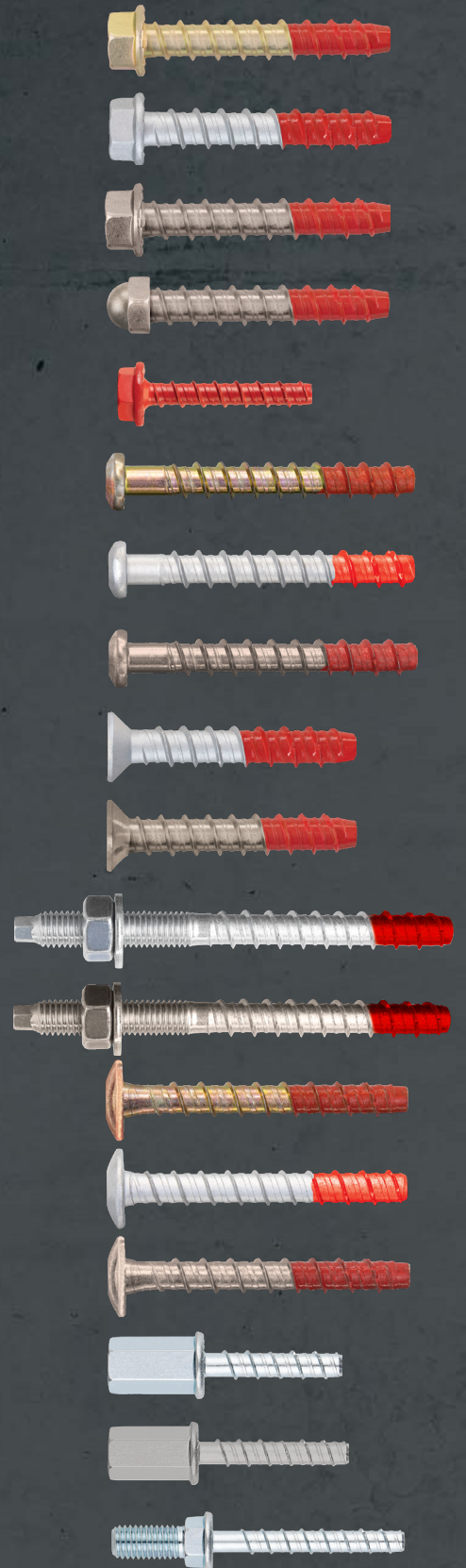




TDS | 1032.14

THUNDERBOLT® PRO
SCREW-BOLT ANCHOR



THUNDERBOLT® PRO





THUNDERBOLT® PRO SCREW-BOLT ANCHOR

FEATURES

- Optimum high-performance concrete and masonry screw-bolt anchor
- AS 5216:2021 compliant
- ETA assessed for cracked concrete and fire performance
- Flanged hex head design with "lightning bolt" locking serrations for a secure fix
- Also available in CSK, internal thread, external thread, pan and truss head designs
- Stamped head markings for easy identification and traceability
- Zinc, galvanised, Stainless Steel and corrosion resistant Nautilus® C coating options (refer to offering)
- Fast installation at reduced torque
- No expansion, ideal for close to edge applications
- Suitable for installation with impact drivers
- Removable
- Tamperproof option
- Available on ICCONS Design Pro AS 5216:2021 compliant software

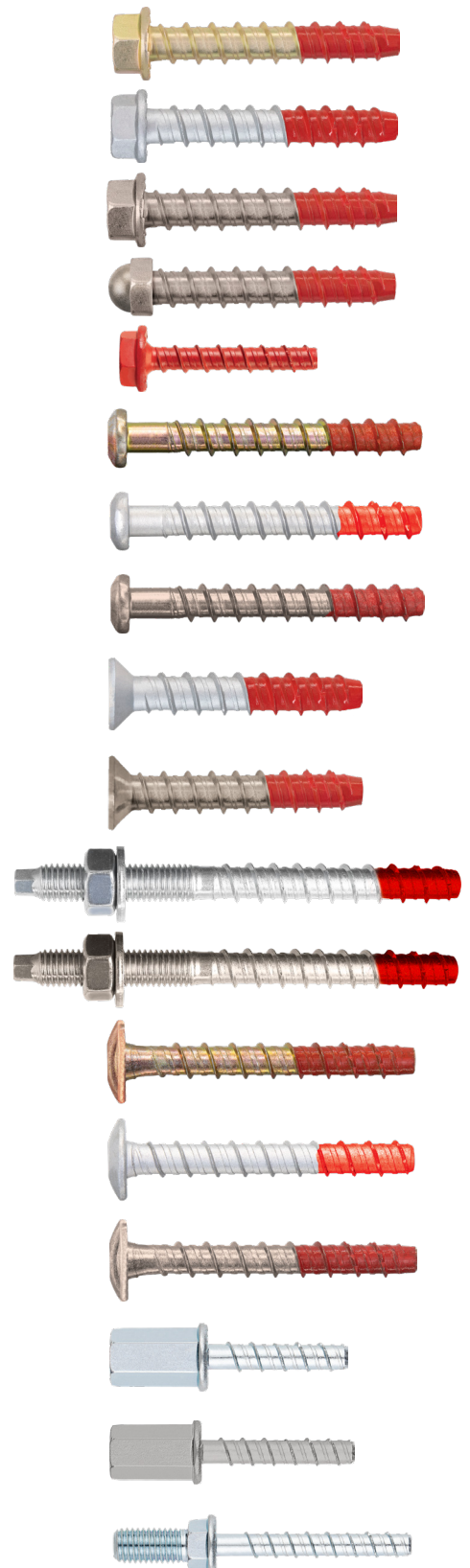
APPLICATIONS

- Structural fixings in cracked and uncracked concrete.
- Glazing, windows and storefronts
- Racking and shelving
- Attaching railings, handrails and balustrades
- Timber frame construction to concrete
- Steel frame construction to concrete
- Façades, scaffolding. Stadium seating
- HVAC and fire services

ETA 20/0902-Option 1

ETA 20/0901 (RNSS)

RNSS = Redundant Non-Structural Systems





RANGE IDENTIFICATION

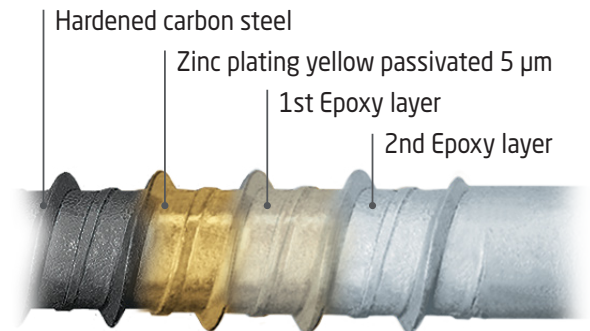
Code	Size		Description	Material
SXTB _____	Ø5 - Ø18		Hexagonal head with flange Screw-Bolt anchor	Carbon Steel Zinc Yellow Coating $\geq 5 \mu\text{m}$ plus Red Tip
SXTB _____ G	Ø5 - Ø18		Hexagonal head with flange Screw-Bolt anchor	Carbon Steel NAUTILUS®C Coating plus Red Tip Transitioning to Mechanical Galvanised Zinc Coating ≥ 40 microns (min.) (45 microns average). Refer to packaging.
SXTB _____ SS	Ø6 - Ø12		Hexagonal head with flange Screw-Bolt anchor	Shaft and Head-316 (A4) & Tip- Hardened carbon steel
SXTBD _____ SS	Ø6 - Ø12		Dome Hexagonal head with flange Screw-Bolt anchor	Shaft and Head-316 (A4) & Tip-hardened carbon steel
SXTBCS _____ G	Ø6 - Ø12		Countersunk Screw-Bolt anchor	Carbon Steel NAUTILUS®C Coating plus Red Tip Transitioning to Mechanical Galvanised Zinc Coating ≥ 40 microns (min.) (45 microns average). Refer to packaging.
SXTBCS _____ SS	Ø6 - Ø12		Countersunk Screw-Bolt anchor	Shaft and Head-316 (A4) & Tip- Hardened carbon steel
SXTBTS _____ G-M _____	Ø8 - Ø14		Thru-Screw Screw-Bolt anchor	Carbon Steel Mechanical Galvanised Zinc Coating ≥ 40 microns (min.) (45 microns average)
SXTBTS _____ SS-M _____	Ø8 - Ø10		Thru-Screw Screw-Bolt anchor	Shaft and Head-316 (A4) & Tip- Hardened carbon steel
SXTBP _____	Ø8		Pan Head Screw-Bolt anchor	Carbon steel zinc yellow coating $\geq 5 \mu\text{m}$ plus Red Tip
SXTBP _____ G	Ø8		Pan Head Screw-Bolt anchor	Carbon Steel NAUTILUS®C Coating plus Red Tip Transitioning to Mechanical Galvanised Zinc Coating ≥ 40 microns (min.) (45 microns average). Refer to packaging.
SXTBP _____ SS	Ø8		Pan Head Screw-Bolt anchor	Shaft and Head-316 (A4) & Tip- Hardened carbon steel
SXTBTR _____	Ø6		Truss Head Screw-Bolt anchor	Carbon steel zinc yellow coating $\geq 5 \mu\text{m}$ plus Red Tip
SXTBTR _____ G	Ø6		Truss Head Screw-Bolt anchor	Carbon Steel NAUTILUS®C Coating plus Red Tip Transitioning to Mechanical Galvanised Zinc Coating ≥ 40 microns (min.) (45 microns average). Refer to packaging.
SXTBTR _____ SS	Ø6		Truss Head Screw-Bolt anchor	Shaft and Head-316 (A4) & Tip- Hardened carbon steel
SXTB-IM _____	Ø6 - Ø8		Rod hanger internal thread Screw-Bolt anchor	Carbon steel, zinc clear plated coating $\geq 5 \mu\text{m}$
SXTB-IM _____ G	Ø6 - Ø8		Rod hanger internal thread Screw-Bolt anchor	Carbon Steel Mechanical Galvanised Zinc Coating ≥ 40 microns (min.) (45 microns average)
SXTB-B _____	Ø6		Rod hanger external thread Screw-Bolt anchor	Carbon steel, zinc clear plated coating $\geq 5 \mu\text{m}$
SXTBTH _____ G	Ø6		Hex Track Hawk™ Screw-Bolt anchor	Carbon Steel NAUTILUS®C Coating (Red)

Note: Corrosion performance of the Thunderbolt PRO and coatings should be reviewed and determined in accordance with AEFAC TN 15 (Durability of Fasteners).



ICCONS NAUTILUS® C CORROSION RESISTANT COATING

Nautilus® C corrosion resistant coating is a multi layered corrosion resistant coating designed for indoor applications as well as outdoor applications based on urban and industrial atmospheres, moderate sulfur dioxide pollution and coastal areas with low salinity. This is typically covered in EN ISO 12944-2, corrosivity category environment C3 and durability range HIGH according to EN ISO 12944-1. Under these conditions the Nautilus® C coating offers a typical minimum life expectancy of between 15 to 25 yrs. This information is based on testing in accordance with EN ISO 12944.6 and provides average life expectancy data for typical applications. The final decision on coating suitability should be made by the customer/design professional responsible for the application and based on local specific environmental conditions.





THUNDERBOLT® PRO HEX HEAD

ZINC YELLOW - INTERNAL USE



															
Part No.	Description	Drill Diameter (mm)	Min. Drill Depth (mm)	Min. Anchor Embedment (mm)	Max. Fixture Thickness (mm)	Clearance Hole in Fixture (mm)	Head Size (mm)	Socket Part No.	Max. Impact Tool Torque Tmax (Nm)	ETA Option	SEISMIC Assessment	qty.	qty.		
SXTB05050	5 x 50mm	5	45	35	15	8	8	BTISS0838	250	RNSS	n/a	100	1600		
SXTB06040	6 x 40mm	6	45	35	5	9	10	BTISS1038	250	Option 1 & RNSS	n/a	100	1200		
SXTB06045	6 x 45mm		50	40	5					Option 1	C1	100	1200		
SXTB06050	6 x 50mm				10							100	1200		
SXTB06060	6 x 60mm		65	55	5					Option 1 & RNSS		100	600		
SXTB06075	6 x 75mm				20							100	600		
SXTB06100	6 x 100mm				45							100	600		
SXTB08055	8 x 55mm	8	60	50	5	12	13	BTISS1338	350	Option 1	C1 & C2	100	600		
SXTB08060	8 x 60mm				10							100	600		
SXTB08070	8 x 70mm				20							100	400		
SXTB08075	8 x 75mm				25							100	400		
SXTB08100	8 x 100mm		75	65	35							100	400		
SXTB08140	8 x 140mm				75							25	150		
SXTB10060	10 x 60mm	10	65	55	5	14	17	BTISS1738	600	Option 1	n/a	50	300		
SXTB10075	10 x 75mm				20							50	300		
SXTB10090	10 x 90mm		95	85	5						C1 & C2	50	200		
SXTB10100	10 x 100mm				15							50	200		
SXTB10120	10 x 120mm				35							50	200		
SXTB10150	10 x 150mm				65							25	100		
SXTB10200	10 x 200mm		115	25	100										
SXTB12080	12 x 80mm	12	90	75	5	16	19	BTISS1938	600	Option 1	n/a	50	200		
SXTB12100	12 x 100mm				25							50	100		
SXTB12120	12 x 120mm		120	105	15						C1 & C2	25	150		
SXTB12150	12 x 150mm				45							25	100		
SXTB12200	12 x 200mm				95							20	80		
SXTB14080	14 x 80mm	14	90	75	5	18	21	BTISS2138	600	Option 1	n/a	25	150		
SXTB14100	14 x 100mm				25							25	150		
SXTB14130	14 x 130mm		130	115	15						C1 & C2	25	100		
SXTB14150	14 x 150mm				35							25	100		
SXTB16100	16 x 100mm	16	100	80	20	20	24	BTISS2440	600	Option 1	Pending	15	90		
SXTB16150	16 x 150mm				70							15	60		
SXTB16200	16 x 200mm		140	120	80							10	40		
SXTB18100	18 x 100mm	18	110	90	10	22	26	BTISS2643	600	Option 1	n/a	20	80		
SXTB18150	18 x 150mm		160	140	30							C1 & C2	15	60	
SXTB18170	18 x 170mm												15	60	
SXTB18200	18 x 200mm												60	10	40
SXTB18300	18 x 300mm												160	5	20

Max. power output of impact screw gun | RNSS = ETA Redundant non-structural systems | Option 1 = ETA Option 1 = AS 5216 Compliant

Excessive torque during installation may damage the anchor. Training, expertise and good judgment is required. Always adhere to anchor installation max. impact torque tool settings.

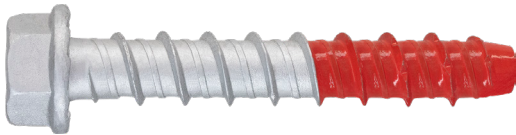
C1 Seismic assessment only valid for the following embedment depths: Anchor size 6 - 40 & 55mm / Anchor size 8 - 50mm & 65mm / Anchor size 10 - 85mm / Anchor size 12 - 105mm / Anchor size 14 - 115mm / Anchor size 16 - 140mm C2

Seismic assessment only valid for the following embedment depths: Anchor size 8 - 50mm & 65mm / Anchor size 10 - 85mm / Anchor size 12 - 105mm / Anchor size 14 - 115mm / Anchor size 16 - 140mm



THUNDERBOLT® PRO HEX HEAD

■ NAUTILUS®C - EXTERNAL USE



SXTBTH06043G*

Part No.	Description	Drill Diameter (mm)	Min. Drill Depth (mm)	Min. Anchor Embedment (mm)	Max. Fixture Thickness (mm)	Clearance Hole in Fixture (mm)	Head Size (mm)	Socket Part No.	Max. Impact Tool Torque Tmax (Nm)	ETA Option	SEISMIC Assessment	qty.	qty.
SXTB05050G	5 x 50mm	5	45	35	15	8	8	BTISS0838	250	RNSS	n/a	100	1600
SXTB06040G	6 x 40mm		45	35	5		10	BTISS1038		Option 1 & RNSS	n/a	100	1200
SXTBTH06043G*	6 x 43mm		50	40	3		13Ext / T30Int	BTISS1338				100	500
SXTB06045G	6 x 45mm	6	50	40	5	9	10	BTISS1038	250	Option 1	C1	100	1200
SXTB06050G	6 x 50mm				10							100	1200
SXTB06060G	6 x 60mm				5							100	600
SXTB06075G	6 x 75mm				20							100	600
SXTB06100G	6 x 100mm	8	65	55	45	12	13	BTISS1338	350	Option 1	C1 & C2	100	600
SXTB06150G*	6 x 150mm				95							50	300
SXTB08055G	8 x 55mm				5							100	600
SXTB08060G	8 x 60mm				10							100	600
SXTB08070G	8 x 70mm	10	60	50	20	14	17	BTISS1738	600	Option 1	C1 & C2	100	400
SXTB08075G	8 x 75mm				25							100	400
SXTB08100G	8 x 100mm				35							100	400
SXTB08130G*	8 x 130mm				65							25	150
SXTB08140G	8 x 140mm	12	75	65	75	16	19	BTISS1938	600	Option 1	C1 & C2	25	150
SXTB10060G	10 x 60mm				5							50	300
SXTB10075G	10 x 75mm				20							50	300
SXTB10090G	10 x 90mm				5							50	200
SXTB10100G	10 x 100mm	14	95	85	15	18	21	BTISS2138	600	Option 1	C1 & C2	50	200
SXTB10120G	10 x 120mm				35							50	200
SXTB10150G	10 x 150mm				65							25	100
SXTB10200G	10 x 200mm				115							25	100
SXTB12080G	12 x 80mm	16	90	75	5	20	24	BTISS2440	600	Option 1	Pending	50	200
SXTB12100G	12 x 100mm				25							50	100
SXTB12110G	12 x 110mm				5							25	150
SXTB12120G	12 x 120mm				15							25	150
SXTB12150G	12 x 150mm	18	120	105	45	22	26	BTISS2643	600	Option 1	C1 & C2	25	100
SXTB12200G	12 x 200mm				95							20	80
SXTB14080G	14 x 80mm				5							25	150
SXTB14100G	14 x 100mm				25							25	150
SXTB14130G	14 x 130mm	16	130	115	15	20	24	BTISS2440	600	Option 1	Pending	25	100
SXTB14150G	14 x 150mm				35							25	100
SXTB16100G	16 x 100mm				20							15	90
SXTB16150G	16 x 150mm				70							15	60
SXTB16200G	16 x 200mm	18	140	140	80	22	26	BTISS2643	600	Option 1	C1 & C2	10	40
SXTB18100G	18 x 100mm				10							20	80
SXTB18150G	18 x 150mm				30							15	60
SXTB18170G	18 x 170mm				60							15	60
SXTB18200G	18 x 200mm	18	160	140	160							10	40
SXTB18300G	18 x 300mm				160							5	20

NOTE: Nautilus C coating will transition to a corresponding Mechanical Galvanized coating. A combination of both coatings will be available during this period. Except for SXTBTH06043G which retains the Nautilus C coating
Max. power output of impact screw gun | RNSS = ETA Redundant non-structural systems | Option 1 = ETA Option 1 = AS 5216 Compliant

Excessive torque during installation may damage the anchor. Training, expertise and good judgment is required. Always adhere to anchor installation max. impact torque tool settings.

C1 Seismic assessment only valid for the following embedment depths: Anchor size 6 - 40 & 55mm / Anchor size 8 - 50mm & 65mm / Anchor size 10 - 85mm / Anchor size 12 - 105mm / Anchor size 14 - 115mm / Anchor size 18 - 140mm C2

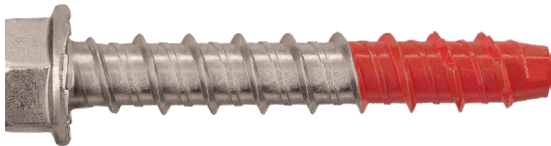
Seismic assessment only valid for the following embedment depths: Anchor size 8 - 50mm & 65mm / Anchor size 10 - 85mm / Anchor size 12 - 105mm / Anchor size 14 - 115mm / Anchor size 18 - 140mm

* Available in New Zealand



THUNDERBOLT® PRO HEX HEAD

■ STAINLESS STEEL 316 (A4) - EXTERNAL USE



Part No.	Description	Drill Diameter (mm)	Min. Drill Depth (mm)	Min. Anchor Embedment (mm)	Max. Fixture Thickness (mm)	Clearance Hole in Fixture (mm)	Head Size (mm)	Socket Part No.	Max. Impact Tool Torque Tmax (Nm)	ETA Option	SEISMIC Assessment	qty.	qty.
SXTB06045SS	6 x 45mm	6	50	40	5	9	10	BTISS1038	250	Option 1	C1	100	1200
SXTB06050SS	6 x 50mm				10							100	600
SXTB06060SS	6 x 60mm		65	55	5							100	600
SXTB06075SS	6 x 75mm				20							100	600
SXTB06100SS	6 x 100mm				45							100	400
SXTB08055SS	8 x 55mm	8	60	50	5	12	13	BTISS1338	600	Option 1	C1	100	600
SXTB08070SS	8 x 70mm				5							100	400
SXTB08075SS	8 x 75mm				10							100	400
SXTB08090SS	8 x 90mm		75	65	25							100	400
SXTB08100SS	8 x 100mm				35							100	400
SXTB10060SS	10 x 60mm	10	65	55	5	14	17	BTISS1738	600	Option 1	C1	50	300
SXTB10075SS	10 x 75mm				20							50	200
SXTB10080SS	10 x 80mm				25							50	200
SXTB10090SS	10 x 90mm		95	85	5							50	200
SXTB10100SS	10 x 100mm				15							50	200
SXTB10110SS	10 x 110mm				25							50	200
SXTB10120SS	10 x 120mm				35							50	200
SXTB10140SS*	10 x 140mm				55							25	100
SXTB12080SS	12 x 80mm	12	90	75	5	16	19	BTISS1938	600	Option 1	C1	50	200
SXTB12100SS	12 x 100mm				25							50	100
SXTB12120SS	12 x 120mm		120	105	15							25	150
SXTB12150SS*	12 x 150mm				45							25	100

Max. power output of impact screw gun | Option 1 = ETA Option 1 = AS 5216 Compliant

Excessive torque during installation may damage the anchor. Training, expertise and good judgment is required. Always adhere to anchor installation max. impact torque tool settings.

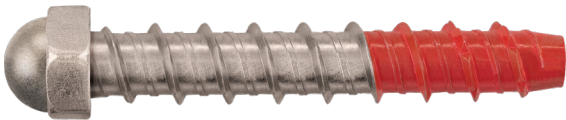
C1 Seismic assessment only valid for the following embedment depths: Anchor size 6 - 40 & 55mm / Anchor size 8 - 50mm & 65mm / Anchor size 10 - 55 & 85mm / Anchor size 12 - 75 & 105mm

* Available in New Zealand



THUNDERBOLT® PRO DOME HEX HEAD

■ STAINLESS STEEL 316 (A4) - EXTERNAL USE



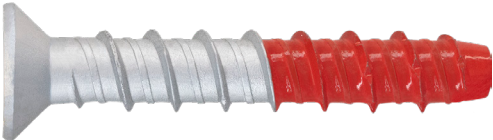
Part No.	Description	Drill Diameter (mm)	Min. Drill Depth (mm)	Min. Anchor Embedment (mm)	Max. Fixture Thickness (mm)	Clearance Hole in Fixture (mm)	Head Size (mm)	Socket Part No.	Max. Impact Tool Torque Tmax (Nm)	 ETA Option	SEISMIC Assessment	 qty.	 qty.
SXTBD06050SS	6 x 50mm	6	50	40	10	9	10	BTISS1038	250	Option 1	C1	100	600
SXTBD08075SS	8 x 75mm	8	75	65	10	12	13	BTISS1338	600	Option 1	C1	100	400
SXTBD10075SS	10 x 75mm	10	65	55	20	14	17	BTISS1738	600	Option 1	C1	50	200
SXTBD12100SS	12 x 100mm	12	90	75	25	16	19	BTISS1938	600	Option 1	C1	50	100

Max. power output of impact screw gun | Option 1 = ETA Option 1 = AS 5216 Compliant
Excessive torque during installation may damage the anchor. Training, expertise and good judgment is required. Always adhere to anchor installation max. impact torque tool settings.
C1 Seismic assessment only valid for the following embedment depths: Anchor size 6 - 40mm / Anchor size 8 - 65mm / Anchor size 10 - 55mm / Anchor size 12 - 75mm



THUNDERBOLT® PRO COUNTERSUNK HEAD

■ NAUTILUS® C - EXTERNAL USE



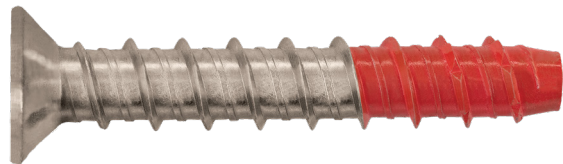
Part No.	Description	Drill Diameter (mm)	Min. Drill Depth (mm)	Min. Anchor Embedment (mm)	Max. Fixture Thickness (mm)	Clearance Hole in Fixture (mm)	Dia. of CSK Drill Size (mm)	CSK Head Height (mm)	Drive Type Driver (Torx)	Torx Impact Tool Torque Part No.	Max. Impact Tmax (Nm)	ETA Option	SEISMIC Assessment	qty.	qty.
SXTBCS06050G	6 x 50mm	6	50	40	10	9	15	4.5	T30	BTI050T30	250	Option 1	C1	100	1200
SXTBCS06075G	6 x 75mm		65	55	20							Option 1 & RNSS		100	600
SXTBCS06100G	6 x 100mm				45									100	600
SXTBCS08060G	8 x 60mm	8	60	50	10	12	21	6.5	T45	BTI050T45	350	Option 1	C1 & C2	100	600
SXTBCS08075G	8 x 75mm				25									100	400
SXTBCS08100G	8 x 100mm				50									100	400
SXTBCS08130G	8 x 130mm		75	65	65									50	200
SXTBCS10060G	10 x 60mm	10	65	55	5	14	24.5	7.3	T50	BTI050T50	600	Option 1	n/a	50	200
SXTBCS10065G	10 x 65mm				10									50	200
SXTBCS10075G	10 x 75mm				20									50	200
SXTBCS10100G	10 x 100mm		95	85	15								C1 & C2	50	200
SXTBCS12085G	12 x 85mm	12	90	75	10	16	28	8	T55	BTI050T55	600	Option 1	n/a	50	200
SXTBCS12100G	12 x 100mm				25									50	200
SXTBCS12150G	12 x 150mm		120	105	45								C1 & C2	20	120

Max. power output of impact screw gun | RNSS = ETA Redundant non-structural systems | Option 1 = ETA Option 1 = AS 5216 Compliant
Excessive torque during installation may damage the anchor. Training, expertise and good judgment is required. Always adhere to anchor installation max. impact torque tool settings.
C1 Seismic assessment only valid for the following embedment depths: Anchor size 6 - 40 & 55mm / Anchor size 8 - 50mm & 65mm / Anchor size 10 - 85mm / Anchor size 12 - 105mm
C2 Seismic assessment only valid for the following embedment depths: Anchor size 8 - 50mm & 65mm / Anchor size 10 - 85mm / Anchor size 12 - 105mm
Transitioning from Nautilus C to Mechanical Galvanised Zinc Coating ≥ 40 microns (min.) (45 microns average). Refer to packaging.



THUNDERBOLT® PRO COUNTERSUNK HEAD

■ STAINLESS STEEL 316 (A4) - EXTERNAL USE



Part No.	Description	Drill Diameter (mm)	Min. Drill Depth (mm)	Min. Anchor Embedment (mm)	Max. Fixture Thickness (mm)	Clearance Hole in Fixture (mm)	Dia. of CSK Drill Size (mm)	CSK Head Height (mm)	Drive Type Driver (Torx)	Torx Impact Tool Torque Part No.	Max. Impact T _{max} (Nm)	ETA Option	SEISMIC Assessment	qty.	qty.
SXTBCS06050SS	6 x 50mm	6	50	40	10	9	15	4.5	TX30	BTI050T30	250	Option 1	C1	100	1200
SXTBCS06075SS	6 x 75mm		65	55	20									100	600
SXTBCS06080SS	6 x 80mm				25									100	600
SXTBCS06100SS	6 x 100mm				45									100	400
SXTBCS08075SS	8 x 75mm	8	60	50	25	12	21	6.5	TX45	BTI050T45	600	Option 1	C1	100	400
SXTBCS08090SS	8 x 90mm		75	65	25									100	400
SXTBCS08095SS	8 x 95mm				30									100	400
SXTBCS08100SS	8 x 100mm				35									100	400
SXTBCS10075SS	10 x 75mm	10	65	55	20	14	24.5	7.3	TX50	BTI050T50	600	Option 1	C1	50	200
SXTBCS10100SS	10 x 100mm		95	85	15									50	200
SXTBCS10120SS	10 x 120mm				35									50	200
SXTBCS10150SS	10 x 150mm				65									25	150
SXTBCS12100SS	12 x 100mm	12	90	75	25	16	28	8	TX55	BTI050T55	600	Option 1	C1	50	200
SXTBCS12150SS	12 x 150mm		120	105	45									20	120

Max. power output of impact screw gun | Option 1 = ETA Option 1 = AS 5216 Compliant
Excessive torque during installation may damage the anchor. Training, expertise and good judgment is required. Always adhere to anchor installation max. impact torque tool settings.
C1 Seismic assessment only valid for the following embedment depths: Anchor size 6 - 40 & 55mm / Anchor size 8 - 50mm & 65mm / Anchor size 10 - 55 & 85mm /Anchor size 12 - 75 & 105mm



THUNDERBOLT® PRO THRU-SCREW

MECHANICAL GALVANISED - EXTERNAL USE



Part No.	Description	Drill Diameter (mm)	Min. Drill Depth (mm)	Min. Anchor Embedment (mm)	Max. Fixture Thickness (mm)	Clearance Hole in Fixture (mm)	Head Size (mm)	External Thread (metric)	Nut Across Flat (mm)	Max. Impact Tool Torque Tmax (Nm)	ETA Option	SEISMIC Assessment	qty.	qty.
SXTBTS08110G-M10-29	Ø8 x 110 (M10)	8	75	65	29	12	7	M10	17	350	Option 1	C1 & C2	25	250
SXTBTS08130G-M10-49	Ø8 x 130 (M10)	8	75	65	49	12	7	M10	17	350	Option 1	C1 & C2	25	250
SXTBTS10120G-M12-16	Ø10 x 120 (M12)	10	95	85	16	14	8	M12	19	600	Option 1	C1 & C2	25	150
SXTBTS10140G-M12-36	Ø10 x 140 (M12)	10	95	85	36	14	8	M12	19	600	Option 1	C1 & C2	25	150
SXTBTS14155G-M16-16	Ø14 x 155 (M16)	14	130	115	16	18	12	M16	24	600	Option 1	C1 & C2	25	50
SXTBTS14185G-M16-46	Ø14 x 185 (M16)	14	130	115	46	18	12	M16	24	600	Option 1	C1 & C2	25	50

Option 1 = ETA Option 1 = AS 5216 Compliant
Excessive torque during installation may damage the anchor. Training, expertise and good judgment is required. Always adhere to anchor installation impact tool torque guidelines.
C1 Seismic assessment only valid for the following embedment depths: Anchor size 8 - 50mm & 65mm / Anchor size 10 - 85mm / Anchor size 14 - 115mm. C2 Seismic assessment only valid for the following embedment depths: Anchor size 8 - 50mm & 65mm / Anchor size 10 - 85mm / Anchor size 14 - 115mm.



THUNDERBOLT® PRO THRU-SCREW

■ STAINLESS STEEL 316 (A4) - EXTERNAL USE



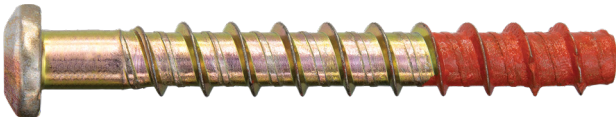
Part No.	Description	Drill Diameter (mm)	Min. Drill Depth (mm)	Min. Anchor Embedment (mm)	Max. Fixture Thickness (mm)	Clearance Hole in Fixture (mm)	Head Size (mm)	External Thread (metric)	Nut Across Flat (mm)	Max. Impact Tool Torque Tmax (Nm)	 ETA Option	SEISMIC Assessment	 qty.	 qty.
SXTBTS08110SS-M10-29	Ø8 x 110 (M10)	8	75	65	29	12	7	M10	17	600	Option 1	C1	25	250
SXTBTS08130SS-M10-49	Ø8 x 130 (M10)	8	75	65	49	12	7	M10	17	600	Option 1	C1	25	250
SXTBTS10120SS-M12-16	Ø10 x 120 (M12)	10	95	85	16	14	8	M12	19	600	Option 1	C1	25	150
SXTBTS10140SS-M12-36	Ø10 x 140 (M12)	10	95	85	36	14	8	M12	19	600	Option 1	C1	25	150

Option 1 = ETA Option 1 = AS 5216 Compliant
Excessive torque during installation may damage the anchor. Training, expertise and good judgment is required. Always adhere to anchor installation impact tool torque guidelines.
C1 Seismic assessment only valid for the following embedment depths: Anchor size 8 - 50mm & 65mm / Anchor size 10 - 55 & 85mm.



THUNDERBOLT® PRO PAN HEAD

ZINC YELLOW - INTERNAL USE



Part No.	Description	Drill Diameter (mm)	Min. Drill Depth (mm)	Min. Anchor Embed. (mm)	Max. Fixture Thickness (mm)	Clearance Hole in Fixture (mm)	Drive Type (Torx)	Torx Impact Driver Part No.	Max. Impact Tmax (Nm)	ETA Option	SEISMIC Assessment	qty.	qty.
SXTBP08060	8 x 60mm	8	60	50	10	12	T45	BTI050T45	350	Option 1	C1 & C2	100	600
SXTBP08080	8 x 80mm		75	65	30							100	400
SXTBP080100	8 x 100mm				35							100	400

Max. power output of impact screw gun | Option 1 = ETA Option 1 = AS 5216 Compliant
Excessive torque during installation may damage the anchor. Training, expertise and good judgment is required. Always adhere to anchor installation max. impact torque tool settings.
C1 Seismic assessment only valid for the following embedment depths: Anchor size 8 – 50mm & 65mm
C2 Seismic assessment only valid for the following embedment depths: Anchor size 8 – 50mm & 65mm

THUNDERBOLT® PRO PAN HEAD

NAUTILUS® C - EXTERNAL USE

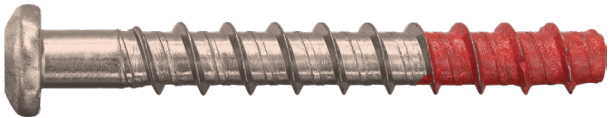


Part No.	Description	Drill Diameter (mm)	Min. Drill Depth (mm)	Min. Anchor Embed. (mm)	Max. Fixture Thickness (mm)	Clearance Hole in Fixture (mm)	Drive Type (Torx)	Torx Impact Driver Part No.	Max. Impact Tmax (Nm)	ETA Option	SEISMIC Assessment	qty.	qty.
SXTBP08060G	8 x 60mm	8	60	50	10	12	T45	BTI050T45	350	Option 1	C1 & C2	100	600
SXTBP08080G	8 x 80mm		75	65	30							100	400
SXTBP080100G	8 x 100mm				35							100	400

Max. power output of impact screw gun | Option 1 = ETA Option 1 = AS 5216 Compliant
Excessive torque during installation may damage the anchor. Training, expertise and good judgment is required. Always adhere to anchor installation max. impact torque tool settings.
C1 Seismic assessment only valid for the following embedment depths: Anchor size 8 – 50mm & 65mm
C2 Seismic assessment only valid for the following embedment depths: Anchor size 8 – 50mm & 65mm
Transitioning from Nautilus C to Mechanical Galvanised Zinc Coating ≥ 40 microns (min.) (45 microns average). Refer to packaging.

THUNDERBOLT® PRO PAN HEAD

STAINLESS STEEL 316 (A4) - EXTERNAL USE



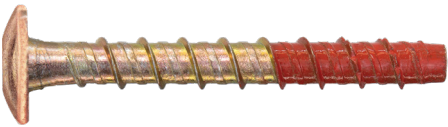
Part No.	Description	Drill Diameter (mm)	Min. Drill Depth (mm)	Min. Anchor Embed. (mm)	Max. Fixture Thickness (mm)	Clearance Hole in Fixture (mm)	Drive Type (Torx)	Torx Impact Driver Part No.	Max. Impact Tmax (Nm)	ETA Option	SEISMIC Assessment	qty.	qty.
SXTBP08060SS	8 x 60mm	8	60	50	10	12	T45	BTI050T45	350	Option 1	C1 & C2	100	600
SXTBP08080SS	8 x 80mm		75	65	30							100	400
SXTBP080100SS	8 x 100mm				35							100	400

Max. power output of impact screw gun | Option 1 = ETA Option 1 = AS 5216 Compliant
Excessive torque during installation may damage the anchor. Training, expertise and good judgment is required. Always adhere to anchor installation max. impact torque tool settings.
C1 Seismic assessment only valid for the following embedment depths: Anchor size 8 – 50mm & 65mm



THUNDERBOLT® PRO TRUSS HEAD

ZINC YELLOW - INTERNAL USE



													
Part No.	Description	Drill Diameter (mm)	Min. Drill Depth (mm)	Min. Anchor Embed. (mm)	Max. Fixture Thickness (mm)	Clearance Hole in Fixture (mm)	Drive Type (Torx)	Torx Impact Driver Part No.	Max. Impact Tmax (Nm)	ETA Option	SEISMIC Assessment	qty.	qty.
SXTBTR06045	6 x 45mm	6	50	40	5	9	T30	BTI050T30	250	Option 1	C1	100	1200
SXTBTR06060	6 x 60mm		65	55	5					Option 1 & RNSS		100	600
SXTBTR06080	6 x 80mm				25					Option 1 & RNSS		100	600
SXTBTR06100	6 x 100mm				45					Option 1 & RNSS		100	600

Max. power output of impact screw gun | RNSS = ETA Redundant non-structural systems | Option 1 = ETA Option 1 = AS 5216 Compliant
Excessive torque during installation may damage the anchor. Training, expertise and good judgment is required. Always adhere to anchor installation max. impact torque tool settings.
C1 Seismic assessment only valid for the following embedment depths: Anchor size 6 - 40 & 55mm

THUNDERBOLT® PRO TRUSS HEAD

NAUTILUS® C - EXTERNAL USE

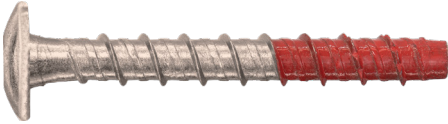


													
Part No.	Description	Drill Diameter (mm)	Min. Drill Depth (mm)	Min. Anchor Embed. (mm)	Max. Fixture Thickness (mm)	Clearance Hole in Fixture (mm)	Drive Type (Torx)	Torx Impact Driver Part No.	Max. Impact Tmax (Nm)	ETA Option	SEISMIC Assessment	qty.	qty.
SXTBTR06045G	6 x 45mm	6	50	40	5	9	T30	BTI050T30	250	Option 1	C1	100	1200
SXTBTR06060G	6 x 60mm		65	55	5					Option 1 & RNSS		100	600
SXTBTR06080G	6 x 80mm				25							100	600
SXTBTR06100G	6 x 100mm				45							100	600

Max. power output of impact screw gun | RNSS = ETA Redundant non-structural systems | Option 1 = ETA Option 1 = AS 5216 Compliant
Excessive torque during installation may damage the anchor. Training, expertise and good judgment is required. Always adhere to anchor installation max. impact torque tool settings.
C1 Seismic assessment only valid for the following embedment depths: Anchor size 6 - 40 & 55mm
Transitioning from Nautilus C to Mechanical Galvanised Zinc Coating ≥ 40 microns (min.) (45 microns average). Refer to packaging.

THUNDERBOLT® PRO TRUSS HEAD

STAINLESS STEEL 316 (A4) - EXTERNAL USE



Part No.	Description	Drill Diameter (mm)	Min. Drill Depth (mm)	Min. Anchor Embed. (mm)	Max. Fixture Thickness (mm)	Clearance Hole in Fixture (mm)	Drive Type (Torx)	Torx Impact Driver Part No.	Max. Impact Tmax (Nm)	ETA Option	SEISMIC Assessment	qty.	qty.
SXTBTR06045SS	6 x 45mm	6	50	40	5	9	T30	BTI050T30	250	Option 1	C1	100	1200
SXTBTR06060SS	6 x 60mm		65	55	5							100	600
SXTBTR06080SS	6 x 80mm				25							100	600
SXTBTR06100SS	6 x 100mm				45							100	600

Max. power output of impact screw gun | Option 1 = ETA Option 1 = AS 5216 Compliant
Excessive torque during installation may damage the anchor. Training, expertise and good judgment is required. Always adhere to anchor installation max. impact torque tool settings.
C1 Seismic assessment only valid for the following embedment depths: Anchor size 6 - 40 & 55mm



THUNDERBOLT® PRO ROD HANGERZ™

CARBON STEEL ZINC CLEAR - INTERNAL USE



		Drill Diameter (mm)	Drill Depth (mm)	Head / Socket Size (mm)	Internal Thread (metric)	Socket Part No.	Max. Impact Tool Torque Tmax (Nm)	 ETA Option	SEISMIC Assessment	 qty.	 qty.
Part No.	Description										
SXTB-IM06035	6 x 35 Rod Hanger (M8/M10)	6	45	13	M8/ M10	HZCM10-D	250	Option 1 & RNSS	n/a	50	400
SXTB-IM06035-BK	6 x 35 Rod Hanger (M8/M10) Bucket		50		M10			Option 1	C1	500	n/a
SXTB-IM06040-M10	6 x 40 Rod Hanger (M10)									100	400
SXTB-IM06040-M10-BK	6 x 40 Rod Hanger (M10) Bucket		65	M8/ M10	Option 1 & RNSS			C1	500	n/a	
SXTB-IM06055	6 x 55 Rod Hanger (M8/M10)								50	400	
SXTB-IM06055-BK	6 x 55 Rod Hanger (M8/M10) Bucket								500	n/a	
SXTB-IM08050-M10	8 x 50 Rod Hanger (M10)	8	60	13	M10	HZCM10-D	350	Option 1	C1 & C2	100	400
SXTB-IM08050-M12	8 x 50 Rod Hanger (M12)		17	M12	BTIDS1778					100	400

RNSS = ETA Redundant non-structural systems | Option 1 = ETA Option 1 = AS 5216 Compliant
Excessive torque during installation may damage the anchor. Training, expertise and good judgment is required. Always adhere to anchor installation impact tool torque guidelines

THUNDERBOLT® PRO ROD HANGERZ™

MECHANICAL GALVANISED - EXTERNAL USE



Part No.	Description	Drill Diameter (mm)	Drill Depth (mm)	Head / Socket Size (mm)	Internal Thread (metric)	Socket Part No.	Max. Impact Tool Torque Tmax (Nm)	ETA Option	SEISMIC Assessment	qty.	qty.
SXTB-IM06040G-M10	6 x 40 ETA Rod Hanger (M10)	6	50	13	M10	HZCM10-D	250	Option 1	C1	100	400
SXTB-IM08050G-M10	8 x 50 ETA Rod Hanger (M10)	8	60	13	M10		350	Option 1	C1 & C2	100	400
SXTB-IM08050G-M12	8 x 50 ETA Rod Hanger (M12)			17	M12					100	400

Option 1 = ETA Option 1 = AS 5216 Compliant
Excessive torque during installation may damage the anchor. Training, expertise and good judgment is required. Always adhere to anchor installation impact tool torque guidelines.

THUNDERBOLT® PRO HANGERZ™

CARBON STEEL ZINC CLEAR - EXTERNAL THREAD



Part No.	Description	Drill Diameter (mm)	Drill Depth (mm)	Head / Socket Size (mm)	External Thread (metric)	Socket Part No.	Max. Impact Tool Torque Tmax (Nm)	ETA Option	SEISMIC Assessment	qty.	qty.
SXTB-B06040-M10	6 x 40 External Thread Hanger	6	50	13	M10	BTIDS1378	250	Option 1	C1	100	400

Option 1 = ETA Option 1 = AS 5216 Compliant
Excessive torque during installation may damage the anchor. Training, expertise and good judgment is required. Always adhere to anchor installation impact tool torque guidelines.



SCREW-BOLT ANCHOR

TDS | 1032.14

INSTALLATION DATA

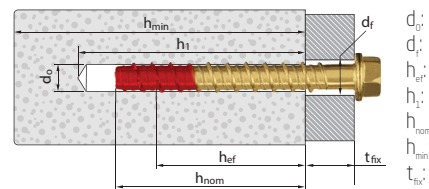
THUNDERBOLT® PRO HEX HEAD

■ ZINC YELLOW

■ NAUTILUS® C



SXTBTH06043G^



d_0 : Nominal diameter of drill bit
 d_1 : Fixture clearance hole diameter
 h_{ef} : Effective anchorage depth
 h_1 : Depth of drilled hole
 h_{nom} : Overall fastener embedment depth in the concrete
 h_{min} : Minimum thickness of concrete member
 t_{fix} : Fixture thickness



General Installation parameters		Standard Installation depth (h _{ef} , std)																Reduced Installation depth (h _{ef} , red)								
Thunderbolt®PRO	Size	Assessed	Drill bit diameter	Fixture clearance hole	Spanner	Impact tool torque	Minimum allowable spacing	Minimum allowable edge distance	Minimum concrete thickness	Depth of drill hole	Installation depth	Effective anchorage depth	Thickness of fixture	Critical spacing (concrete cone)	Critical edge distance (cone)	Critical spacing (splitting)	Critical edge distance (splitting)	Minimum concrete thickness	Depth of drill hole	Installation depth	Effective anchorage depth	Thickness of fixture	Critical spacing (concrete cone)	Critical edge distance (cone)	Critical spacing (splitting)	Critical edge distance (splitting)
Part No.	[-]	ETA	d ₀ (mm)	d _f (mm)	SW/Tx [-]	T _{max} [Nm]	S _{min} (mm)	C _{min} (mm)	h _{min} (mm)	h ₁ (mm)	h _{nom} (mm)	h _{ef} (mm)	t _{fix} (mm)	S _{cr,N} (mm)	C _{cr,N} (mm)	S _{cr,sp} (mm)	C _{cr,sp} (mm)	h _{min} (mm)	h ₁ (mm)	h _{nom} (mm)	h _{ef} (mm)	t _{fix} (mm)	S _{cr,N} (mm)	C _{cr,N} (mm)	S _{cr,sp} (mm)	C _{cr,sp} (mm)
SXTB05050/G	Ø5 x 50	RN55 ✓	5	8	SW 8	250	35	35	80	55	45	35.0	5	105	53	105	53	80	45	35	26.5	15	80	40	80	40
SXTB06040/G	Ø6 x 40	✓	6	9	SW 10	250	35	35	-	-	-	-	-	-	-	-	-	100	45	35	26.0	5	78	39	90	45
SXTBTH06043G	Ø6 x 43	✓			13 Ext/T30 Int				-	-	-	-	-	-	-	-										
SXTB06045/G	Ø6 x 45	✓			SW 10				-	-	-	-	-	-	-	-										
SXTB06050/G	Ø6 x 50	✓							-	-	-	-	-	-	-	-										
SXTB06060/G	Ø6 x 60	✓							100	65	55	43.0	5	129	65	170	85									
SXTB06075/G	Ø6 x 75	✓											20													
SXTB06100/G	Ø6 x 100	✓											45													
SXTB08055/G	Ø8 x 55	✓	8	12	SW 13	350	35	35	-	-	-	-	-	-	-	-	-	100	60	50	37.5	5	113	57	130	65
SXTB08060/G	Ø8 x 60	✓							-	-	-	-	-	-	-	-										
SXTB08070/G	Ø8 x 70	✓							100	75	65	50.5	5	152	76	200	100									
SXTB08075/G	Ø8 x 75	✓											10													
SXTB08100/G	Ø8 x 100	✓											35													
SXTB08130G	Ø8 x 130	✓											65													
SXTB08140/G	Ø8 x 140	✓											75													
SXTB10060/G	Ø10 x 60	✓	10	14	SW 17	600	50	40	-	-	-	-	-	-	-	-	-	100	65	55	41.5	5	125	63	140	70
SXTB10075/G	Ø10 x 75	✓							-	-	-	-	-	-	-	-										
SXTB10090/G	Ø10 x 90	✓							135	95	85	67.0	5	201	101	210	105									
SXTB10100/G	Ø10 x 100	✓											15													
SXTB10120/G	Ø10 x 120	✓											35													
SXTB10150/G	Ø10 x 150	✓											65													
SXTB10200/G	Ø10 x 200	✓											115													

Note: Add "G" to the part no for Nautilus® C option, e.g. SXTB05050G.



SCREW-BOLT ANCHOR

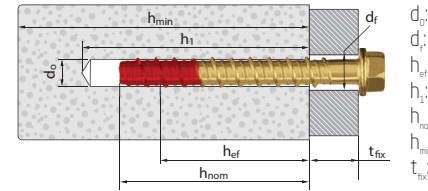
TDS | 1032.14

INSTALLATION DATA

THUNDERBOLT® PRO HEX HEAD

■ ZINC YELLOW

■ NAUTILUS® C



d_0 : Nominal diameter of drill bit
 d_1 : Fixture clearance hole diameter
 h_1 : Effective anchorage depth
 h_2 : Depth of drilled hole
 h_3 : Overall fastener embedment depth in the concrete
 h_4 : Minimum thickness of concrete member
 t_{fix} : Fixture thickness



General Installation parameters									Standard Installation depth (^h _{ef, std})								Reduced Installation depth (^h _{ef, red})										
Thunderbolt®PRO	Size	Assessed	Drill bit diameter	Fixture clearance hole	Spanner	Impact tool torque	Minimum allowable spacing	Minimum allowable edge distance	Minimum concrete thickness	Depth of drill hole	Installation depth	Effective anchorage depth	Thickness of fixture	Critical spacing (concrete cone)	Critical edge distance (cone)	Critical spacing (splitting)	Critical edge distance (splitting)	Minimum concrete thickness	Depth of drill hole	Installation depth	Effective anchorage depth	Thickness of fixture	Critical spacing (concrete cone)	Critical edge distance (cone)	Critical spacing (splitting)	Critical edge distance (splitting)	
Part No.	[-]	ETA	d ₀ (mm)	d _f (mm)	SW/Tx [-]	T _{max} [Nm]	S _{min} (mm)	C _{min} (mm)	h _{min} (mm)	h ₁ (mm)	h _{nom} (mm)	h _{ef} (mm)	t _{fix} (mm)	S _{cr,N} (mm)	C _{cr,N} (mm)	S _{cr,sp} (mm)	C _{cr,sp} (mm)	h _{min} (mm)	h ₁ (mm)	h _{nom} (mm)	h _{ef} (mm)	t _{fix} (mm)	S _{cr,N} (mm)	C _{cr,N} (mm)	S _{cr,sp} (mm)	C _{cr,sp} (mm)	
SXTB12080/G	Ø12 x 80	✓	12	16	SW 19	600	75	45	-	-	-	-	-	-	-	-	-	120	90	75	58.0	5	174	87	190	95	
SXTB12100/G	Ø12 x 100	✓							-	-	-	-	-	-	-	-	-					-					-
SXTB12110/G	Ø12 x 110	✓							170	120	105	83.5	5	251	126	220	110										
SXTB12120/G	Ø12 x 120	✓											15														
SXTB12150/G	Ø12 x 150	✓											45														
SXTB12200/G	Ø12 x 200	✓											95														
SXTB14080/G	Ø14 x 80	✓	14	18	SW 21	600	80	50	-	-	-	-	-	-	-	-	-	120	90	75	58.0	5	174	87	190	95	
SXTB14100/G	Ø14 x 100	✓							-	-	-	-	-	-	-	-	-					-					-
SXTB14130/G	Ø14 x 130	✓							185	130	115	92.0	15	276	138	230	115										
SXTB14150/G	Ø14 x 150	✓											35														
SXTB16100/G	Ø16 x 100	✓	16	20	SW 24	600	80	50	-	-	-	-	-	-	-	-	-	115	100	80	58	20	174	87	180	90	
SXTB16150/G	Ø16 x 150	✓							185	140	120	92.0	30	276	138	280	140										
SXTB16200/G	Ø16x 200	✓											80														
SXTB18100/G	Ø18 x 100	✓	18	22	SW 26	600	90	55	-	-	-	-	-	-	-	-	-	140	110	90	69.5	10	209	105	230	115	
SXTB18150/G	Ø18 x 150	✓							225	160	140	112.0	10	336	168	350	175										
SXTB18170/G	Ø18 x 170	✓											30														
SXTB18200/G	Ø18 x 200	✓											60														
SXTB18300/G	Ø18 x 300	✓											160														

Note: Add "G" to the part no for Nautilus® C option, e.g. SXTB12080G



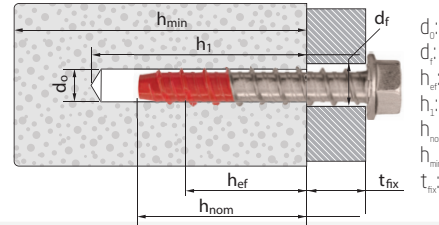
SCREW-BOLT ANCHOR

TDS | 1032.14

INSTALLATION DATA

THUNDERBOLT® PRO HEX HEAD

■ STAINLESS STEEL 316 (A4)



d_0 : Nominal diameter of drill bit
 d_1 : Fixture clearance hole diameter
 d_2 : Effective anchorage depth
 d_3 : Depth of drilled hole
 d_4 : Overall fastener embedment depth in the concrete
 d_5 : Minimum thickness of concrete member
 d_6 : Fixture thickness



General Installation parameters

Standard Installation depth ($h_{ef, std}$)Reduced Installation depth ($h_{ef, red}$)

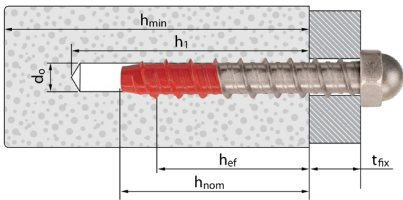
Thunderbolt®PRO		Size [-]	Assessed ETA	Drill bit diameter d ₀ (mm)	Fixture clearance hole d _f (mm)	Spanner SW/Tx [-]	Impact tool torque T _{max} [Nm]	Minimum allowable spacing S _{min} (mm)	Minimum allowable edge distance C _{min} (mm)	Standard Installation depth (h _{ef, std})								Reduced Installation depth (h _{ef, red})								
Part No.										Minimum concrete thickness h _{min} (mm)	Depth of drill hole h ₁ (mm)	Installation depth h _{nom} (mm)	Effective anchorage depth h _{ef} (mm)	Thickness of fixture t _{fix} (mm)	Critical spacing (concrete cone) S _{cr,N} (mm)	Critical edge distance (cone) C _{cr,N} (mm)	Critical spacing (splitting) S _{cr,sp} (mm)	Critical edge distance (splitting) C _{cr,sp} (mm)	Minimum concrete thickness h _{min} (mm)	Depth of drill hole h ₁ (mm)	Installation depth h _{nom} (mm)	Effective anchorage depth h _{ef} (mm)	Thickness of fixture t _{fix} (mm)	Critical spacing (concrete cone) S _{cr,N} (mm)	Critical edge distance (cone) C _{cr,N} (mm)	Critical spacing (splitting) S _{cr,sp} (mm)
SXTB06045SS	Ø6 x 45	✓	6	9	SW 10	250	35	35	-	-	-	-	-	-	-	-	-	80	50	40	30.0	5	90	45	110	55
SXTB06050SS	Ø6 x 50	✓							-	-	-	-	-	-	-	-	-					10				
SXTB06060SS	Ø6 x 60	✓							-	-	-	-	5	-	-	-	-					20				
SXTB06075SS	Ø6 x 75	✓							80	65	55	43.0	20	129	65	190	95					35				
SXTB06100SS	Ø6 x 100	✓							-	-	-	-	45	-	-	-	-					60				
SXTB08055SS	Ø8 x 55	✓	8	12	S 13	350	35	35	-	-	-	-	-	-	-	-	-	80	60	50	37.5	5	113	57	130	65
SXTB08070SS	Ø8 x 70	✓							-	-	-	-	5	-	-	-	-					20				
SXTB08075SS	Ø8 x 75	✓							80	75	65	50.5	10	152	76	220	110					25				
SXTB08090SS	Ø8 x 90	✓							-	-	-	-	20	-	-	-	-					40				
SXTB08100SS	Ø8 x 100	✓							-	-	-	-	35	-	-	-	-					50				
SXTB10060SS	Ø10 x 60	✓	10	14	SW 17	600	50	40	-	-	-	-	-	-	-	-	-	100	65	55	41.5	5	125	63	140	70
SXTB10075SS	Ø10 x 75	✓							-	-	-	-	-	-	-	-	-					20				
SXTB10080SS	Ø10 x 80	✓							-	-	-	-	-	-	-	-	-					25				
SXTB10090SS	Ø10 x 90	✓							-	-	-	-	5	-	-	-	-					35				
SXTB10100SS	Ø10 x 100	✓							135	95	85	67.0	15	201	101	210	105					45				
SXTB10120SS	Ø10 x 120	✓	12	16	SW 19	600	75	45	-	-	-	-	35	-	-	-	-	120	90	75	58.0	65	174	87	190	95
SXTB10140SS	Ø10 x 140	✓							-	-	-	-	55	-	-	-	-					85				
SXTB12080SS	Ø12 x 80	✓							-	-	-	-	-	-	-	-	-					5				
SXTB12100SS	Ø12 x 100	✓							-	-	-	-	-	-	-	-	-					25				
SXTB12120SS	Ø12 x 120	✓							160	120	105	83.5	15	251	126	240	120					45				
SXTB12150SS	Ø12 x 150	✓							-	-	-	-	45	-	-	-	-					75				



INSTALLATION DATA

THUNDERBOLT® PRO DOME HEX HEAD

■ STAINLESS STEEL 316 (A4)



- d_0 : Nominal diameter of drill bit
- d_f : Fixture clearance hole diameter
- h_{ef} : Effective anchorage depth
- h_1 : Depth of drilled hole
- h_{nom} : Overall fastener embedment depth in the concrete
- h_{min} : Minimum thickness of concrete member
- t_{fix} : Fixture thickness



General Installation parameters									Standard Installation depth (hef, std)									Reduced Installation depth (hef, red)								
Thunderbolt®PRO	Size	Assessed	Drill bit diameter	Fixture clearance hole	Spanner	Impact tool torque	Minimum allowable spacing	Minimum allowable edge distance	Minimum concrete thickness	Depth of drill hole	Installation depth	Effective anchorage depth	Thickness of fixture	Critical spacing (concrete cone)	Critical edge distance (cone)	Critical spacing (splitting)	Critical edge distance (splitting)	Minimum concrete thickness	Depth of drill hole	Installation depth	Effective anchorage depth	Thickness of fixture	Critical spacing (concrete cone)	Critical edge distance (cone)	Critical spacing (splitting)	Critical edge distance (splitting)
Part No.	[-]	ETA	d0 (mm)	df (mm)	SW/Tx [-]	Tmax [Nm]	Smin (mm)	Cmin (mm)	hmin (mm)	h1 (mm)	hnom (mm)	hef (mm)	tfix (mm)	Scr,N (mm)	Ccr,N (mm)	Scr,sp (mm)	Ccr,sp (mm)	hmin (mm)	h1 (mm)	hnom (mm)	hef (mm)	tfix (mm)	Scr,N (mm)	Ccr,N (mm)	Scr,sp (mm)	Ccr,sp (mm)
SXTBD06050SS	Ø6 x 50	✓	6	9	SW 10	250	35	35	-	-	-	-	-	-	-	-	-	80	50	40	30.0	10	90	45	110	55
SXTBD08075SS	Ø8 x 75	✓	8	12	SW 13	600	35	35	80	75	65	50.5	10	152	76	220	110	80	60	50	37.5	25	113	57	130	65
SXTBD10075SS	Ø10 x 75	✓	10	14	SW 17	600	50	40	-	-	-	-	-	-	-	-	-	80	65	55	41.5	20	125	63	140	70
SXTBD12100SS	Ø12 x 100	✓	12	16	SW 19	600	75	45	-	-	-	-	-	-	-	-	-	120	90	75	58.0	25	174	87	190	95



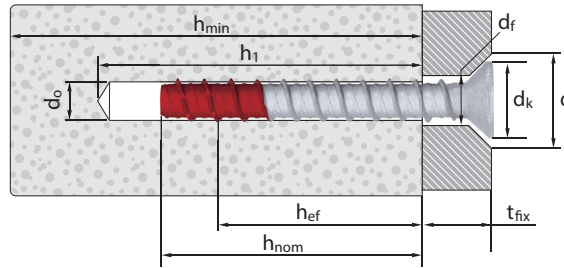
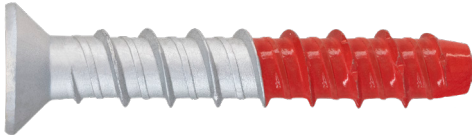
SCREW-BOLT ANCHOR

TDS | 1032.14

INSTALLATION DATA

THUNDERBOLT® PRO COUNTERSUNK HEAD

■ NAUTILUS® C



d_0 : Diameter of CSK head
 d_1 : Nominal diameter of drill bit
 d_f : Fixture clearance hole diameter
 d_k : Effective anchorage depth
 d_1 : Depth of drilled hole
 h_{min} : Overall fastener embedment depth in the concrete
 h_1 : Minimum thickness of concrete member
 t_{fix} : Fixture thickness
 d_1 : Diameter of CSK drill size



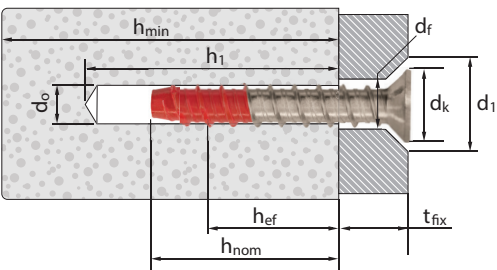
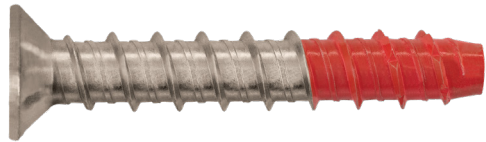
General Installation parameters

Standard Installation depth ($h_{1ef, std}$)Reduced Installation depth ($h_{1ef, red}$)

Thunderbolt®PRO	Size	Assessed	Drill bit diameter	Fixture clearance hole	Diameter of CSK Head	Diameter of CSK drill hole	Spanner	Impact tool torque	Minimum allowable spacing	Minimum allowable edge distance	Minimum concrete thickness	Depth of drill hole	Installation depth	Effective anchorage depth	Thickness of fixture	Critical spacing (concrete cone)	Critical edge distance (cone)	Critical spacing (splitting)	Critical edge distance (splitting)	Minimum concrete thickness	Depth of drill hole	Installation depth	Effective anchorage depth	Thickness of fixture	Critical spacing (concrete cone)	Critical edge distance (cone)	Critical spacing (splitting)	Critical edge distance (splitting)
Part No.	[-]	ETA	d0 (mm)	df (mm)	dk (mm)	d1 (mm)	SW/Tx [-]	Tmax [Nm]	Smin (mm)	Cmin (mm)	hmin (mm)	h1 (mm)	hnom (mm)	hef (mm)	tfix (mm)	Scr,N (mm)	Ccr,N (mm)	Scr,sp (mm)	Ccr,sp (mm)	hmin (mm)	h1 (mm)	hnom (mm)	hef (mm)	tfix (mm)	Scr,N (mm)	Ccr,N (mm)	Scr,sp (mm)	Ccr,sp (mm)
SXTBCS06050G	Ø6 x 50	✓	6	9	12.4	15	TX30	250	35	35	-	-	-	-	-	-	-	-	-	100	50	40	30.0	10	90	45	90	45
SXTBCS06075G	Ø6 x 75	✓									100	65	55	43.00	20	129	65	170	85					35				
SXTBCS06100G	Ø6 x 100	✓									100	65	55	43.00	45	129	65	170	85					60				
SXTBCS08055G	Ø8 x 55	✓	8	12	18	21	TX45	350	35	35	-	-	-	-	-	-	-	-	-	100	60	50	37.5	10	113	57	130	65
SXTBCS08075G	Ø8 x 75	✓									100	75	65	50.5	10	152	76	200	100					25				
SXTBCS08100G	Ø8 x 100	✓									100	75	65	50.5	35	152	76	200	100					50				
SXTBCS08130G	Ø8 x 130	✓									100	75	65	50.5	65	152	76	200	100					80				
SXTBCS10060G	Ø10 x 60	✓	10	14	21	24.5	TX50	600	50	40	-	-	-	-	-	-	-	-	-	100	65	55	41.5	5	125	63	140	70
SXTBCS10065G	Ø10 x 65	✓									-	-	-	-	-	-	-	-	-					10				
SXTBCS10075G	Ø10 x 75	✓									-	-	-	-	-	-	-	-	-					20				
SXTBCS10100G	Ø10 x 100	✓									135	95	85	67.0	15	201	101	210	105					45				
SXTBCS12085G	Ø12 x 85	✓	12	16	24	28	TX55	600	75	45	-	-	-	-	-	-	-	-	-	120	90	75	58	10	174	87	190	95
SXTBCS12100G	Ø12 x 100	✓									-	-	-	-	-	-	-	-	-					25				
SXTBCS12150G	Ø12 x 150	✓									170	120	105	83.5	45	251	126	220	110					75				



INSTALLATION DATA
THUNDERBOLT® PRO COUNTERSUNK HEAD
■ STAINLESS STEEL 316 (A4)



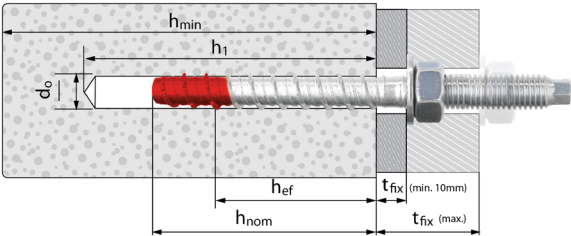
- d_o : Diameter of CSK head
- d_o' : Nominal diameter of drill bit
- d_i : Fixture clearance hole diameter
- h_{ef} : Effective anchorage depth
- h_1 : Depth of drilled hole
- h_{nom} : Overall fastener embedment depth in the concrete
- h_{min} : Minimum thickness of concrete member
- t_{fix} : Fixture thickness
- d_1 : Diameter of CSK drill size



General Installation parameters											Standard Installation depth (h _{ef, std})									Reduced Installation depth (h _{ef, red})									
Thunderbolt®PRO	Size	Assessed	Drill bit diameter	Fixture clearance hole	Diameter of CSK Head	Diameter of CSK drill hole	Spanner	Impact tool torque	Minimum allowable spacing	Minimum allowable edge distance	Minimum concrete thickness	Depth of drill hole	Installation depth	Effective anchorage depth	Thickness of fixture	Critical spacing (concrete cone)	Critical edge distance (cone)	Critical spacing (splitting)	Critical edge distance (splitting)	Minimum concrete thickness	Depth of drill hole	Installation depth	Effective anchorage depth	Thickness of fixture	Critical spacing (concrete cone)	Critical edge distance (cone)	Critical spacing (splitting)	Critical edge distance (splitting)	
Part No.	[-]	ETA	d0 (mm)	d _f (mm)	d _k (mm)	d1 (mm)	SW/Tx [-]	T _{max} [Nm]	S _{min} (mm)	C _{min} (mm)	h _{min} (mm)	h1 (mm)	h _{nom} (mm)	h _{ef} (mm)	t _{fix} (mm)	Scr,N (mm)	C _{cr,N} (mm)	Scr,sp (mm)	C _{cr,sp} (mm)	h _{min} (mm)	h1 (mm)	h _{nom} (mm)	h _{ef} (mm)	t _{fix} (mm)	Scr,N (mm)	C _{cr,N} (mm)	Scr,sp (mm)	C _{cr,sp} (mm)	
SXTBCS06050SS	Ø6 x 50	✓	6	9	12.4	15	TX30	250	35	35	-	-	-	-	-	-	-	-	-	-	80	50	40	30.0	10	90	45	110	55
SXTBCS06075SS	Ø6 x 75	✓									20	129	65	190	95	35													
SXTBCS06080SS	Ø6 x 80	✓									25																		
SXTBCS06100SS	Ø6 x 100	✓									45																		
SXTBCS08075SS	Ø8 x 75	✓	8	12	18	21	TX45	600	35	35	80	75	65	50.5	10	152	76	220	110	80	60	50	37.5	25	113	57	130	65	
SXTBCS08090SS	Ø8 x 90	✓													25														
SXTBCS08095SS	Ø8 x 95	✓													30														
SXTBCS08100SS	Ø8 x 100	✓													35														
SXTBCS10075SS	Ø10 x 75	✓	10	14	21	24.5	TX50	600	50	40	-	-	-	-	-	-	-	-	-	-	80	65	55	41.5	20	125	63	140	70
SXTBCS10100SS	Ø10 x 100	✓									15	201	101	230	115	45													
SXTBCS10120SS	Ø10 x 120	✓									35																		
SXTBCS10150SS	Ø10 x 150	✓									65																		
SXTBCS12100SS	Ø12 x100	✓	12	16	24	28	TX55	600	75	45	-	-	-	-	-	-	-	-	-	-	120	90	75	58	25	174	87	190	95
SXTBCS12150SS	Ø12 x 150	✓									160	120	105	83.5	45	251	126	240	120	75									



INSTALLATION DATA
THUNDERBOLT® PRO THRU-SCREW
MECHANICAL GALVANISED



- d_o : Diameter of CSK head
- d_o' : Nominal diameter of drill bit
- d_o' : Fixture clearance hole diameter
- h_{ef} : Effective anchorage depth
- h_1 : Depth of drilled hole
- h_{nom} : Overall fastener embedment depth in the concrete
- h_{min} : Minimum thickness of concrete member
- t_{fix} : Fixture thickness
- d_o : Diameter of CSK drill size



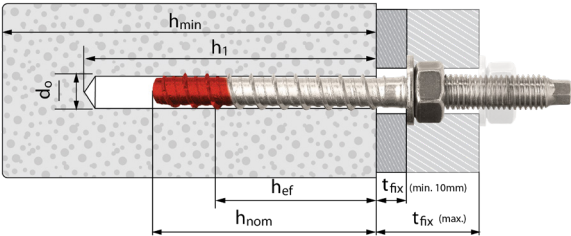
General Installation parameters									Standard Installation depth (h_{ef} std)										Reduced Installation depth (h_{ef} red)									
Thunderbolt® PRO	Size	Assessed	Drill bit diameter	Fixture clearance hole	Spanner	Impact tool torque	Minimum allowable spacing	Minimum allowable edge distance	Minimum concrete thickness	Depth of drill hole	Installation depth	Effective anchorage depth	Min. Thickness of fixture	Max. Thickness of fixture	Critical spacing (concrete cone)	Critical edge distance (cone)	Critical spacing (splitting)	Critical edge distance (splitting)	Minimum concrete thickness	Depth of drill hole	Installation depth	Effective anchorage depth	Min. Thickness of fixture	Max. Thickness of fixture	Critical spacing (concrete cone)	Critical edge distance (cone)	Critical spacing (splitting)	Critical edge distance (splitting)
Part No.	[-]	ETA	d_o (mm)	d_f (mm)	SW/Tx [-]	T_{max} [Nm]	S_{min} (mm)	C_{min} (mm)	h_{min} (mm)	h_1 (mm)	h_{nom} (mm)	h_{ef} (mm)	t_{fix} (mm)	t_{fix} (mm)	$S_{cr,N}$ (mm)	$C_{cr,N}$ (mm)	$S_{cr,sp}$ (mm)	$C_{cr,sp}$ (mm)	h_{min} (mm)	h_1 (mm)	h_{nom} (mm)	h_{ef} (mm)	t_{fix} (mm)	t_{fix} (mm)	$S_{cr,N}$ (mm)	$C_{cr,N}$ (mm)	$S_{cr,sp}$ (mm)	$C_{cr,sp}$ (mm)
SXTBTS08110G-M10-29	Ø8 x 110	✓	8	12	7	350	35	35	100	75	65	50.5	10	29	152	76	200	100	100	60	50	37.5	25	44	113	57	130	65
SXTBTS08130G-M10-49	Ø8 x 130	✓											10	49									25	64				
SXTBTS10120G-M12-16	Ø10 x 120	✓	10	14	8	600	50	40	135	95	85	67	10	16	201	101	210	105	100	65	55	41.5	40	46	125	63	140	70
SXTBTS10140G-M12-36	Ø10 x 140	✓											10	36									40	66				
SXTBTS14155G-M16-16	Ø14 x 155	✓	14	18	12	600	80	50	185	130	115	92	10	16	276	138	230	115	120	90	75	58	50	56	174	87	190	95
SXTBTS14185G-M16-46	Ø14 x 185	✓											10	46									50	86				



INSTALLATION DATA

THUNDERBOLT® PRO THRU-SCREW

■ STAINLESS STEEL 316 (A4)



- d₁: Diameter of CSK head
- d_{dr}: Nominal diameter of drill bit
- d_{fix}: Fixture clearance hole diameter
- h_{ef}: Effective anchorage depth
- h₁: Depth of drilled hole
- h_{nom}: Overall fastener embedment depth in the concrete
- h_{min}: Minimum thickness of concrete member
- t_{fix}: Fixture thickness
- d₁: Diameter of CSK drill size



General Installation parameters		Standard Installation depth (h _{ef} std)																Reduced Installation depth (h _{ef} red)										
Thunderbolt®PRO	Size	Assessed	Drill bit diameter	Fixture clearance hole	Spanner	Impact tool torque	Minimum allowable spacing	Minimum allowable edge distance	Minimum concrete thickness	Depth of drill hole	Installation depth	Effective anchorage depth	Min. Thickness of fixture	Max. Thickness of fixture	Critical spacing (concrete cone)	Critical edge distance (cone)	Critical spacing (splitting)	Critical edge distance (splitting)	Minimum concrete thickness	Depth of drill hole	Installation depth	Effective anchorage depth	Min. Thickness of fixture	Max. Thickness of fixture	Critical spacing (concrete cone)	Critical edge distance (cone)	Critical spacing (splitting)	Critical edge distance (splitting)
Part No.	[-]	ETA	d ₀ (mm)	d _f (mm)	SW/Tx [-]	T _{max} [Nm]	S _{min} (mm)	C _{min} (mm)	h _{min} (mm)	h ₁ (mm)	h _{nom} (mm)	h _{ef} (mm)	t _{fix} (mm)	t _{fix} (mm)	S _{cr,N} (mm)	C _{cr,N} (mm)	S _{cr,sp} (mm)	C _{cr,sp} (mm)	h _{min} (mm)	h ₁ (mm)	h _{nom} (mm)	h _{ef} (mm)	t _{fix} (mm)	t _{fix} (mm)	S _{cr,N} (mm)	C _{cr,N} (mm)	S _{cr,sp} (mm)	C _{cr,sp} (mm)
SXTBTS08110SS-M10-29	Ø8 x 110	✓	8	12	7	600	35	35	80	75	65	50.5	10	29	152	76	220	110	80	60	50	37.5	25	44	113	57	130	65
SXTBTS08130SS-M10-49	Ø8 x 130	✓											10	49									25	64				
SXTBTS10120SS-M12-16	Ø10 x 120	✓	10	14	8	600	50	40	100	95	85	67	10	16	201	101	230	115	80	65	55	41.5	40	46	125	63	140	70
SXTBTS10140SS-M12-36	Ø10 x 140	✓											10	36									40	66				



SCREW-BOLT ANCHOR

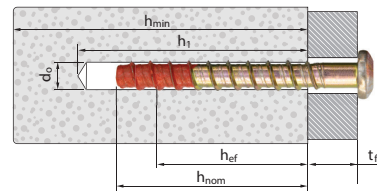
TDS | 1032.14

INSTALLATION DATA

THUNDERBOLT® PRO PAN HEAD

■ ZINC YELLOW

■ NAUTILUS® C



d_0 : Nominal diameter of drill bit
 d_1 : Fixture clearance hole diameter
 h_{ef} : Effective anchorage depth
 h_1 : Depth of drilled hole
 h_{nom} : Overall fastener embedment depth in the concrete
 h_{min} : Minimum thickness of concrete member
 t_{fix} : Fixture thickness

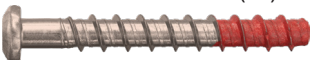


General Installation parameters		Standard Installation depth ($h_{ef\ std}$)																Reduced Installation depth ($h_{ef\ red}$)								
Thunderbolt®PRO Part No.	Size [-]	Assessed ETA	Drill bit diameter d_0 (mm)	Fixture clearance hole d_f (mm)	Drive type Torx [-]	Impact tool torque T_{max} [Nm]	Minimum allowable spacing S_{min} (mm)	Minimum allowable edge distance C_{min} (mm)	Minimum concrete thickness h_{min} (mm)	Depth of drill hole h_1 (mm)	Installation depth h_{nom} (mm)	Effective anchorage depth h_{ef} (mm)	Thickness of fixture t_{fix} (mm)	Critical spacing (concrete cone) $S_{cr,N}$ (mm)	Critical edge distance (cone) $C_{cr,N}$ (mm)	Critical spacing (splitting) $S_{cr,sp}$ (mm)	Critical edge distance (splitting) $C_{cr,sp}$ (mm)	Minimum concrete thickness h_{min} (mm)	Depth of drill hole h_1 (mm)	Installation depth h_{nom} (mm)	Effective anchorage depth h_{ef} (mm)	Thickness of fixture t_{fix} (mm)	Critical spacing (concrete cone) $S_{cr,N}$ (mm)	Critical edge distance (cone) $C_{cr,N}$ (mm)	Critical spacing (splitting) $S_{cr,sp}$ (mm)	Critical edge distance (splitting) $C_{cr,sp}$ (mm)
SXTBP08060/G	Ø8 x 60	✓	8	12	T45	350	35	35	-	-	-	-	-	-	-	-	-	100	60	50	37.5	10	113	57	130	65
SXTBP08080/G	Ø8 x 80	✓							100	75	65	50.5	15	152	76	200	100					30				
SXTBP08100/G	Ø8 x 100	✓											35									50				

Note: Add "G" to the part no for Nautilus® C option, e.g. SXTBP08080G

THUNDERBOLT® PRO PAN HEAD

■ STAINLESS STEEL 316 (A4)



General Installation parameters									Standard Installation depth (h _{ef, std})									Reduced Installation depth (h _{ef, red})								
Thunderbolt®PRO	Size	Assessed	Drill bit diameter	Fixture clearance hole	Drive type	Impact tool torque	Minimum allowable spacing	Minimum allowable edge distance	Minimum concrete thickness	Depth of drill hole	Installation depth	Effective anchorage depth	Thickness of fixture	Critical spacing (concrete cone)	Critical edge distance (cone)	Critical spacing (splitting)	Critical edge distance (splitting)	Minimum concrete thickness	Depth of drill hole	Installation depth	Effective anchorage depth	Thickness of fixture	Critical spacing (concrete cone)	Critical edge distance (cone)	Critical spacing (splitting)	Critical edge distance (splitting)
Part No.	[-]	ETA	d ₀ (mm)	d _f (mm)	Torx [-]	T _{max} [Nm]	S _{min} (mm)	C _{min} (mm)	h _{min} (mm)	h ₁ (mm)	h _{nom} (mm)	h _{ef} (mm)	t _{fix} (mm)	S _{cr,N} (mm)	C _{cr,N} (mm)	S _{cr,sp} (mm)	C _{cr,sp} (mm)	h _{min} (mm)	h ₁ (mm)	h _{nom} (mm)	h _{ef} (mm)	t _{fix} (mm)	S _{cr,N} (mm)	C _{cr,N} (mm)	S _{cr,sp} (mm)	C _{cr,sp} (mm)
SXTBP08060SS	Ø8 x 60	✓	8	12	T45	600	35	35	-	-	-	-	-	-	-	-	-	80	60	50	37.5	10	113	57	130	65
SXTBP08080SS	Ø8 x 80	✓							80	75	65	50.5	15	152	76	200	100					30				
SXTBP08100SS	Ø8 x 100	✓											35									50				

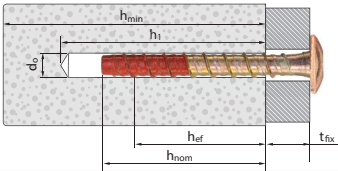


INSTALLATION DATA

THUNDERBOLT® PRO TRUSS HEAD

ZINC YELLOW

NAUTILUS® C



- d0 Nominal diameter of drill bit
- df Fixture clearance hole diameter
- hef Effective anchorage depth
- h1 Depth of drilled hole
- hnom Overall fastener embedment depth in the concrete
- hmin Minimum thickness of concrete member
- tfix Fixture thickness



General Installation parameters									Standard Installation depth (h _{eff std})								Reduced Installation depth (h _{eff red})									
Thunderbolt®PRO	Size	Assessed	Drill bit diameter	Fixture clearance hole	Drive type	Impact tool torque	Minimum allowable spacing	Minimum allowable edge distance	Minimum concrete thickness	Depth of drill hole	Installation depth	Effective anchorage depth	Thickness of fixture	Critical spacing (concrete cone)	Critical edge distance (cone)	Critical spacing (splitting)	Critical edge distance (splitting)	Minimum concrete thickness	Depth of drill hole	Installation depth	Effective anchorage depth	Thickness of fixture	Critical spacing (concrete cone)	Critical edge distance (cone)	Critical spacing (splitting)	Critical edge distance (splitting)
Part No.	[-]	ETA	d ₀ (mm)	d _f (mm)	Torx [-]	T _{max} [Nm]	S _{min} (mm)	C _{min} (mm)	h _{min} (mm)	h ₁ (mm)	h _{nom} (mm)	h _{ef} (mm)	t _{fix} (mm)	S _{cr,N} (mm)	C _{cr,N} (mm)	S _{cr,sp} (mm)	C _{cr,sp} (mm)	h _{min} (mm)	h ₁ (mm)	h _{nom} (mm)	h _{ef} (mm)	t _{fix} (mm)	S _{cr,N} (mm)	C _{cr,N} (mm)	S _{cr,sp} (mm)	C _{cr,sp} (mm)
SXTBTR06045/G	Ø6 x 45	✓	6	9	T30	250	35	35	-	-	-	-	-	-	-	-	-	100	50	40	30.0	5	90	45	90	45
SXTBTR06060/G	Ø6 x 60	✓							20																	
SXTBTR06080/G	Ø6 x 80	✓							40																	
SXTBTR06100/G	Ø6 x 100	✓							60																	

Note: Add "G" to the part no for Nautilus® C option. e.g. SXTBTR06080G

THUNDERBOLT® PRO TRUSS HEAD

STAINLESS STEEL 316 (A4)



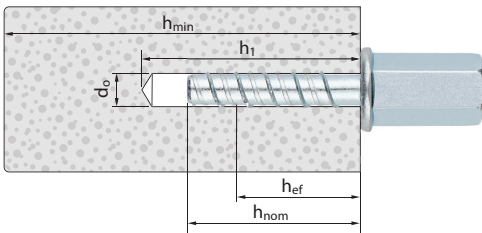
General Installation parameters		Standard Installation depth (h _{eff std})																Reduced Installation depth (h _{eff red})								
Thunderbolt®PRO	Size	Assessed	Drill bit diameter	Fixture clearance hole	Drive type	Impact tool torque	Minimum allowable spacing	Minimum allowable edge distance	Minimum concrete thickness	Depth of drill hole	Installation depth	Effective anchorage depth	Thickness of fixture	Critical spacing (concrete cone)	Critical edge distance (cone)	Critical spacing (splitting)	Critical edge distance (splitting)	Minimum concrete thickness	Depth of drill hole	Installation depth	Effective anchorage depth	Thickness of fixture	Critical spacing (concrete cone)	Critical edge distance (cone)	Critical spacing (splitting)	Critical edge distance (splitting)
Part No.	[-]	ETA	d ₀ (mm)	d _f (mm)	Torx [-]	T _{max} [Nm]	S _{min} (mm)	C _{min} (mm)	h _{min} (mm)	h ₁ (mm)	h _{nom} (mm)	h _{ef} (mm)	t _{fix} (mm)	S _{cr,N} (mm)	C _{cr,N} (mm)	S _{cr,sp} (mm)	C _{cr,sp} (mm)	h _{min} (mm)	h ₁ (mm)	h _{nom} (mm)	h _{ef} (mm)	t _{fix} (mm)	S _{cr,N} (mm)	C _{cr,N} (mm)	S _{cr,sp} (mm)	C _{cr,sp} (mm)
SXTBTR06045SS	Ø6 x 45	✓	6	9	T30	250	35	35	-	-	-	-	-	-	-	-	-	80	50	40	30.0	5	90	45	110	55
SXTBTR06060SS	Ø6 x 60	✓							80	65	55	43	5	129	65	190	95					20				
SXTBTR06080SS	Ø6 x 80	✓							25	40																
SXTBTR06100SS	Ø6 x 100	✓							45	60																



INSTALLATION DATA

THUNDERBOLT® PRO ROD HANGERZ™

☐ ZINC CLEAR
 ☒ GALVANISED - INTERNAL THREAD



d_0 : Nominal diameter of drill bit
 h_{ef} : Effective anchorage depth
 h_1 : Depth of drilled hole
 h_{nom} : Overall fastener embedment depth in the concrete
 h_{min} : Minimum thickness of concrete member



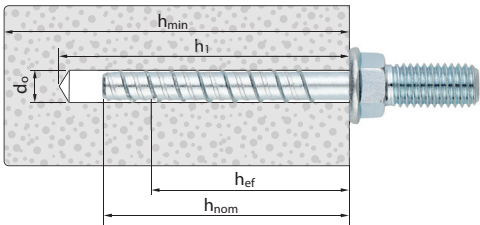
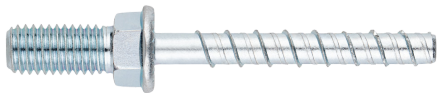
General Installation parameters								Standard Installation depth ($h_{ef\,std}$)							
Thunderbolt®PRO	Size	Assessed	Drill bit diameter	Spanner	Impact tool torque	Minimum allowable spacing	Minimum allowable edge distance	Minimum concrete thickness	Depth of drill hole	Installation depth	Effective anchorage depth	Critical spacing (concrete cone)	Critical edge distance (cone)	Critical spacing (splitting)	Critical edge distance (splitting)
Part No.	[-]	ETA	d_0 (mm)	SW/TX [-]	T_{max} [Nm]	S_{min} (mm)	C_{min} (mm)	h_{min} (mm)	h_1 (mm)	h_{nom} (mm)	h_{ef} (mm)	$S_{cr,N}$ (mm)	$C_{cr,N}$ (mm)	$S_{cr,sp}$ (mm)	$C_{cr,sp}$ (mm)
SXTB-IM06035	Ø6 x 35 (M8-M10)	✓	6	SW13	250	35	35	100	45	35	26.0	78	39	90	45
SXTB-IM06040/G-M10	Ø6 x 40 (M10)	✓						100	50	40	30.0	90	45	90	45
SXTB-IM06055	Ø6 x 55 (M8-M10)	✓						100	65	55	43.0	129	65	170	85
SXTB-IM08050/G-M10	Ø8 x 50 (M10)	✓	8	SW13	350	35	35	100	60	50	37.5	113	57	130	65
SXTB-IM08050/G-M12	Ø8 x 50 (M12)	✓		SW17											

Note: Add 'G' to the part no. for the Mechanically Galvanised option..e.g. SXTB-IM06040G-M10



INSTALLATION DATA
THUNDERBOLT® PRO HANGERZ™

☐ ZINC CLEAR - EXTERNAL THREAD



- d0 Nominal diameter of drill bit
- hef Effective anchorage depth
- h1 Depth of drilled hole
- hnom Overall fastener embedment depth in the concrete
- hmin Minimum thickness of concrete member



General Installation parameters						Standard Installation depth (h _{ef STD})									
Thunderbolt®PRO	Size	Assessed	Drill bit diameter	Spanner	Impact tool torque	Minimum allowable spacing	Minimum allowable edge distance	Minimum concrete thickness	Depth of drill hole	Installation depth	Effective anchorage depth	Critical spacing (concrete cone)	Critical edge distance (cone)	Critical spacing (splitting)	Critical edge distance (splitting)
Part No.	[-]	ETA	d ₀ (mm)	SW/TX [-]	T _{max} [Nm]	S _{min} (mm)	C _{min} (mm)	h _{min} (mm)	h ₁ (mm)	h _{nom} (mm)	hef (mm)	S _{cr,N} (mm)	C _{cr,N} (mm)	S _{cr,sp} (mm)	C _{cr,sp} (mm)
SXTB-B06040-M10	Ø6 x 40 (M10)	✓	6	SW13	250	35	35	100	50	40	30.0	90	45	90	45



PERFORMANCE IN ACCORDANCE WITH AS 5216

Parameters: Qualification based on AS 5216

Concrete: 20 MPa

Conditions: Single anchor, no edge distance, min recommended concrete thickness

Design Resistance Capacities

Diameter (mm)	Installation Depth h_{nom} (mm)	Effective Depth h_{ef} (mm)	Uncracked concrete Tension N_{Rd} (kN)	Cracked concrete Tension N_{Rd} (kN)	Uncracked Concrete Shear V_{Rd} (kN)	Cracked concrete Shear V_{Rd} (kN)
6	40	30.0	4.5	3.1	7.8	5.4
	55	43.0	9.2	6.5	8.4	7.4
8	50	37.5	6.3	4.4	13.0	9.5
	65	50.5	11.8	8.2	13.0	10.5
10	55	41.5	8.8	6.1	17.1	12.0
	75	58.5	14.7	10.3	18.3	13.6
	85	67.0	18.0	12.6	18.3	18.3
12	75	58.0	14.5	10.1	24.8	23.6
	105	83.5	25.0	17.5	24.8	24.8
14	75	58.0	14.5	10.1	35.1	25.9
	115	92.0	28.9	20.3	35.1	35.1
16	80	58.0	14.5	10.1	32.6	22.8
	120	92.0	28.9	20.3	38.6	38.6
18	90	69.5	19.0	13.3	50.5	35.4
	140	112.0	38.9	27.2	53.9	53.9

Information presented in the above table has been derived from the product ETA (ETA 20/0902) and in accordance with AS 5216:2021. Data is based on single anchor with no edge or spacing influence. For detailed calculations incorporating multiple anchors please download the ICCONS anchor software program for assistance, this download is available via the ICCONS website www.iccons.com.au

PERFORMANCE FOR USE IN REDUNDANT NON-STRUCTURAL SYSTEMS - 20 MPa

Design Resistance Capacities

Diameter (mm)	Installation Depth h_{nom} (mm)	Effective Depth h_{ef} (mm)	Uncracked concrete Tension N_{Rd} (kN)	Cracked concrete Tension N_{Rd} (kN)	Uncracked Concrete Shear V_{Rd} (kN)	Cracked concrete Shear V_{Rd} (kN)
5	35	26.5	4.5	3.1	4.5	3.1
	45	35.0	6.8	4.8	5.5	4.8
6	35	26.0	3.6	2.5	4.3	3.0
	55	43.0	9.2	6.5	8.4	6.5

Information presented in the above table has been derived from the product ETA (ETA 20/0901) and in accordance with AS 5216:2021 for redundant non-structural systems. Redundant non-structural systems incorporate multiple fixings and fixing points please refer to product ETA and AS 5216:2021 for further details.

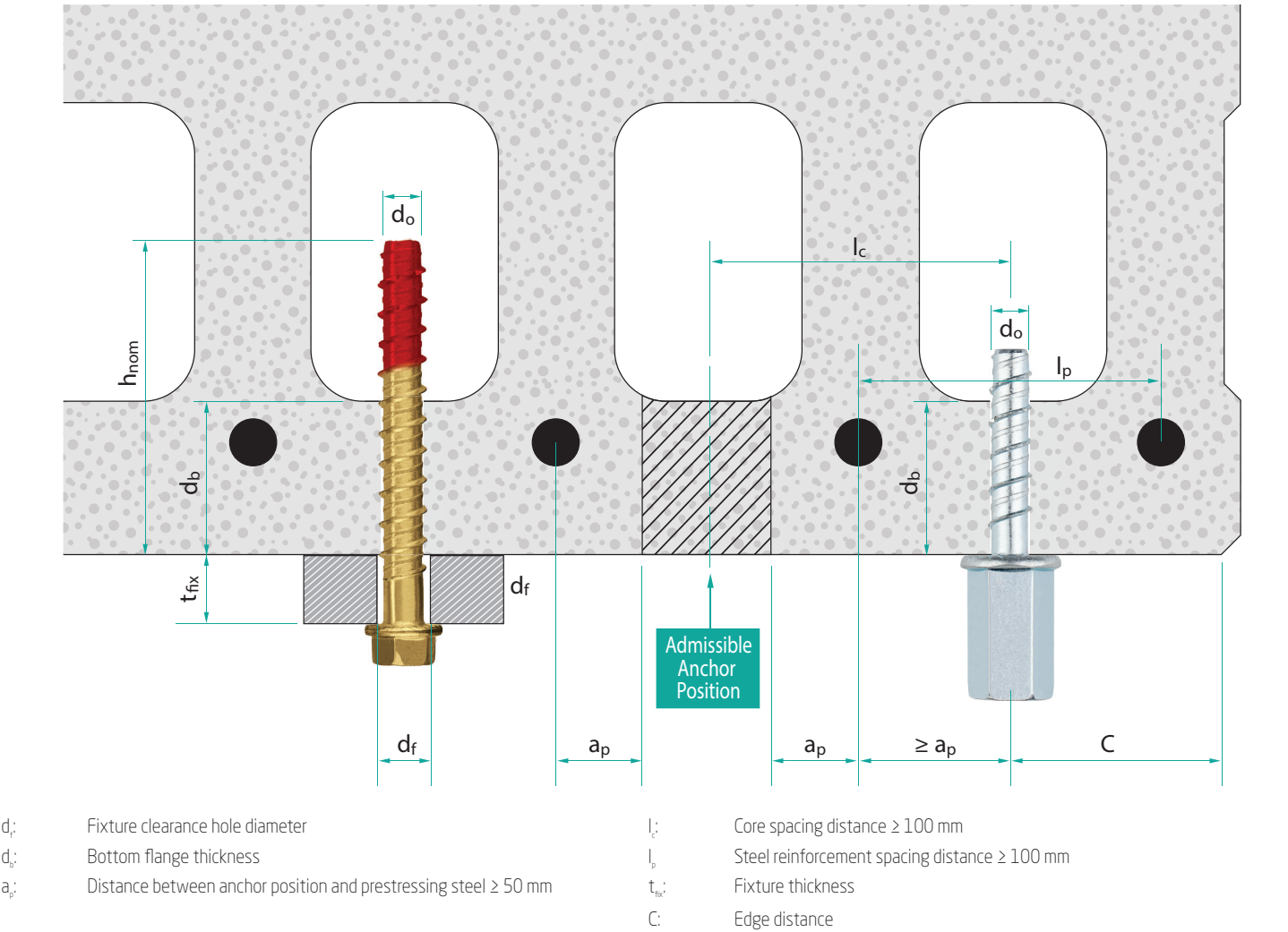


THUNDERBOLT®PRO PERFORMANCE FOR USE IN REDUNDANT NON-STRUCTURAL SYSTEMS
PRESTRESSED HOLLOW CORE SLABS (C30/37 TO C50/60)

Design Resistance Capacities

Diameter d_o (mm)	Min. Bottom Flange Thickness d_b (mm)	Effective Depth h_{ef} (mm)	Uncracked concrete Tension N_{Rd} (kN)	Uncracked Concrete Shear V_{Rd} (kN)
5	25	20.0	2.4	2.4
	30	22.0	2.8	2.8
	40	26.5	3.7	3.7
6	25	20.0	2.4	2.4
	30	22.0	2.8	2.8
	40	26.0	3.6	3.6

Information presented in the above table has been derived from the product ETA (ETA 20/0901) and in accordance with AS 5216:2021 for redundant non-structural systems. Redundant non-structural systems incorporate multiple fixings and fixing points please refer to product ETA and AS 5216:2021 for further details.



d_f : Fixture clearance hole diameter
 d_b : Bottom flange thickness
 a_p : Distance between anchor position and prestressing steel ≥ 50 mm

l_c : Core spacing distance ≥ 100 mm
 l_p : Steel reinforcement spacing distance ≥ 100 mm
 t_{fix} : Fixture thickness
 C : Edge distance



THUNDERBOLT® PRO SEISMIC C1 PERFORMANCE IN ACCORDANCE WITH AS 5216:2021

Design Resistance Capacities - 20 MPa ($a_{gap} = 1.0$)

SXTB Screw-Bolt size	Embed. Depth (mm)	Effective Depth (min.)	Tension $N_{Rd,seis}$ (kN)	Shear $V_{Rd,seis}$ (kN)
6	40	30.0	2.8	3.9
6	55	43.0	3.3	6.3
8	50	37.5	3.4	5.8
8	65	50.5	5.9	7.8
10	85	67.0	9.8	12.8
12	105	83.5	12.1	15.7
14	115	92.0	15.5	21.1
18	140	112.0	23.1	29.4

→ $a_{seis}=0.85$ for tension → $a_{seis}=0.85$ for shear concrete pryout

THUNDERBOLT® PRO SEISMIC C2 PERFORMANCE IN ACCORDANCE WITH AS 5216:2021

Design Resistance Capacities - 20 MPa ($a_{gap} = 1.0$)

SXTB Screw-Bolt size	Embed. Depth (mm)	Effective Depth (min.)	Tension $N_{Rd,seis}$ (kN)	Shear $V_{Rd,seis}$ (kN)
8	50	37.5	1.3	5.6
8	65	50.5	2.3	7.8
10	85	67.0	4.6	12.8
12	105	83.5	7.0	15.7
14	115	92.0	10.2	21.1
18	140	112.0	21.0	29.4

→ $a_{seis}=0.85$ for tension → $a_{seis}=0.85$ for shear concrete pryout

Information presented in the above tables has been derived from the product ETA (ETA 20/0902) and in accordance with AS 5216:2021. Data is based on single anchor with no edge or spacing influence. For detailed calculations incorporating multiple anchors please download the ICCONS® anchor software program for assistance, this download is available via the ICCONS® website www.iccons.com.au.

THUNDERBOLT® PRO STAINLESS STEEL (A4) PERFORMANCE IN ACCORDANCE WITH AS 5216

Parameters: Qualification based on AS 5216

Concrete: 20 MPa

Conditions: Single anchor, no edge distance, min recommended concrete thickness

Design Resistance Capacities

Diameter (mm)	Installation Depth h_{nom} (mm)	Effective Depth h_{ef} (mm)	Uncracked concrete Tension N_{Rd} (kN)	Cracked concrete Tension N_{Rd} (kN)	Uncracked Concrete Shear V_{Rd} (kN)	Cracked concrete Shear V_{Rd} (kN)
6	35	26.0	3.1	0.6	6.1	4.3
	40	30.0	4.5	1.4	7.0	6.3
	55	43.0	6.7	5.4	7.0	5.7
8	50	37.5	5.6	4.4	10.7	7.5
	65	50.5	9.8	6.9	11.7	9.5
10	55	41.5	7.3	5.1	13.4	9.4
	85	67.0	15.0	10.5	19.2	19.2
12	75	58.0	12.1	8.5	26.4	18.5
	105	83.5	25.0	17.5	27.9	27.9

Information presented in the above table has been derived from the product ETA (ETA 20/0902) and in accordance with AS 5216:2021. Data is based on single anchor with no edge or spacing influence. For detailed calculations incorporating multiple anchors please download the ICCONS anchor software program for assistance, this download is available via the ICCONS website www.iccons.com.au.



THUNDERBOLT® PRO STAINLESS STEEL (A4) C1 SEISMIC PERFORMANCE IN ACCORDANCE WITH AS 5216:2021

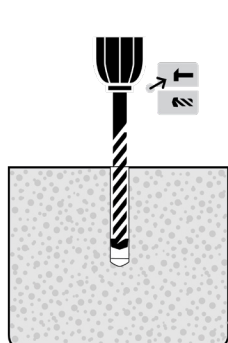
DESIGN RESISTANCE CAPACITIES - 20 MPA ($A_{GAP} = 1.0$)

SXTB Screw-Bolt size	Embed. Depth (mm)	Effective Depth (min.)	Tension $N_{Rd,seis}$ (kN)	Shear $V_{Rd,seis}$ (kN)
6	40	30.0	1.2	3.9
6	55	43.0	3.2	4.8
8	50	37.5	2.0	5.4
8	65	50.5	4.9	6.7
10	55	41.5	3.7	8.0
10	85	67.0	7.1	13.2
12	75	58.0	5.5	15.7
12	105	83.5	14.4	20.5

→ $a_{seis}=0.85$ for tension → $a_{seis}=0.85$ for shear concrete pryout

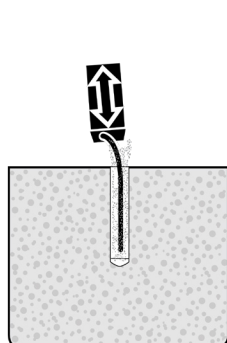
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INSTALLATION (SOLID CONCRETE)



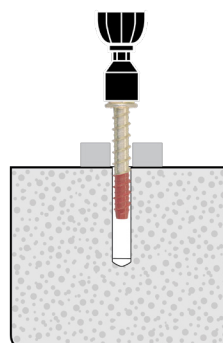
1. DRILL HOLE

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.



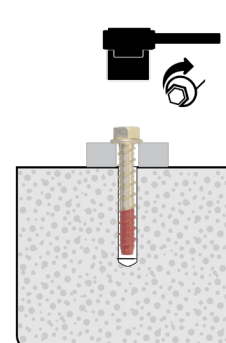
2. BLOW AND CLEAN

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



3. 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.



4. 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.



AS5216 COMPLIANT NCC ANCHOR DESIGN



Design of fastenings
under seismic actions



Design of redundant
non-structural
systems



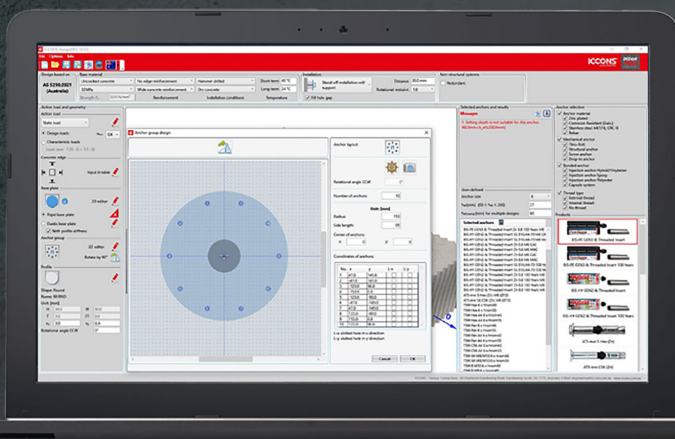
Combined loading
and displacement
calculations



Unique all-in-one
screen interface with
easy data input and
results display

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- ✓ Integrated FEA (Finite Element Analysis) for quick base plate thickness calculations
- ✓ Offers design solutions for rigid and elastic baseplates
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ICCONS® PTY LTD

VICTORIA - Head Office

383 Frankston Dandenong Rd,
Dandenong South,
Victoria, 3175
P: 03 9706 4344

NSW Branch

Unit A, 17 Seddon Street,
Bankstown,
New South Wales, 2200
P: 02 9791 6869

QLD Branch

42-44 Nealdon Dr,
Meadowbrook,
Queensland, 4131
P: 07 3200 6455

FNQ Branch

41 Corporate Crescent,
Garbutt,
Queensland, 4814
P: 07 2111 3453

S.A Branch

29-31 Weaver Street,
Edwardstown,
South Australia, 5039
P: 08 8234 5535

W.A. Branch

90 Christable Way,
Landsdale,
Western Australia, 6065
P: 08 6305 0008

N.T Branch

Unit 1, 14 Menmuir Street,
Winnellie,
Northern Territory, 0820
P: 08 8947 2758

NEW ZEALAND

SESTO FASTENERS

5E Piermark Drive,
Rosedale, Auckland,
New Zealand, 0632
P: +64 9415 8564
E: sestofasteners@gmail.com

THAILAND

ICCONS® (Thailand) Co. Ltd.

55 Phetkasem 62/3,
Bangkhao, Bangkok
Thailand, 0160
P: + 66 2 801 0764
F: + 66 2 801 0764
M: + 66 8 1 710 8745
E: icconsthailand@iccons.com.au