TECHNICAL DATA SHEET

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

AT-HP Blue

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		9	12	14	18	22	26
Installation Torque	$T_{inst,\ max}$	Nm	10	12	20	40	70	90

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AT-HP BLUE — Fast Cure Chemical Anchor

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} + 30mm (≥100mm)			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 x h_{ef}					
Critical Spacing for concrete cone failure	$s_{cr,N}$		3 x 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**

1. Concrete strength is C20/25, $f_{ck,cube}$ = 25 N/mm² unreinforced, hammer drilling (HD) and compressed air drilling (CD), hole condition is "dry", temperature range 24°C long-term/40°C short-term.
2. Tabulated loads are valid at critical spacing and critical edge distance only.
3. N_{Rd} and V_{Rd} is based on use of a Grade 8.8 threaded insert. Verify capacity if using a different steel grade.
4. All design resistances are derived from the product's ETA (European Technical Assessment ETA-23/0253 of 03/28/2023).

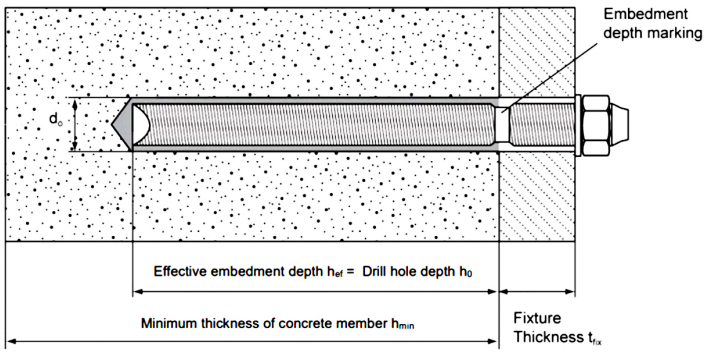
For combined tension and shear loads or anchor groups, spacing and edge distance influence, a calculation per EAD 330499 shall be done. Simpson Strong-Tie® Anchor Designer™ Software used for analysis.

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} + 30mm (>100mm)				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	$s_{cr,sp}$		2$c_{cr,sp}$							

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									
TENSION[2]	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**

Rebar Design Resistance (Tension)

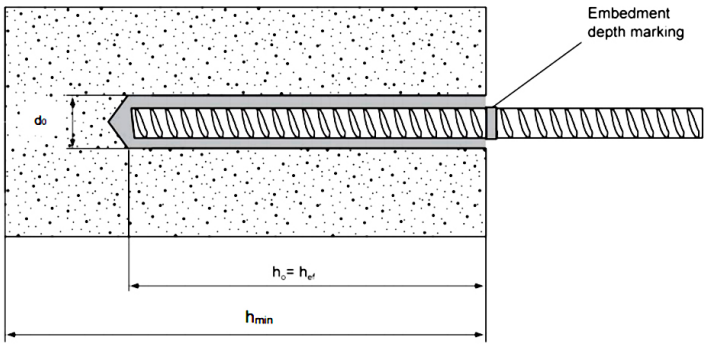
Installation Data	Symbol	Units	Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25
Design Resistance	$N_{Rd,s}$	kN	19.7	30.9	44.4	60.5	79.0	123.4	192.8
Nominal Yield Strength	f_{yk}		25.1	39.3	56.5	77.0	100.5	157.1	245.4
Nominal Tensile Strength	f_{uk}		27.6	43.2	62.2	84.7	110.6	172.8	270.0

Rebar Design Resistance (Shear)

REBAR Size	Symbol	Units	Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø24	Ø25
Design Resistance	$V_{Rd,s}$	kN	9.2	14.4	20.7	28.2	36.9	57.6	82.9	90.0

1. Concrete strength is C20/25, $f_{ck,cube}$ = 25 N/mm² unreinforced, hammer drilling (HD) and compressed air drilling (CD), hole condition is "dry", is temperature range 24°C long-term/40°C short-term.
2. Tabulated loads are valid at critical spacing and critical edge distance only.
3. Nominal tensile strength (f_{uk}) is determined by the equation: f_{uk} = 550 MPa x A_{nom}.
4. 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.



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