ICCONS®

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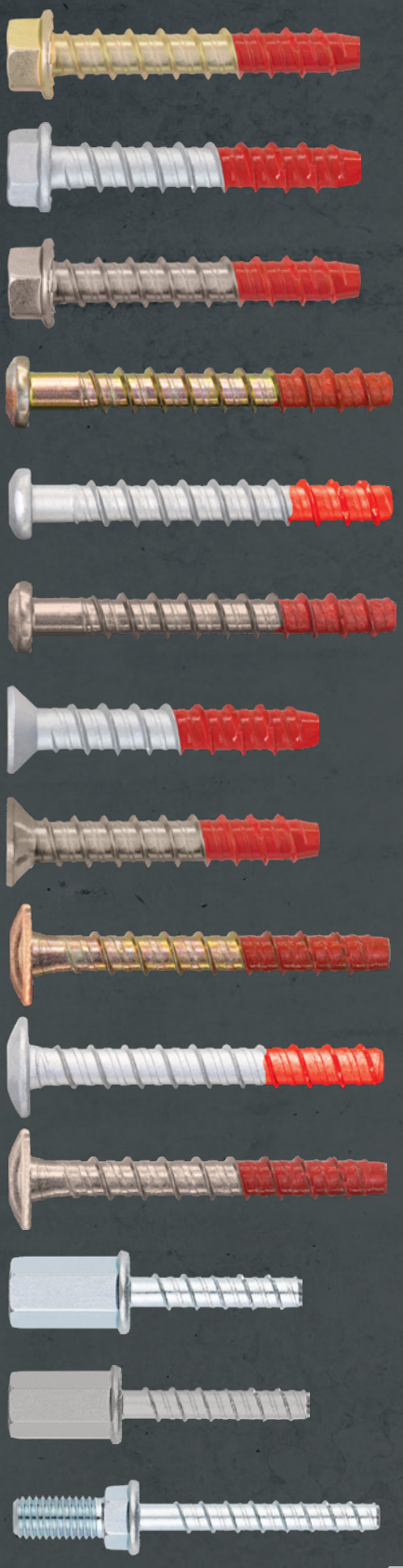
THUNDERBOLT® PRO
SCREW-BOLT ANCHOR



THUNDERBOLT® PRO

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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

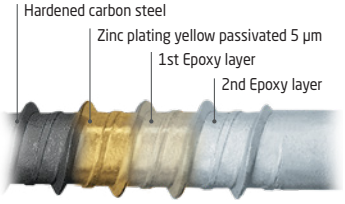
Applications

- 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 ≥ 5 µm plus Red Tip
SXTB _____G	Ø5 - Ø18	Hexagonal head with flange Screw-Bolt anchor	Carbon Steel NAUTILUS®C Coating plus Red Tip
SXTB _____SS	Ø6-Ø12	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
SXTBCS _____SS	Ø6-Ø12	Countersunk Screw-Bolt anchor	Shaft and Head-316 (A4) & Tip- Hardened carbon steel
SXTBP _____	Ø8	Pan Head Screw-Bolt anchor	Carbon steel zinc yellow coating ≥ 5 µm plus Red Tip
SXTBP_____G	Ø8	Pan Head Screw-Bolt anchor	Carbon Steel NAUTILUS®C Coating plus Red Tip
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 ≥ 5 µm plus Red Tip
SXTBTR _____G	Ø6	Truss Head Screw-Bolt anchor	Carbon Steel NAUTILUS®C Coating plus Red Tip
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 ≥ 5 µm
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 ≥ 5 µm
SXTBTH_____G	Ø6	Hex Track Hawk™ Screw-Bolt anchor	Carbon Steel NAUTILUS®C Coating (Red)



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	12	90	75	115	16	19	BTISS1938	600	Option 1	n/a	25	100
SXTB12080	12 x 80mm				5							50	200
SXTB12100	12 x 100mm		120	105	25							50	100
SXTB12120	12 x 120mm				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							C1 & C2	15	60
SXTB18170	18 x 170mm				30							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 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

THUNDERBOLT®PRO HEX HEAD

SXTBTH06043G^

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)	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		13 Ext / T30 Int	BTISS1338				100	500
SXTB06045G	6 x 45mm	6	50	40	5	9			250	Option 1	C1	100	1200
SXTB06050G	6 x 50mm				10							100	1200
SXTB06060G	6 x 60mm		65	55	5		10	BTISS1038		Option 1 & RNSS		100	600
SXTB06075G	6 x 75mm				20							100	600
SXTB06100G	6 x 100mm				45							100	600
SXTB06150G*	6 x 150mm	8	60	50	95	12	13	BTISS1338	350	Option 1	C1 & C2	50	300
SXTB08055G	8 x 55mm				5							100	600
SXTB08060G	8 x 60mm				10							100	600
SXTB08070G	8 x 70mm				20							100	400
SXTB08075G	8 x 75mm				25							100	400
SXTB08100G	8 x 100mm		75	65	35							100	400
SXTB08130G*	8 x 130mm				65							25	150
SXTB08140G	8 x 140mm				75							25	150
SXTB10060G	10 x 60mm	10	65	55	5	14	17	BTISS1738	600	Option 1	n/a	50	300
SXTB10075G	10 x 75mm				20							50	300
SXTB10090G	10 x 90mm		95	85	5						C1 & C2	50	200
SXTB10100G	10 x 100mm				15							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	12	90	75	5	16	19	BTISS1938	600	Option 1	n/a	50	200
SXTB12100G	12 x 100mm				25							50	100
SXTB12110G	12 x 110mm		120	105	5						C1 & C2	25	150
SXTB12120G	12 x 120mm				15							25	150
SXTB12150G	12 x 150mm				45							25	100
SXTB12200G	12 x 200mm				95							20	80
SXTB14080G	14 x 80mm	14	90	75	5	18	21	BTISS2138	600	Option 1	n/a	25	150
SXTB14100G	14 x 100mm				25							25	150
SXTB14130G	14 x 130mm		130	115	15						C1 & C2	25	100
SXTB14150G	14 x 150mm				35							25	100
SXTB16100G	16 x 100mm	16	100	80	20	20	24	BTISS2440	600	Option 1	Pending	15	90
SXTB16150G	16 x 150mm				70							15	60
SXTB16200G	16 x 200mm		140	120	80							10	40
SXTB18100G	18 x 100mm	18	110	90	10	22	26	BTISS2643	600	Option 1	n/a	20	80
SXTB18150G	18 x 150mm		160	140							C1 & C2	15	60
SXTB18170G	18 x 170mm				30							15	60
SXTB18200G	18 x 200mm				60							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.
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

316 SS (A4) - Stainless Steel

316 SS (A4) - Stainless Steel - 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 COUNTERSUNK HEAD

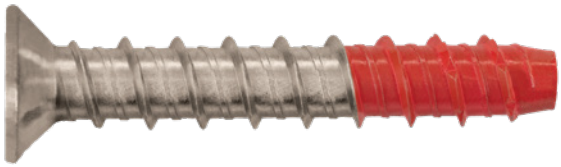
Nautilus® C - External Use

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

THUNDERBOLT®PRO COUNTERSUNK HEAD

316 SS (A4) - Stainless Steel



316 SS (A4) - Stainless Steel - 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.
SXTBCS06050SS	Ø6 x 50	6	50	40	10	9	15	4.5	TX30	BTI050T30	250	Option 1	C1	100	1200
SXTBCS06075SS	Ø6 x 75		65	55	20									100	600
SXTBCS06080SS	Ø6 x 80				25									100	600
SXTBCS06100SS	Ø6 x 100				45									100	400
SXTBCS08075SS	Ø8 x 75	8	60	50	25	12	21	6.5	TX45	BTI050T45	600	Option 1	C1	100	400
SXTBCS08090SS	Ø8 x 90		75	65	25									100	400
SXTBCS08095SS	Ø8 x 95				30									100	400
SXTBCS08100SS	Ø8 x 100				35									100	400
SXTBCS10075SS	Ø10 x 75	10	65	55	20	14	24.5	7.3	TX50	BTI050T50	600	Option 1	C1	50	200
SXTBCS10100SS	Ø10 x 100		95	85	15									50	200
SXTBCS12100SS	Ø12 x 100	12	90	75	25	16	28	8	TX55	BTI050T55	600	Option 1	C1	50	200
SXTBCS12150SS	Ø12 x 150		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 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				30							100	400
SXTBP080100	8 x 100mm		75	65	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

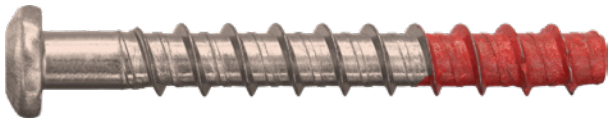
THUNDERBOLT®PRO PAN HEAD

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				30							100	400
SXTBP080100G	8 x 100mm		75	65	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



316 SS (A4) - Stainless Steel - 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				30							100	400
SXTBP080100SS	8 x 100mm		75	65	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 x45mm	6	50	40	5	9	T30	BTI050T30	250	Option 1	C1	100	1200
SXTBTR06060	6 x60mm		65	55	5					Option 1 & RNSS		100	600
SXTBTR06080	6 x80mm				25							100	600
SXTBTR06100	6 x100mm				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

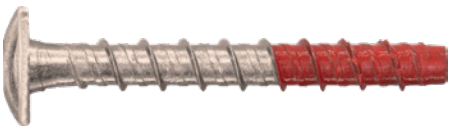
THUNDERBOLT®PRO TRUSS HEAD

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 x45mm	6	50	40	5	9	T30	BTI050T30	250	Option 1	C1	100	1200
SXTBTR06060G	6 x60mm		65	55	5					Option 1 & RNSS		100	600
SXTBTR06080G	6 x80mm				25							100	600
SXTBTR06100G	6 x100mm				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

THUNDERBOLT®PRO TRUSS HEAD

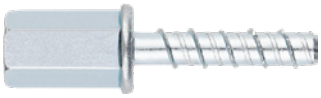


316 SS (A4) - Stainless Steel - External Use

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 x45mm	6	50	40	5	9	T30	BTI050T30	250	Option 1	C1	100	1200
SXTBTR06060SS	6 x60mm		65	55	5							100	600
SXTBTR06080SS	6 x80mm				25							100	600
SXTBTR06100SS	6 x100mm				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™

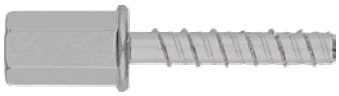


Carbon Steel Zinc Clear - Internal Use

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-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									500	n/a
SXTB-IM06040-M10	6 X 40 Rod Hanger (M10)		50		M10			Option 1	C1	100	400
SXTB-IM06040-M10-BK	6 X 40 Rod Hanger (M10) Bucket									500	n/a
SXTB-IM06055	6 X 55 Rod Hanger (M8/M10)		65		M8/ M10			Option 1 & RNSS		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	HZCM10-D	350	Option 1	C1 & C2	100	400
SXTB-IM08050G-M12	8 X 50 ETA Rod Hanger (M12)	8	60	17	M12	BTIDS1778	350	Option 1	C1 & C2	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™

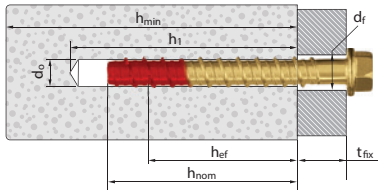
Carbon Steel Zinc Clear - External Thread

Part No.	Description	Drill Diameter (mm)	Drill Depth (mm)	Head / Socket Size (mm)	Internal 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.

THUNDERBOLT®PRO HEX HEAD

Zinc Yellow and NAUTILUS® C



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

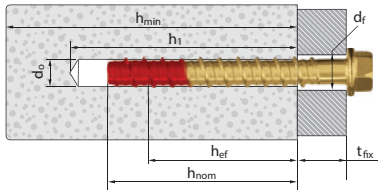
AS 5216 COMPLIES WITH FOR PERIOD INSTALLED PERTAINING

General Installation parameters									Standard Installation depth (hef, std)									Reduced Installation depth (hef, red)								
Thunderbolt®PRO Part No.	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)	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} (min)	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} (min)	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)
SXTB05050/G	Ø5 x 50	RNSS ✓	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				-	-	-	-	-	-	-	-	-		50	40	30.0	3	90	45		
SXTB06045/G	Ø6 x 45	✓			SW 10				-	-	-	-	-	-	-	-	-					5				
SXTB06050/G	Ø6 x 50	✓							-	-	-	-	-	-	-	-	-					10				
SXTB06060/G	Ø6 x 60	✓											5									20				
SXTB06075/G	Ø6 x 75	✓							100	65	55	43.0	20	129	65	170	85					35				
SXTB06100/G	Ø6 x 100	✓											45									60				
SXTB08055/G	Ø8 x 55	✓	8	12	S 13	350	35	35	-	-	-	-	-	-	-	-	-	100	60	50	37.5	5	113	57	130	65
SXTB08060/G	Ø8 x 60	✓							-	-	-	-	-	-	-	-	-					10				
SXTB08070/G	Ø8 x 70	✓											5									20				
SXTB08075/G	Ø8 x 75	✓											10									25				
SXTB08100/G	Ø8 x 100	✓							100	75	65	50.5	35	152	76	200	100					50				
SXTB08130G	Ø8 x 130	✓											65									80				
SXTB08140/G	Ø8 x 140	✓											75									90				
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	✓							-	-	-	-	-	-	-	-	-					20				
SXTB10090/G	Ø10 x 90	✓											5									35				
SXTB10100/G	Ø10 x 100	✓											15									45				
SXTB10120/G	Ø10 x 120	✓							135	95	85	67.0	35	201	101	210	105					65				
SXTB10150/G	Ø10 x 150	✓											65									95				
SXTB10200/G	Ø10 x 200	✓											115									140				

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

THUNDERBOLT®PRO HEX HEAD

Zinc Yellow and NAUTILUS® C



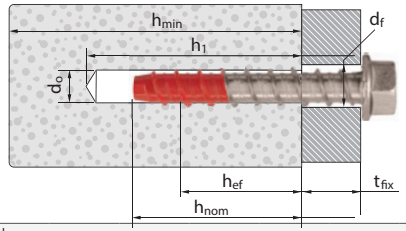
d_o: Nominal diameter of drill bit
d_f: Fixture clearance hole diameter
h_{ef}: Effective anchorage depth
h_1: Depth of drilled hole
h_{nom}: Overall fastener embedment depth in the concrete
h_{min}: Minimum thickness of concrete member
t_{fix}: Fixture thickness

General Installation parameters									Standard Installation depth ($h_{ef,std}$)									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)	Spanner SW/Tx [-]	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} (min)	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} (min)	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)
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	✓							-	-	-	-	-	-	-	-	-					25				
SXTB12110/G	Ø12 x 110	✓							170	120	105	83.5	5	251	126	220	110					35				
SXTB12120/G	Ø12 x 120	✓											15									45				
SXTB12150/G	Ø12 x 150	✓											45									75				
SXTB12200/G	Ø12 x 200	✓											95									125				
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	✓							-	-	-	-	-	-	-	-	-					25				
SXTB14130/G	Ø14 x 130	✓							185	130	115	92.0	15	276	138	230	115					55				
SXTB14150/G	Ø14 x 150	✓											35									75				
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					70				
SXTB16200/G	Ø16x 200	✓											80									120				
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					60				
SXTB18170/G	Ø18 x 170	✓											30									80				
SXTB18200/G	Ø18 x 200	✓											60									110				
SXTB18300/G	Ø18 x 300	✓											160									210				

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

THUNDERBOLT®PRO HEX HEAD

316 SS (A4) - Stainless Steel

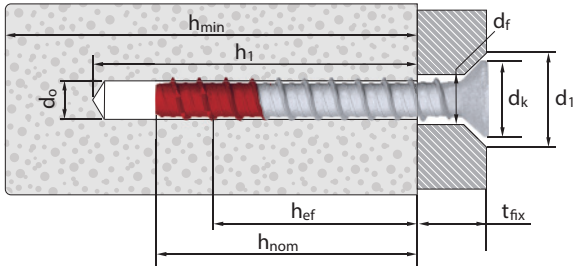


d_0: Nominal diameter of drill bit
d_f: Fixture clearance hole diameter
h_{ef}: Effective anchorage depth
h_1: Depth of drilled hole
h_{nom}: Overall fastener embedment depth in the concrete
h_{min}: Minimum thickness of concrete member
t_{fix}: Fixture thickness

General Installation parameters									Standard Installation depth ($h_{ef,std}$)									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)	Spanner SW/Tx [-]	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} (min)	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} (min)	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)
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	✓							80	65	55	43.0	5	129	65	190	95					20				
SXTB06075SS	Ø6 x 75	✓											20									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	✓							80	75	65	50.5	5	152	76	220	110					20				
SXTB08075SS	Ø8 x 75	✓											10									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	✓							135	95	85	67.0	5	201	101	210	105					35				
SXTB10100SS	Ø10 x 100	✓											15									45				
SXTB10120SS	Ø10 x 120	✓											35									65				
SXTB10140SS	Ø10 x 140	✓											55									85				
SXTB12080SS	Ø12 x 80	✓	12	16	SW 19	600	75	45	-	-	-	-	-	-	-	-	-	120	90	75	58.0	5	174	87	190	95
SXTB12100SS	Ø12 x100	✓							-	-	-	-	-	-	-	-	-					25				
SXTB12120SS	Ø12 x 120	✓							160	120	105	83.5	15	251	126	240	120					45				
SXTB12150SS	Ø12 x 150	✓											45									75				

THUNDERBOLT®PRO COUNTERSUNK HEAD

NAUTILUS® C

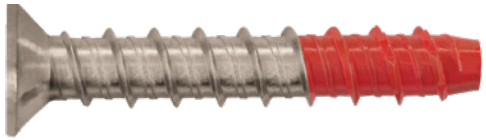


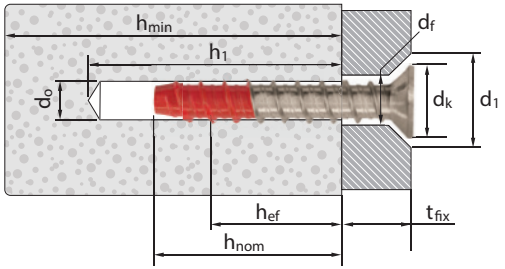
d_1: Diameter of CSK head
d_o: Nominal diameter of drill bit
d_f: Fixture clearance hole diameter
h_{ef}: Effective anchorage depth
h_1: Depth of drilled hole
h_{nom}: Overall fastener embedment depth in the concrete
h_{min}: Minimum thickness of concrete member
t_{fix}: Fixture thickness
d_1: Diameter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

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_o (mm)	Fixture clearance hole d_f (mm)	Diameter of CSK Head d_k (mm)	Diameter of CSK drill hole d_1 (mm)	Spanner SW/Tx [-]	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} (min)	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} (min)	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)
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	✓													45									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	✓													35									50				
SXTBCS08135G	Ø8 x 135	✓													70									85				
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 x65	✓									-	-	-	-	-	-	-	-	-					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 x100	✓									-	-	-	-	-	-	-	-	-					25				
SXTBCS12150G	Ø12 x 150	✓									170	120	105	83.5	45	251	126	220	110					75				

THUNDERBOLT®PRO COUNTERSUNK HEAD

316 SS (A4) - Stainless Steel



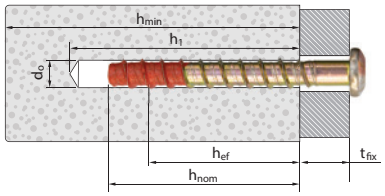


d_k:	Diameter of CSK head
d_o:	Nominal diameter of drill bit
d_f:	Fixture clearance hole diameter
h_{ef}:	Effective anchorage depth
h_1:	Depth of drilled hole
h_{nom}:	Overall fastener embedment depth in the concrete
h_{min}:	Minimum thickness of concrete member
t_{fix}:	Fixture thickness
d_1:	Diameter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

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)	Diameter of CSK Head d_k (mm)	Diameter of CSK drill hole d_1 (mm)	Spanner SW/Tx [-]	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} (min)	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} (min)	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)
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	✓									80	65	55	43	20	129	65	190	95					35				
SXTBCS06080SS	Ø6 x 80	✓													25									40				
SXTBCS06100SS	Ø6 x 100	✓													45									60				
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									40				
SXTBCS08095SS	Ø8 x 95	✓													30									45				
SXTBCS08100SS	Ø8 x 100	✓													35									50				
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	✓									100	95	85	67	15	201	101	230	115					45				
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				

THUNDERBOLT®PRO PAN HEAD

Zinc Yellow and NAUTILUS® C



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 ($h_{ef,std}$)									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} (min)	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} (min)	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

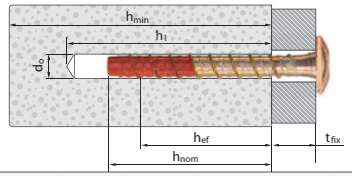
THUNDERBOLT®PRO PAN HEAD

316 SS (A4) - Stainless Steel

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} (min)	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} (min)	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)
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				

THUNDERBOLT®PRO TRUSS HEAD

Zinc Yellow and NAUTILUS® C



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 ($h_{ef,std}$)									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} (min)	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} (min)	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)
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	✓							100	65	55	43	5	129	65	170	85					20				
SXTBTR06080/G	Ø6 x 80	✓											25									40				
SXTBTR06100/G	Ø6 x 100	✓											45									60				

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

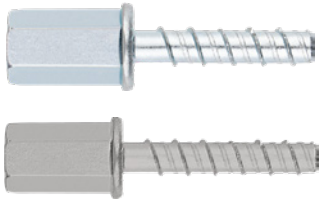
THUNDERBOLT®PRO TRUSS HEAD

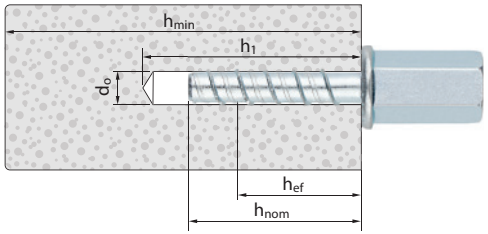
316 SS (A4) - Stainless Steel

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} (min)	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} (min)	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)
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				

THUNDERBOLT®PRO ROD HANGERZ™

Zinc clear and Galvanised - Internal Thread





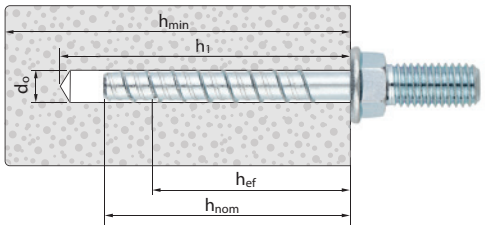
d_o: Nominal diameter of drill bit
h_{ef}: Effective anchorage depth
h_1: Depth of drilled hole
h_{nom}: Overall fastener embedment depth in the concrete
h_{min}: Minimum thickness of concrete member

General Installation parameters								Standard Installation depth ($h_{ef, std}$)							
Thunderbolt®PRO Part No.	Size [-]	Assessed ETA	Drill bit diameter d_0 (mm)	Spanner SW/TX [-]	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)	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)
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 Nautilus® C option. e.g. SXTB-IM06040G-M10

THUNDERBOLT®PRO HANGERZ™

Zinc clear - External 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 Part No.	Size [-]	Assessed ETA	Drill bit diameter d_o (mm)	Spanner SW/TX [-]	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)	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)
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

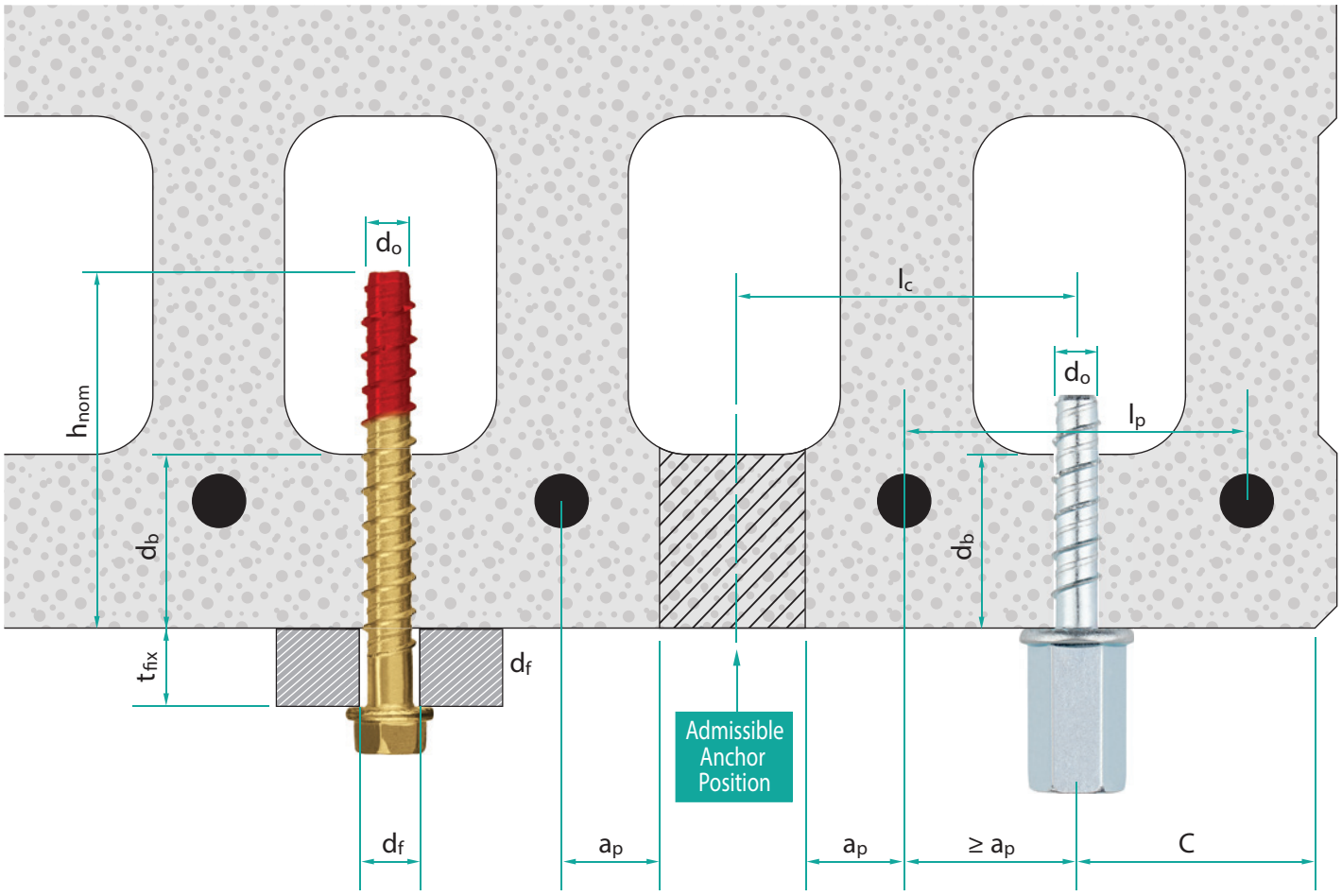
Information presented in the above table has been derived from the product ETA (ETA 20/0901) and in accordance with AS 5216:2021 for redundant non-structural systems.
Redundant non-structural systems incorporate multiple fixings and fixing points please refer to product ETA and AS 5216:2021for further 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 C1 (A4) Seismic Performance in accordance with AS 5216:2021

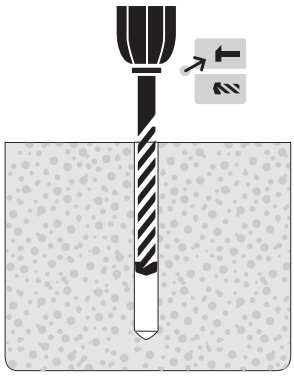
Design Resistance Capacities - 20 MPa (a_{gap} = 1.0)

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

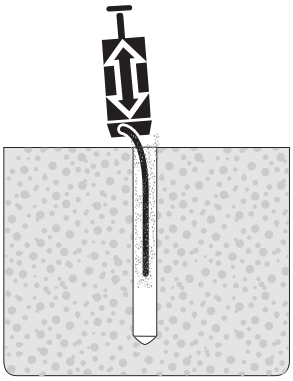
→ a_{seis}=0.85 for tension → a_{seis}=0.85 for shear concrete pryout

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.

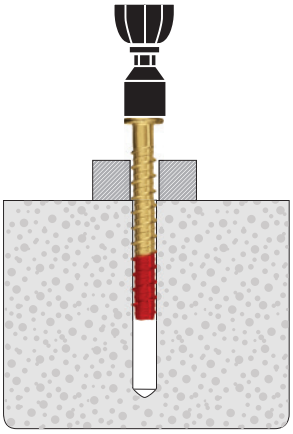
Installation (Solid Concrete)



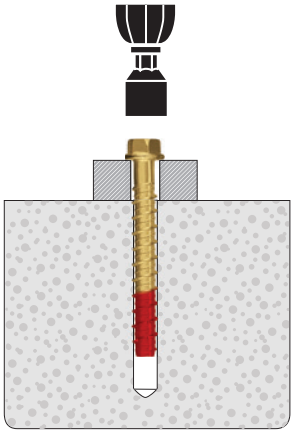
1. **DRILL HOLE**
With the correct diameter carbide drill bit, drill a hole into the base material to the correct depth using a hammer drill in rotary and hammer mode.



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.

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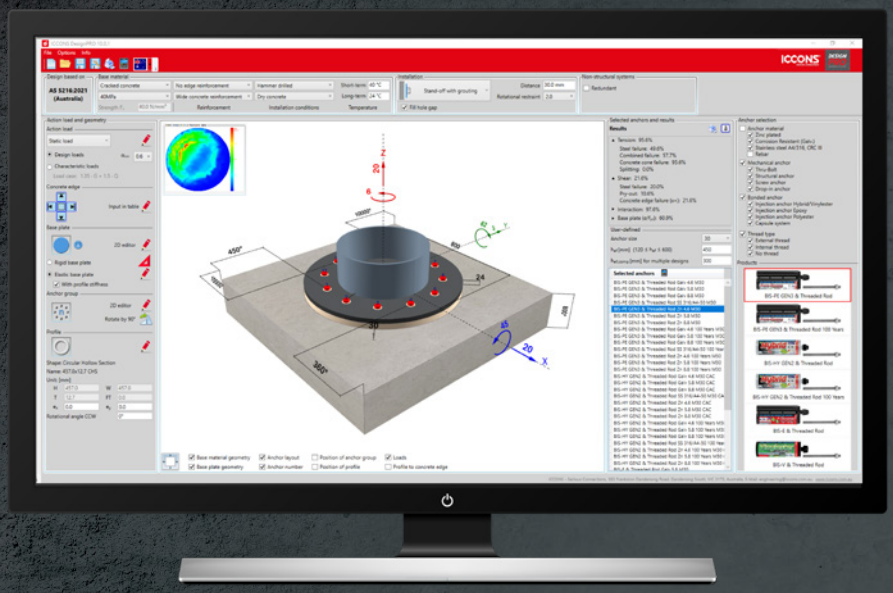

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