16
Minimum Hole Depth	h_{hole}	in.	2 1⁄4	2 1⁄4
Embedment Depth	h_{nom}	in.	1 3⁄4	1 3⁄4
Effective Embedment Depth	h_{ef}	in.	1.25	1.20
Critical Edge Distance	c_{ac}	in.	3	3
Minimum Edge Distance	c_{min}	in.	1 3⁄4	1 3⁄4
Minimum Spacing	s_{min}	in.	1	2
Minimum Concrete Thickness	h_{min}	in.	3 1⁄4	3 1⁄4
Additional Data				
Yield Strength	f_{ya}	psi	100,000	
Tensile Strength	f_{uta}	psi	125,000	
Minimum Tensile and Shear Stress Area	A_{se}	in.^{2}	0.0131	0.0211

1. The information presented in this table is to be used in conjunction with the design criteria of ACI 318-19 Chapter 17, ACI 318-14 Chapter 17 or ACI 318-11 Appendix D.

Titen Turbo Tension Strength Design Data[1]

Characteristic	Symbol	Units	Nominal Anchor Diameter (in.)	
			3/16	1/4
Anchor Category	1, 2 or 3	—	1	
Embedment Depth	h_{nom}	in.	1¾	1¾
Steel Strength in Tension				
Tension Resistance of Steel	N_{sa}	lb.	1,640	2,640
Strength Reduction Factor — Steel Failure[2]	φ_{sa}	—	0.65	
Concrete Breakout Strength in Tension				
Effective Embedment Depth	h_{ef}	in.	1.25	1.20
Critical Edge Distance	c_{ac}	in.	3	3
Effectiveness Factor — Uncracked Concrete	k_{uncr}	—	24	
Modification Factor	$\Psi_{c,N}$	—	1.0	
Strength Reduction Factor — Concrete Breakout Failure[3]	ϕ_{cb}	—	0.65	
Pullout Strength in Tension				
Pullout Resistance Uncracked Concrete (f'_c = 2,500 psi)[5]	$N_{p,uncr}$	lb.	1,515	1,515
Strength Reduction Factor — Pullout Failure[4]	ϕ_p	—	0.65	

1. The information presented in this table is to be used in conjunction with the design criteria of ACI 318-19 Chapter 17, ACI 318-14 Chapter 17 or ACI 318-11 Appendix D.
2. The tabulated value of ϕ_{sa} applies when the load combinations of Section 1605.1 of the 2021 IBC, Section 1605.2 of the 2018, 2015, 2012, and 2009 IBC, ACI 318-19, ACI 318-14 Section 5.3 or ACI 318-11 Section 9.2 are used. If the load combinations of ACI 318-11 Appendix C are used, the appropriate value of ϕ must be determined in accordance with ACI 318-11 Section D.4.4.
3. The tabulated value of ϕ_{cb} applies when both the load combinations of Section 1605.1 of the 2021 IBC, Section 1605.2 of the 2018, 2015, 2012, and 2009 IBC, ACI 318-19, ACI 318-14 Section 5.3 or ACI 318-11 Section 9.2 are used and the requirements of ACI 318-19 Section 17.5.3, ACI 318-14 Section 17.3.3 (c) or ACI 318-11 Section D.4.3, as applicable, for Condition B are met. If the load combinations of ACI 318-11 Appendix C are used, the appropriate value of ϕ must be determined in accordance with ACI 318-11 Section D.4.4 for Condition B.
4. The tabulated value of ϕ_p applies when both the load combinations of Section 1605.1 of the 2021 IBC, Section 1605.2 of the 2018, 2015, 2012, and 2009 IBC, ACI 318-19, ACI 318-14 Section 5.3 or ACI 318-11 Section 9.2 are used and the requirements of ACI 318-19 Section 17.5.3, ACI 318-14 Section 17.3.3 (c) or ACI 318-11 Section D.4.3 (c) for Condition B are met. If the load combinations of ACI 318-11 Appendix C are used, the appropriate value of ϕ must be determined in accordance with ACI 318-11 Section D.4.4 for Condition B.
5. The characteristic pullout resistance for greater compressive strengths may be increased by multiplying the tabular value by $(f'_c/2500)^{0.23}$ for ¼" screw anchors. No increase in the characteristic pullout resistance for greater compressive strengths is permitted for 3/16" screw anchors.

Titen Turbo Shear Strength Design Data Into Concrete[1]

Characteristic	Symbol	Units	Nominal Anchor Diameter (in.)	
			3/16	1/4
Anchor Category	1, 2 or 3	—	1	
Embedment Depth	h_{nom}	in.	1¾	1¾
Steel Strength in Shear				
Shear Resistance of Steel	V_{sa}	lb.	475	720
Strength Reduction Factor — Steel Failure	ϕ_{sa}	—	0.60[2]	
Concrete Breakout Strength in Shear				
Outside Diameter	d_a	in.	0.129	0.164
Load Bearing Length of Anchor in Shear	l_e	in.	1.25	1.20
Strength Reduction Factor — Concrete Breakout Failure	ϕ_{cb}	—	0.70[3]	
Concrete Pryout Strength in Shear				
Coefficient for Pryout Strength	k_{cp}	—	1.0	
Strength Reduction Factor — Concrete Pryout Failure	ϕ_{cp}	—	0.70[3]	

1. The information presented in this table is to be used in conjunction with the design criteria of ACI 318-19 Chapter 17, ACI 318-14 Chapter 17 or ACI 318-11 Appendix D.
2. The tabulated value of ϕ_{sa} applies when the load combinations of Section 1605.1 of the 2021 IBC®, Section 1605.2 of the 2018, 2015, 2012, and 2009 IBC, ACI 318-19 and ACI 318-14 Section 5.3, or ACI 318-11 Section 9.2 are used. If the load combinations of ACI 318-11 Appendix C are used, the appropriate value of ϕ must be determined in accordance with ACI 318-11 Section D.4.4.
3. The tabulated values of ϕ_{cb} and ϕ_{cp} apply when both the load combinations of Section 1605.1 of the 2021 IBC, Section 1605.2 of the 2018, 2015, 2012 and 2009 IBC, ACI 318-19, ACI 318-14 Section 5.3 or ACI 318-11 Section 9.2 are used and the requirements of ACI 318-19 Section 17.5.3, ACI 318-14 Section 17.3.3 (c) or ACI 318-11 Section D.4.3, as applicable, for Condition B are met. If the load combinations of ACI 318-11 Appendix C are used, the appropriate value of ϕ must be determined in accordance with ACI 318-11 Section D.4.4 for Condition B.

Allowable Tension Load for Titen Turbo Screw Anchor Installed in Face of Grouted CMU[1,2,3]

Anchor Diameter (in.)	Embedment Depth (in.)	Minimum Dimensions			Allowable Load (lb.)[4]
		Spacing (in.)	Edge (in.)	End (in.)	
3/16	2	3	3 7/8	3 7/8	267
3/16	2	3	1 1/2	3 7/8	267
1/4	2	4	3 7/8	3 7/8	393
1/4	2	4	1 1/2	3 7/8	343

1. The tabulates values are for screw anchors installed in minimum 8"-wide grouted concrete masonry walls having reached a minimum f'_m of 1,500 psi at time of installation.
2. Embedment is measured from the masonry surface to the embedded end of the screw anchor.
3. Screw anchors must be installed in grouted cell. The minimum edge and end distances must be maintained.
4. Allowable loads are based on a safety factor of 5.0 for installations under the IBC® and IRC®.

Allowable Shear Load for Titen Turbo Screw Anchor Installed in Face of Grouted CMU[1,2,3]

Anchor Diameter (in.)	Embedment Depth (in.)	Minimum Dimensions			Direction of Loading	Allowable Load (lb.)[4]
		Spacing (in.)	Edge (in.)	End (in.)		
3/16	2	3	3 7/8	3 7/8	Toward edge, parallel to wall end	218
3/16	2	3	1 1/2	3 7/8	Toward wall end, parallel to wall edge	218
1/4	2	4	3 7/8	3 7/8	Toward edge, parallel to wall end	342
1/4	2	4	1 1/2	3 7/8	Toward wall end, parallel to wall edge	283

1. The tabulates values are for screw anchors installed in minimum 8"-wide grouted concrete masonry walls having reached a minimum f'_m of 1,500 psi at time of installation.
2. Embedment is measured from the masonry surface to the embedded end of the screw anchor.
3. Screw anchors must be installed in grouted cell. The minimum edge and end distances must be maintained.
4. Allowable loads are based on a safety factor of 5.0 for installations under the IBC and IRC.

Allowable Tension Load for Titen Turbo Screw Anchor Installed in Hollow CMU Wall Faces[1,2,3]

Anchor Diameter (in.)	Embedment Depth (in.)	Minimum Dimensions			Allowable Load (lb.)[4]
		Spacing (in.)	Edge (in.)	End (in.)	
3/16	1 1/4	3	3 7/8	3 7/8	117
1/4	1 1/4	4	3 7/8	3 7/8	117

1. The tabulates values are for screw anchors installed in minimum 8"-wide hollow masonry walls having reached a minimum f'_m of 1,500 psi at time of installation.
2. Embedment is the thickness of the face shell.
3. Screw anchors may be installed at any location in the wall face provided the minimum edge and end distances are maintained.
4. Allowable loads are based on a safety factor of 5.0 for installations under the IBC and IRC.

Allowable Shear Load for Titen Turbo Screw Anchor Installed in Hollow CMU Wall Faces[1,2,3]

Anchor Diameter (in.)	Embedment Depth (in.)	Minimum Dimensions			Direction of Loading	Allowable Load (lb.)[4]
		Spacing (in.)	Edge (in.)	End (in.)		
3/16	1 1/4	3	3 7/8	3 7/8	Toward edge, parallel to wall end	164
1/4	1 1/4	4	3 7/8	3 7/8	Toward edge, parallel to wall end	190

1. The tabulates values are for screw anchors installed in minimum 8"-wide hollow masonry walls having reached a minimum f'_m of 1,500 psi at time of installation.
2. Embedment is the thickness of the face shell.
3. Screw anchors may be installed at any location in the wall face provided the minimum edge and end distances are maintained.
4. Allowable loads are based on a safety factor of 5.0 for installations under the IBC and IRC.

Titen Turbo™ Concrete and Masonry Screw Anchor

SIMPSON Strong-Tie

Titen Turbo Screw Anchor Installation Tool

Six-piece kit includes:

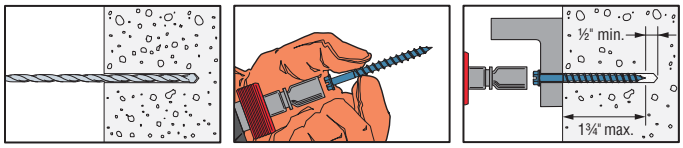
- 6-lobe bit socket
- T25 and T30 bits
- ¼" and 5⁄16" hex sockets
- Canvas storage bag

Titen Turbo Screw Anchor Installation Kit

Titen Turbo Installation Tool

Model No.	Quantity	
	Clamshell	Carton
TNTINSTALLKIT	1	4

Installation Sequence



Titen® Screw Anchor — Drill Bits

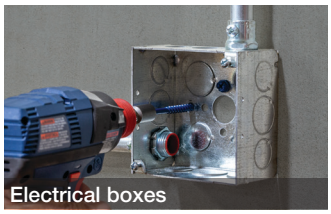
Size (in.)	Model No.	Use With		Quantity	
		Screw	Length	Box	Carton
5⁄32 x 3 ½	MDB15312C1	3⁄16" diameter	To 1 ¾	1	10
5⁄32 x 4 ½	MDB15412C1		To 3 ¼	1	
	MDB15412C4			4	
5⁄32 x 5 ½	MDB15512C1		To 4	1	
3⁄16 x 3 ½	MDB18312C1	¼" diameter	To 1 ¾	1	10
3⁄16 x 4 ½	MDB18412C1		To 3 ¼	1	
	MDB18412C4			4	
3⁄16 x 5 ½	MDB18512C1		To 4	1	

SDS-Plus® Drill Bits

Size (in.)	Model No.	For Screw Diameter (in.)	Drilling Depth (in.)	Overall Length (in.)
5⁄32 x 6	MDPL01506H	3⁄16	3 1⁄8	6
5⁄32 x 7	MDPL01507H		4 1⁄8	7
3⁄16 x 5	MDPL01805H	¼	2 3⁄8	5
3⁄16 x 6	MDPL01806H		3 1⁄8	6
3⁄16 x 7	MDPL01807H		4 1⁄8	7

Titen drivers are sold individually.
SDS-plus® is a trademark of the Robert Bosch Tool Corporation.

For use in attaching electrical boxes, conduits, switch boxes, light fixtures, window frames and more into concrete or masonry-based materials.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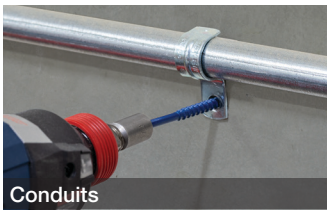
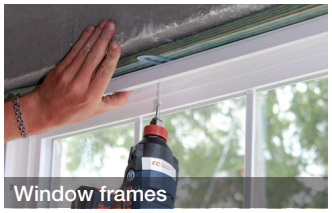
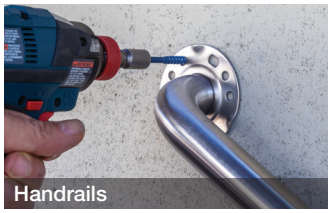

Conduits


Light fixtures


Window frames


Thresholds

Furring strips


Handrails

Shelf mounting

To locate your local dealer, visit **strongtie.com/dealerlocator**.

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