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WA-S1

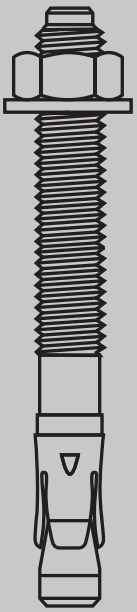
WEDGE ANCHOR / 316 (A4) STAINLESS STEEL / C1 & C2 SEISMIC RATED

316

CERTIFICATION | TDS | FIRE REPORT

Technical Data Sheet

- AS 5216 Compliant
- Approved for Cracked and Uncracked Concrete
- C1 & C2 Seismic Rated
- Standard and reduced anchorage depths



ETA

NCC COMPLIANT AS 5216

For Install Support
techadvice@allfasteners.com.au

For Specification Support
engineering@allfasteners.com.au

For Customer Support
1800 255 349

Certified System Quality ISO 9001 SAI GLOBAL

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Wedge Anchor,
316 (A4) Stainless Steel, C1 & C2 Seismic Rated

NCC COMPLIANT AS 5216

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- Connecting structural steel or timber to concrete
- Facades, balustrades, building services, height access systems, tunnel services, industrial
- A4 stainless steel for corrosive environments, outdoors

AS 5216 Compliant

ETA Cracked and Uncracked Concrete

C1 & C2 Seismic Rated

R30 - R120 Fire Rated, Tunnel Specific Fire Testing Report Available

Swiss Shock Load Approval

Supported by AFOS Anchor Design Software

Anchor Summary

Part Number	Description, Dia x L	Max. Fixture Thickness, t_{fix}	Effective Anchor Depth, h_{ef}	Embedment Depth, h_{nom}	Drill Hole Dia x Depth, d_0 x h_1	Minimum Concrete Thickness, h_{min}	Seismic C1/C2	Design Capacity in 32MPa Cracked Concrete [1]		Indicative Price Per Fixing [2]
								Tension	Shear	
1068.0080065	M8 x 65mm	**11mm**	35mm [3]	41mm	8 x 49mm	80mm	- / -	4.2kN	10.4kN	$3.52
1068.0080095	M8 x 95mm	**41mm**	35mm [3]	41mm	8 x 49mm		- / -			$3.82
		30mm	46mm	52mm	8 x 60mm		✓ / ✓			
1068.0080115	M8 x 115mm	**61mm**	35mm [3]	41mm	8 x 49mm		- / -			$4.26
		50mm	46mm	52mm	8 x 60mm		✓ / ✓			
1068.0100090	M10 x 90mm	**30mm**	40mm	48mm	10 x 55mm	80mm	- / -	6.3kN	16.0kN	$5.05
		10mm	60mm	68mm	10 x 75mm	100mm	✓ / ✓	7.5kN		
1068.0100110	M10 x 110mm	**50mm**	40mm	48mm	10 x 55mm	80mm	- / -	6.3kN		$5.20
		30mm	60mm	68mm	10 x 75mm	100mm	✓ / ✓	7.5kN		
1068.0100130	M10 x 130mm	**70mm**	40mm	48mm	10 x 55mm	80mm	- / -	6.3kN		$5.59
		50mm	60mm	68mm	10 x 75mm	100mm	✓ / ✓	7.5kN		
1068.0100155	M10 x 155mm	**95mm**	40mm	48mm	10 x 55mm	80mm	- / -	6.3kN		$6.16
		75mm	60mm	68mm	10 x 75mm	100mm	✓ / ✓	7.5kN		
1068.0120125	M12 x 125mm	**50mm**	50mm	60mm	12 x 70mm	100mm	- / -	10.2kN	24.0kN	$7.31
		30mm	70mm	80mm	12 x 90mm	120mm	✓ / ✓	13.4kN		
1068.0120145	M12 x 145mm	**70mm**	50mm	60mm	12 x 70mm	100mm	- / -	10.2kN		$8.39
		50mm	70mm	80mm	12 x 90mm	120mm	✓ / ✓	13.4kN		
1068.0120180	M12 x 180mm	**105mm**	50mm	60mm	12 x 70mm	100mm	- / -	10.2kN		$8.66
		85mm	70mm	80mm	12 x 90mm	120mm	✓ / ✓	13.4kN		
1068.0120200	M12 x 200mm	**125mm**	50mm	60mm	12 x 70mm	100mm	- / -	10.2kN		$14.58
		105mm	70mm	80mm	12 x 90mm	120mm	✓ / ✓	13.4kN		

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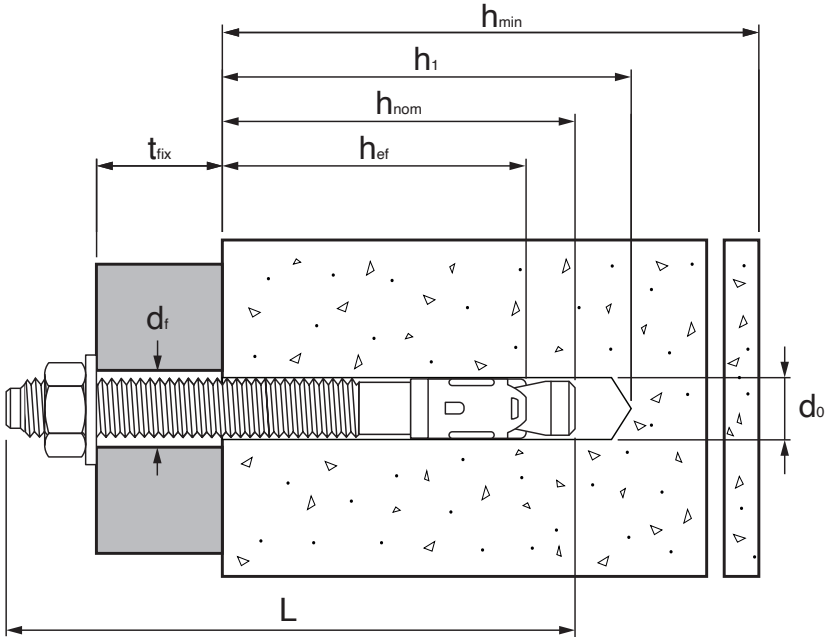
WEDGE ANCHOR / 316 (A4) STAINLESS STEEL / C1 & C2 SEISMIC RATED

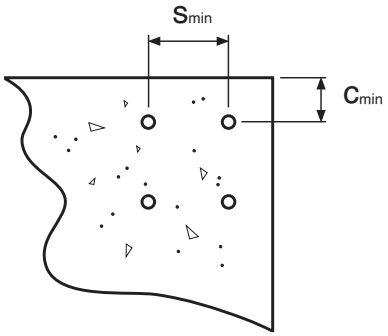
Part Number	Description, Dia x L	Max. Fixture Thickness, t_{fix}	Effective Anchor Depth, h_{ef}	Embedment Depth, h_{nom}	Drill Hole Dia x Depth, d_0 x h_1	Minimum Concrete Thickness, h_{min}	Seismic C1/C2	Design Capacity in 32MPa Cracked Concrete [1]		Indicative Price Per Fixing [2]
								Tension	Shear	
1068.0160135	M16 x 135mm	**35mm**	65mm	77mm	16 x 90mm	140mm	- / -	15.2kN	36.5kN	$14.42
		15mm	85mm	97mm	16 x 110mm		✓ / ✓	21.0kN	44.0kN	
1068.0160145	M16 x 145mm	**45mm**	65mm	77mm	16 x 90mm		- / -	15.2kN	36.5kN	$14.97
		25mm	85mm	97mm	16 x 110mm		✓ / ✓	21.0kN	44.0kN	
1068.0160170	M16 x 170mm	**70mm**	65mm	77mm	16 x 90mm		- / -	15.2kN	36.5kN	$15.74
		50mm	85mm	97mm	16 x 110mm		✓ / ✓	21.0kN	44.0kN	
1068.0160200	M16 x 200mm	**100mm**	65mm	77mm	16 x 90mm		- / -	15.2kN	36.5kN	$17.34
		80mm	85mm	97mm	16 x 110mm		✓ / ✓	21.0kN	44.0kN	
1068.0200165	M20 x 165mm	**30mm**	100mm	114mm	20 x 125mm	200mm	✓ / ✓	29.0kN	61.4kN	$24.52
1068.0200195	M20 x 195mm	**60mm**					✓ / ✓			$26.09
1068.0200235	M20 x 235mm	**100mm**					- / -			$32.36
1068.0200265	M20 x 265mm	**130mm**					- / -			$38.63
1068.0200285	M20 x 285mm	**150mm**					- / -			$44.80
1068.0240200	M24 x 200mm	**30mm**	125mm	140mm	24 x 155mm	250mm	- / -	33.7kN	98.8kN	$55.36
1068.0240230	M24 x 230mm	**60mm**					- / -			$60.53
1068.0240245	M24 x 245mm	**75mm**					- / -			$62.59

1) Without concrete edge or anchor spacing influence. Static and quasi-static load such as wind. To consider all design inputs and details, please refer to our AFOS Anchor Design Software or the ETA.

2) Based on a volume of 100+ to 500+ fixings, as of March 2026.

3) Anchors with effective anchor depth h_{ef} < 40mm are applicable only for statically indeterminate (redundant) non-structural systems as per AS 5216.





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WEDGE ANCHOR / 316 (A4) STAINLESS STEEL / C1 & C2 SEISMIC RATED

Installation Parameters

Anchor Size			M8		M10		M12		M16		M20	M24
Standard effective anchorage depth	h_{ef}	[mm]	**46**	-	**60**	-	**70**	-	**85**	-	**100**	**125**
Reduced effective anchorage depth	$h_{ef,red}$	[mm]	-	**35**	-	**40**	-	**50**	-	**65**	-	-
Embedment depth	h_{nom}	[mm]	52	41	68	48	80	60	97	77	114	140
Drill hole diameter	d_o	[mm]	8		10		12		16		20	24
Diameter of clearance hole in the fixture	d_f	[mm]	9		12		14		18		22	26
Depth of drill hole	h_1	[mm]	60	49	75	55	90	70	110	90	125	155
Installation torque	T_{inst}	[Nm]	20		35		50		110		200	290
Width across nut	SW	[mm]	13		17		19		24		30	36

Minimum spacing and edge distance for standard thickness of concrete member												
Cracked Concrete												
Standard thickness of concrete member	$h_{min,1}$	[mm]	100	-	120	-	140	-	160	-	200	250
Minimum spacing / for edge distance c	s_{min} / c	[mm]	40/70	-	50/75	-	60/100	-	60/100	-	95/150	125/125
Minimum edge distance / for spacing s	c_{min} / s	[mm]	40/80	-	55/90	-	60/140	-	60/180	-	95/200	125/125
Uncracked Concrete												
Minimum spacing / for edge distance c	s_{min} / c	[mm]	40/80	-	50/75	-	60/120	-	65/120	-	90/180	125/125
Minimum edge distance / for spacing s	c_{min} / s	[mm]	50/100	-	60/120	-	75/150	-	80/150	-	130/240	125/125

Minimum spacing and edge distance for minimum thickness of concrete member												
Cracked Concrete												
Minimum thickness of concrete member	$h_{min,2}$	[mm]	80	80	100	80	120	100	140	140	-	-
Minimum spacing / for edge distance c	s_{min} / c	[mm]	40/70	50/60	45/90	50/100	60/100	50/160	70/160	65/170	-	-
Minimum edge distance / for spacing s	c_{min} / s	[mm]	40/80	40/185	50/115	65/180	60/140	65/250	80/180	100/250	-	-
Uncracked Concrete												
Minimum spacing / for edge distance c	s_{min} / c	[mm]	40/80	50/60	60/140	50/100	60/120	50/160	80/180	65/170	-	-
Minimum edge distance / for spacing s	c_{min} / s	[mm]	50/100	40/185	90/140	65/180	75/150	100/185	90/200	170/65	-	-

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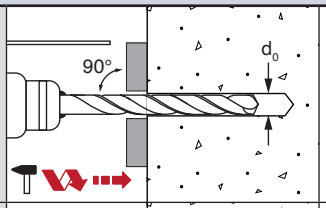
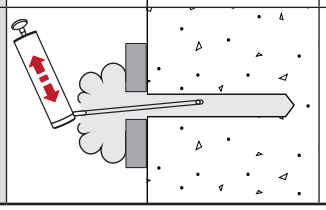
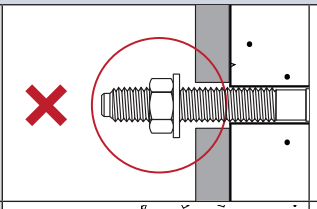
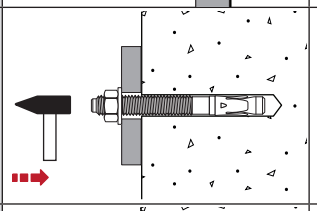
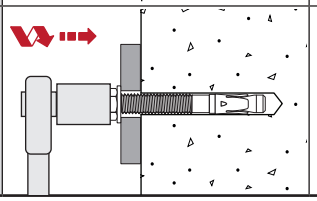
Installation Instructions

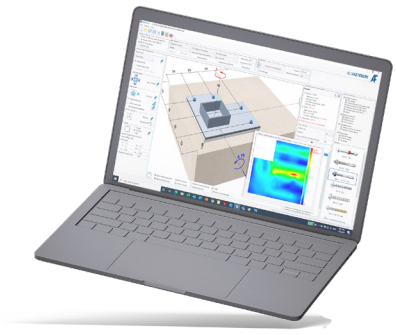
Drill hole preparation and cleaning		
1		Drill hole perpendicular to concrete surface. Using a vacuum drill, continue with step 3.
2		Blow out dust or alternatively vacuum clean down to the bottom of the hole.

Install WA-S1 through fixture		
3		Ensure anchor is properly seated against fixture.
4		Drive in anchor, such that h_{ef} or $h_{ef,red}$ depth is met. This compliance is ensured if thickness of fixture is not greater than the maximum thickness of fixture marked on the anchor.
5		Apply installation torque T_{inst} by using calibrated torque wrench.

For other anchor properties, please refer to the ETA on our website.

AFOS®
Anchor Design Software

DOWNLOAD **allfasteners.com.au/afos**



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