Anchoring and Fastening Systems
Selection Guide

SIMPSON Strong-Tie

Products shown are listed in Simpson Strong-Tie Anchoring and Fasteneing Systems Product Guide 2012-2013 (S-SAS-PGAU12)

For technical data please please contact your Simpson Strong-Tie Field Engineer or refer to Metric Anchoring Systems Technical Design Manual (C-TECHMAN13)

Australia +61 2 9831 7700 **strongtie.com.au**

New Zealand +64 9 477 4440 **strongtie.co.nz**

South Africa +27 87 354 0629 **strongtie.co.za**

Chemical Anchors

Design Resistance (KN)

Base Material: Concrete (Non-cracked, Cracked); Concrete Block (Grout Filled, Hollow); Brick (Solid, Hollow)

For use with: Insert Types (Threaded Rod, Rebar)

Approvals

Pre-qualified for seismic use

SET-XP®

SET-XP & Threaded Rods	M12	M16	M20	M24	M27
Embedment Depth (mm)	110	140	180	220	240
Hole Diameter (mm)	14	18	24	28	30
Tension (KN)	27.7	33.5	53.9	71.1	67.9
Shear (KN)	16.8	31.2	48.8	70.4	92.0

Concrete: Non-cracked ●, Cracked (Cracked Concrete CODE LISTED) ●
Concrete Block: Grout Filled ●, Hollow —
Brick: Solid ●, Hollow —
For use with: Threaded Rod ●, Rebar ●
Pre-qualified for seismic use ●

Approvals:
- ETA-11/0360 (Option 1)
- ICC-ES ESR-2508 (concrete)
- IAPMO UES ER-265 (masonry)
- NSF/ANSI Standard 61 (216 in²/1000 gal)

ET-HP®

ET-HP & Threaded Rods	M12	M16	M20	M24	M27
Embedment Depth (mm)	110	140	180	220	240
Hole Diameter (mm)	14	18	24	28	30
Tension (KN)	20.3	36.1	63.7	91.8	104.6
Shear (KN)	16.8	31.2	48.8	70.4	92.0

Concrete: Non-cracked ●, Cracked (Cracked Concrete CODE LISTED) ●
Concrete Block: Grout Filled ●, Hollow ●*
Brick: Solid ●, Hollow ●*
For use with: Threaded Rod ●, Rebar ●
Pre-qualified for seismic use ●

Approvals:
- ICC-ES ESR-3372 (concrete)
- ICC-ES ESR-3638 (URM)
- IAPMO UES ER-241 (masonry)

AT-HP®

AT-HP® & Threaded Rods	M8	M10	M12	M16	M20
Embedment Depth (mm)	70	90	110	140	180
Hole Diameter (mm)	10	12	14	18	22
Tension (KN)	15.2	20.6	30.6	44.4	56.7
Shear (KN)	6.3	10.1	14.6	27.2	41.3

Concrete: Non-cracked ●, Cracked —
Concrete Block: Grout Filled ●, Hollow ●*
Brick: Solid ●, Hollow ●*
For use with: Threaded Rod ●, Rebar ●
Pre-qualified for seismic use —

Approvals:
- ETA-11/0150 (Option 8)
- ETA-11/0151 (Option 8)
- ETA-11/0139
- ETA-13/0416
- CSTB Fire Test N° 26026461
- WRAS Water Quality Test N° 1205519

Mechanical Anchors

Available in: Zinc | Mechanically Galvanised | A4 Stainless Steel

* *Used in conjunction with screen tubes*

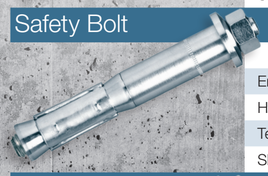
Superplus

	M8		M12		M16	
Embedment Depth (mm)	40	80	80	150	150	200
Hole Diameter (mm)	14		20		25	
Tension (KN)	6.0	15.1	21.7	39.7	61.8	74.1
Shear (KN)	6.0	33.1	43.4	56	94.4	94.4

Concrete: Non-cracked ●, Cracked (Cracked Concrete CODE LISTED) ●
Concrete Block: Grout Filled —, Hollow —
Brick: Solid —, Hollow —
Available in: Zinc ●, Mechanically Galvanised —, A4 Stainless Steel ●
Pre-qualified for seismic use ●

Approvals:
- ETA-01/0011 (Option 1)
- ETA-05/0013 (Option 1)

Safety Bolt

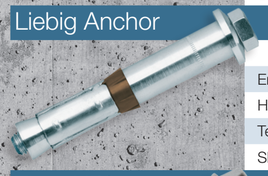


	M6	M8	M10	M12	M16	M20
Embedment Depth (mm)	45	55	70	80	100	125
Hole Diameter (mm)	10	12	15	20	25	30
Tension (KN)	4.2	6.7	13.3	21.7	33.7	44.2
Shear (KN)	7.4	10.6	31.2	43.4	67.3	94.1

Concrete: Non-cracked ●, Cracked (Cracked Concrete CODE LISTED) ●
Concrete Block: Grout Filled —, Hollow —
Brick: Solid —, Hollow —
Available in: Zinc ●, Mechanically Galvanised —, A4 Stainless Steel ●
Pre-qualified for seismic use —

Approvals:
- ETA-0/0108 (Option 1)

Liebig Anchor



	M6	M8	M10	M12	M16
Embedment Depth (mm)	47	55	70	86	102
Hole Diameter (mm)	10	12	15	20	25
Tension (KN)	4.2	5.8	13.9	16.7	27.8
Shear (KN)	8.0	10.6	25.2	46.7	69.4

Concrete: Non-cracked ●, Cracked (Cracked Concrete CODE LISTED) ●
Concrete Block: Grout Filled —, Hollow —
Brick: Solid —, Hollow —
Available in: Zinc ●, Mechanically Galvanised —, A4 Stainless Steel ●
Pre-qualified for seismic use —

Approvals:
- ETA-06/0123 (Option 1)

Titen HD®

	M8	M10	M12	M16	M20
Embedment Depth (mm)	65	75	95	115	135
Hole Diameter (mm)	8	10	12	16	20
Tension (KN)	4.2	5.8	13.9	16.7	27.8
Shear (KN)	8.0	10.6	25.2	46.7	69.4

Concrete: Non-cracked ●, Cracked (Cracked Concrete CODE LISTED) ●
Concrete Block: Grout Filled ●, Hollow ●
Brick: Solid —, Hollow —
Available in: Zinc ●, Mechanically Galvanised ●, A4 Stainless Steel —
Pre-qualified for seismic use ●

Approvals:
- ETA-12/0060 (Option 1)
- ICC-ES ESR-2731 (concrete)
- ICC-ES ESR-1056 (masonry)

Throughbolt WA

	M6	M8	M10	M12	M16
Embedment Depth (mm)	40	45	50	65	80
Hole Diameter (mm)	6	8	10	12	16
Tension (KN)	6.0	7.4	8.9	14.6	21.7
Shear (KN)	4.8	7.4	8.9	20.0	37.6

Concrete: Non-cracked ●, Cracked —
Concrete Block: Grout Filled —, Hollow —
Brick: Solid —, Hollow —
Available in: Zinc ●, Mechanically Galvanised ●, A4 Stainless Steel —
Pre-qualified for seismic use —

Approvals:
- ETA-11/0080 (Option 7)

This wall chart is effective until April 30, 2016, and reflects information available as of April 1, 2014. This information is updated periodically and should not be relied upon after April 30, 2016; contact Simpson Strong-Tie for current information and limited warranty or see (Australia and South Africa) www.strongtie.com.au/info (New Zealand) www.strongtie.co.nz/info

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