

AT-HP BLUE — Fast Cure Chemical Anchor

Material

Vinylester

Features & Benefits

- New improved formulation and foil cartridge design provides more durability and temperature resistance
- Fast working curing times when early loading is required in time sensitive applications
- Improved nozzle means less purging and less waste
- Improved colour curing; the cured colour is much closer to the real colour of concrete
- Usable in drinking water
- High bond strength for medium to heavy loads
- Suitable for use in cracked and non-cracked concrete
- Use DT300 Dispensing tool or high quality standard caulking gun

Applications

- Post-installed rebar applications
- Threaded Rod Anchoring
- Balconies
- Facade
- Structural Steel
- Dry and Wet Concrete
- Flooded holes (not sea water)

Base Material

- Normal and Lightweight Concrete
- Grout-filled and Hollow Concrete Block
- Solid and Hollow Brick
- Cracked and non-cracked concrete

Approvals

- ETA-23/0253 (Concrete - M8 to M24 / Rebar 8mm to 25mm)
- ETA-23/0255 (Rebar - 8mm to 12mm)
- ETA-23/0254 (Masonry - M6 to M12)
- Fire Rated R180
- Australia: Complies with AS5216 and NCC-National Construction Code
- New Zealand: BRANZ APPRAISAL No. 983 (8 May 2023)

Specifications

AT-HP Chemical Anchor - Gr 8.8 Threaded Rod

Installation Data	Symbol	Units	Threaded Rod Size (mm)					
			M8	M10	M12	M16	M20	M24
Nominal Insert Diameter	d	mm	8	10	12	16	20	24
Drill Hole Diameter	d _o		10	12	14	18	22	28
Minimum Embedment Depth	h _{ef,min}		60	60	70	80	90	100
Maximum Embedment Depth	h _{ef,max}		96	120	144	192	240	288
Clearance Hole Diameter in Fixture	d _f	mm	9	12	14	18	22	26
Installation Torque	T _{inst, max}		10	12	20	40	70	90



AT-HP Blue

Simpson Strong-Tie® (New Zealand) Ltd
 Call **09 477 4440**
www.strongtie.co.nz

Simpson Strong-Tie® Australia Pty Ltd
 Call **1300 STRONGTIE (1300 787 664)**
www.strongtie.com.au

Simpson Strong-Tie Limited Warranty: For the Limited Warranty that applies to Simpson Strong-Tie products, please consult www.strongtie.com.au/warranty or www.strongtie.co.nz/warranty. To obtain a copy of the Limited Warranty, contact us at info.au@strongtie.com or info.nz@strongtie.com, or at the number provided here. The Limited Warranty contains important disclaimers, limitations and exclusions, and applies only if the products have been properly specified, installed, maintained, and used in accordance with the design limits and the structural, technical, and environmental specifications in the Simpson Strong-Tie Documentation. All future purchases of Simpson Strong-Tie products are subject to the terms of the Limited Warranty in effect as of the purchase date. This flyer reflects information available as of May 2025 and may be updated periodically.

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Concrete Thickness, Edge Distance and Spacing

Description	Symbol	Units	Threaded Rod Size (mm)					
			M8	M10	M12	M16	M20	M24
Minimum Concrete Thickness	h_{min}	mm	$h_{ef} + 30\text{mm} (\geq 100\text{mm})$			$h_{ef} + 2d_o$		
Minimum Edge Distance	c_{min}		35	40	45	50	60	65
Minimum Spacing	s_{min}		40	40	60	75	95	115
Critical Edge Distance for concrete cone failure	$c_{cr,N}$		$1.5 \times h_{ef}$					
Critical Spacing for concrete cone failure	$s_{cr,N}$		$3 \times h_{ef}$					
Critical Edge Distance for splitting failure	$c_{cr,sp}$		$h/h_{ef} \geq 2.0$			$1.0 h_{ef}$		
			$2.0 > h/h_{ef} > 1.3$			$3h_{ef} - 1h$		
			$h/h_{ef} \leq 1.3$			$1.7 h_{ef}$		
Critical Spacing for splitting failure	$s_{cr,sp}$		$2c_{cr,sp}$					

Design Resistance — Single Anchor, No Concrete Edge or Spacing Influence

Description	Symbol	Units	M8	M10	M12	M16	M20	M24
Embedment Depth	h_{ef}	mm	70	80	110	140	180	220
Minimum Concrete Thickness	h_{min}		100	110	140	176	224	276
Non Cracked Concrete								
TENSION	N_{Rd}	kN	9.14	12.57	23.04	31.83	48.47	67.14
SHEAR	V_{Rd}		12	18.4	27.2	50.4	78.4	112.8

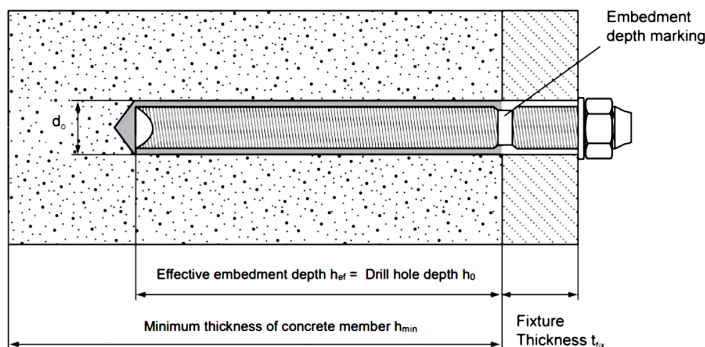
- Concrete strength is C20/25, $f_{ck,cube} = 25 \text{ N/mm}^2$ unreinforced, hammer drilling (HD) and compressed air drilling (CD), hole condition is "dry", temperature range 24°C long-term/40°C short-term.
 - Tabulated loads are valid at critical spacing and critical edge distance only.
 - N_{Rd} and V_{Rd} is based on use of a Grade 8.8 threaded insert. Verify capacity if using a different steel grade.
 - All design resistances are derived from the product's ETA (European Technical Assessment ETA-23/0253 of 03/28/2023).
- For combined tension and shear loads or anchor groups, spacing and edge distance influence, a calculation per EAD 330499 shall be done. Simpson Strong-Tie® Anchor Designer™ Software used for analysis.

Steel Design Resistance (Tension)

Threaded Rod	Symbol	Units	M8	M10	M12	M16	M20	M24
Steel Grade 5.8	$N_{Rd,s}$	kN	12.0	19.3	28.0	52.0	81.3	117.3
Steel Grade 8.8			19.3	30.7	44.7	83.3	130.7	188.0
Stainless Steel A4-70			13.9	21.9	31.6	58.8	91.4	132.1

Steel Design Resistance (Shear without lever arm)

Threaded Rod	Symbol	Units	M8	M10	M12	M16	M20	M24
Steel Grade 5.8	$V_{Rd,s}$	kN	7.2	12.0	16.8	31.2	48.8	70.4
Steel Grade 8.8			12.0	18.4	27.2	50.4	78.4	112.8
Stainless Steel A4-70			8.3	12.8	19.2	35.3	55.1	79.5



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Specifications

AT-HP Chemical Anchor - Rebar Grade B500B (DIN 488)

Installation Data		Units	Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø24	Ø25
Drill Hole Diameter	d_o	mm	10/12	12/14	14/16	16/18	20	25	28	30
Minimum Effective Embedment Depth	$h_{ef,min}$		60	60	70	75	80	90	100	100
Maximum Effective Embedment Depth	$h_{ef,max}$		96	120	144	168	192	240	288	300

Concrete Thickness, Edge Distance and Spacing

REBAR Size		Units	Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø24	Ø25
Minimum Concrete Thickness	h_{min}	mm	$h_{ef} + 30\text{mm} (>100\text{mm})$				$h_{ef} + 2d_o$			
Minimum Edge Distance	c_{min}		40	50	60	70	80	100	120	120
Minimum Spacing	s_{min}		40	50	60	70	80	100	120	120
Critical Edge Distance	$c_{cr,sp}$		$h/h_{ef} \geq 2.0$				$1.0 h_{ef}$			
			$2.0 > h/h_{ef} > 1.3$				$3h_{ef} - 1h$			
			$h/h_{ef} \leq 1.3$				$1.7 h_{ef}$			
Critical Spacing	$s_{cr,sp}$		$2c_{cr,sp}$							

Design Resistance — Single Rebar, No Concrete Edge or Spacing Influence

REBAR Size	Symbol	Units	Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25
Embedment Depth	h_{ef}	mm	80	90	110	130	160	180	220
Minimum Concrete Thickness	h_{min}		110	120	140	166	200	230	280
Non Cracked Concrete									
TENSION²	N_{Rd}	kN	6.0	9.0	13.8	15.0	21.1	29.6	45.3
SHEAR	V_{Rd}		9.2	14.4	20.7	28.2	36.9	57.6	90.0

- Concrete strength is C20/25, $f_{ck,cube} = 25 \text{ N/mm}^2$ unreinforced, hammer drilling (HD) and compressed air drilling (CD), hole condition is "dry", is temperature range 24°C long-term/40°C short-term.
 - Tabulated loads are valid at critical spacing and critical edge distance only.
 - Nominal tensile strength (f_{yk}) is determined by the equation: $f_{yk} = 550 \text{ MPa} \times A_{nom}$.
 - All design resistances are derived from the product's ETA (European Technical Assessment ETA-23/0253 of 03/28/2023).
- For combined tension and shear loads or anchor groups, spacing and edge distance influence, a calculation per EAD 330499 shall be done. Simpson Strong-Tie® Anchor Designer™ Software used for analysis.

Rebar Design Resistance

Installation Data	Symbol	Units	Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25
Design Resistance	$N_{Rd,s}$	kN	19.7	30.9	44.4	60.5	79.0	123.4	192.8
Nominal Yield Strength	f_{yk}		25.1	39.3	56.5	77.0	100.5	157.1	245.4
Nominal Tensile Strength	f_{uk}		27.6	43.2	62.2	84.7	110.6	172.8	270.0

