

WA-S3

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

CERTIFICATION

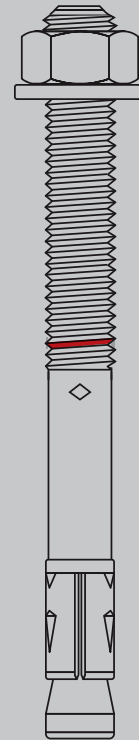
TDS

FIRE REPORT

316

Technical Data Sheet

- High performance anchor
- Approved for cracked and uncracked concrete
- C1 & C2 seismic rated at reduced embedments
- Variable anchorage depths
- Very low splitting forces at small edge distances



For Install Support

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For Specification Support

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For Customer Support

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

High Performance ●●●●●



NCC
COMPLIANT
AS 5216



- High performance, seismic rated at shallow embedments
- Connecting structural steel or timber to concrete
- Tunnel services, facades, balustrades, building services, height access systems, industrial
- Linear increments in embedment are permitted between the maximum and minimum values.
- A4 stainless steel for corrosive environments, outdoors. HCR available on request.

AS 5216 Compliant

ETA Cracked and Uncracked Concrete

C1 & C2 Seismic Rated

R30 - R120 Fire Rated, Tunnel Specific Fire Testing Reports Available for 450°C and 1200°C

Swiss Shock Load Approval

Supported by AFOS Anchor Design Software

Anchor Summary

Part Number	Description, Dia x L	Max. Fixture Thickness, t_{fx}	Effective Anchor Depth, h_{ef}	Embedment Depth, h_{nom}	Drill Hole Dia x Depth, $d_o \times h_i$	Minimum Concrete Thickness, h_{min}	Seismic C1/C2	Design Capacity in 32MPa Cracked Concrete ¹⁾		Indicative Price Per Fixing ²⁾
								Tension	Shear	
1069.0080065	M8 x 65mm	10mm	35mm ³⁾	43mm	8 x 45mm	80mm	- / - ⁴⁾	6.0kN	13.4kN	\$4.44
		5mm	40mm	48mm	8 x 50mm	80mm	✓ / ✓	7.3kN		
1069.0080095	M8 x 95mm	40mm	35mm ³⁾	43mm	8 x 45mm	80mm	- / - ⁴⁾	6.0kN		\$4.82
		30mm	45mm	53mm	8 x 55mm	80mm	✓ / ✓	7.9kN		
1069.0080115	M8 x 115mm	5mm	70mm	78mm	8 x 80mm	105mm	✓ / ✓	7.9kN		\$5.37
		60mm	35mm ³⁾	43mm	8 x 45mm	80mm	- / - ⁴⁾	6.0kN		
		50mm	45mm	53mm	8 x 55mm	80mm	✓ / ✓	7.9kN		
1069.0100070	M10 x 70mm	10mm	40mm	49mm	10 x 51mm	80mm	✓ / ✓	7.3kN	20.5kN	\$6.03
		30mm	40mm	49mm	10 x 51mm	80mm	✓ / ✓	7.3kN	20.5kN	\$6.37
1069.0100090	M10 x 90mm	10mm	60mm	69mm	10 x 71mm	90mm	✓ / ✓	13.4kN	22.2kN	
		50mm	40mm	49mm	10 x 51mm	80mm	✓ / ✓	7.3kN	20.5kN	\$6.56
1069.0100110	M10 x 110mm	30mm	60mm	69mm	10 x 71mm	90mm	✓ / ✓	13.4kN	22.2kN	
		5mm	85mm	94mm	10 x 96mm	128mm	✓ / ✓	14.3kN	20.5kN	\$7.06
1069.0100130	M10 x 130mm	70mm	40mm	49mm	10 x 51mm	80mm	✓ / ✓	7.3kN	20.5kN	
		50mm	60mm	69mm	10 x 71mm	90mm	✓ / ✓	13.4kN	22.2kN	
		10mm	100mm	109mm	10 x 111mm	150mm	✓ / ✓	14.3kN	22.2kN	\$7.78
1069.0100155	M10 x 155mm	95mm	40mm	49mm	10 x 51mm	80mm	✓ / ✓	7.3kN	20.5kN	
		75mm	60mm	69mm	10 x 71mm	90mm	✓ / ✓	13.4kN	22.2kN	
		35mm	100mm	109mm	10 x 111mm	150mm	✓ / ✓	14.3kN	22.2kN	

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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	
1069.0120085	M12 x 85mm	10mm	50mm	60mm	12 x 63mm	100mm	✓ / ✓	10.2kN	31.8kN	\$8.47
1069.0120105	M12 x 105mm	30mm	50mm	60mm	12 x 63mm	100mm	✓ / ✓			17.0kN
		10mm	70mm	80mm	12 x 83mm	105mm	✓ / ✓			
1069.0120125	M12 x 125mm	50mm	50mm	60mm	12 x 63mm	100mm	✓ / ✓	10.2kN		\$9.22
		30mm	70mm	80mm	12 x 83mm	105mm	✓ / ✓	17.0kN		
		5mm	95mm	105mm	12 x 108mm	143mm	✓ / ✓	18.0kN		
1069.0120145	M12 x 145mm	70mm	50mm	60mm	12 x 63mm	100mm	✓ / ✓	10.2kN		\$10.58
		50mm	70mm	80mm	12 x 83mm	105mm	✓ / ✓	17.0kN		
		5mm	115mm	125mm	12 x 128mm	173mm	✓ / ✓	18.0kN		
1069.0120180	M12 x 180mm	105mm	50mm	60mm	12 x 63mm	100mm	✓ / ✓	10.2kN		\$10.92
		85mm	70mm	80mm	12 x 83mm	105mm	✓ / ✓	17.0kN		
		30mm	125mm	135mm	12 x 138mm	188mm	✓ / ✓	18.0kN		
1069.0120200	M12 x 200mm	125mm	50mm	60mm	12 x 63mm	100mm	✓ / ✓	10.2kN		\$18.95
		105mm	70mm	80mm	12 x 83mm	105mm	✓ / ✓	17.0kN		
		50mm	125mm	135mm	12 x 138mm	188mm	✓ / ✓	18.0kN		
1069.0160115	M16 x 115mm	15mm	65mm	79mm	16 x 82mm	120mm	✓ / ✓	15.2kN	51.7kN	\$17.59
1069.0160135	M16 x 135mm	35mm	65mm	79mm	16 x 82mm	120mm	✓ / ✓		22.7kN	55.6kN
		15mm	85mm	99mm	16 x 102mm	128mm	✓ / ✓			
		5mm	95mm	109mm	16 x 112mm	143mm	✓ / ✓	26.8kN		
1069.0160145	M16 x 145mm	45mm	65mm	79mm	16 x 82mm	120mm	✓ / ✓	15.2kN	51.7kN	\$18.90
		25mm	85mm	99mm	16 x 102mm	128mm	✓ / ✓	22.7kN	55.6kN	
		5mm	105mm	119mm	16 x 122mm	158mm	✓ / ✓	27.5kN		
1069.0160170	M16 x 170mm	70mm	65mm	79mm	16 x 82mm	120mm	✓ / ✓	15.2kN	51.7kN	\$19.86
		50mm	85mm	99mm	16 x 102mm	128mm	✓ / ✓	22.7kN	55.6kN	
		5mm	130mm	144mm	16 x 147mm	195mm	✓ / ✓	27.5kN		
1069.0160200	M16 x 200mm	100mm	65mm	79mm	16 x 82mm	120mm	✓ / ✓	15.2kN	51.7kN	\$21.88
		80mm	85mm	99mm	16 x 102mm	128mm	✓ / ✓	22.7kN	55.6kN	
		5mm	160mm	174mm	16 x 177mm	240mm	✓ / ✓	27.5kN		
1069.0200165	M20 x 165mm	40mm	90mm	104mm	20 x 107mm	150mm	✓ / ✓	24.7kN	81.8kN	TBA
		30mm	100mm	114mm	20 x 117mm	150mm	✓ / ✓	29.0kN	86.8kN	
		5mm	125mm	139mm	20 x 142mm	188mm	✓ / ✓	35.1kN		
1069.0200195	M20 x 195mm	70mm	90mm	104mm	20 x 107mm	150mm	✓ / ✓	24.7kN	81.8kN	TBA
		60mm	100mm	114mm	20 x 117mm	150mm	✓ / ✓	29.0kN	86.8kN	
		20mm	140mm	154mm	20 x 157mm	210mm	✓ / ✓	35.1kN		

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

2) Based on a volume of 200+ to 500+ fixings, as of March 2026.

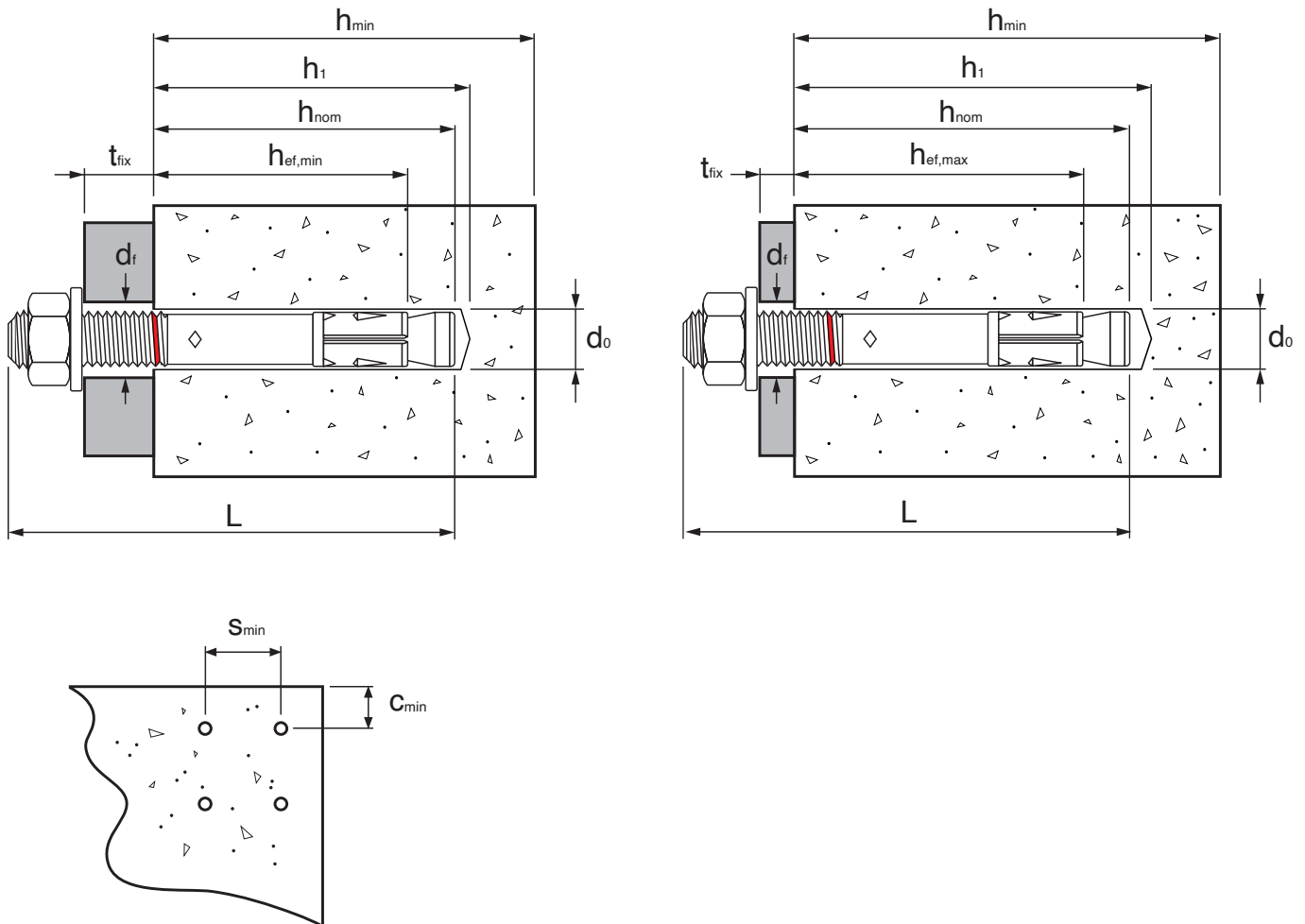
3) Anchors with effective anchor depth $h_{ef} < 40\text{mm}$ are applicable only for statically indeterminate (redundant) non-structural systems as per AS 5216.

4) Seismic C1 and C2 available for effective anchor depth $h_{ef} \geq 40\text{mm}$.

Installation Parameters

Anchor Size			M8	M10	M12	M16	M20
Minimum effective anchorage depth	$h_{ef,min}$	[mm]	35	40	50	65	90
Maximum effective anchorage depth	$h_{ef,max}$	[mm]	90	100	125	160	140
Embedment depth	h_{nom}	[mm]	$h_{ef} + 8$	$h_{ef} + 9$	$h_{ef} + 10$	$h_{ef} + 14$	$h_{ef} + 14$
Drill hole diameter	d_0	[mm]	8	10	12	16	20
Depth of drill hole	h_1	[mm]	$h_{ef} + 10$	$h_{ef} + 11$	$h_{ef} + 13$	$h_{ef} + 17$	$h_{ef} + 17$
Diameter of clearance hole in the fixture	d_f	[mm]	9	12	14	18	22
Installation torque	T_{inst}	[Nm]	15	40	55	100	200
Width across nut	SW	[mm]	13	17	19	24	30
Minimum thickness of concrete member	h_{min}	[mm]	$\max(1.5h_{ef}; 80)$		$\max(1.5h_{ef}; 100)$	$\max(1.5h_{ef}; 120)$	$\max(1.5h_{ef}; 150)$
Minimum spacing ¹⁾	s_{min}	[mm]	35	40	50	65	95
Minimum edge distance ¹⁾	c_{min}	[mm]	40	45	55	65	90

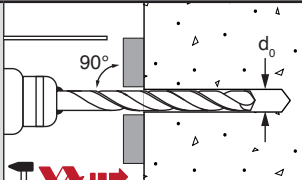
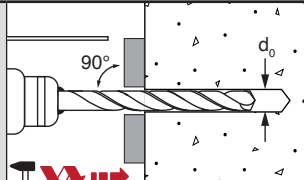
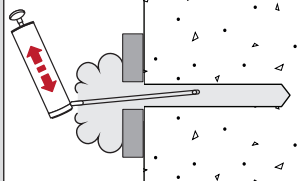
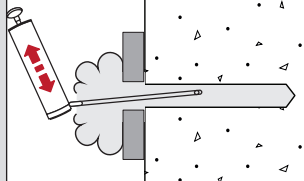
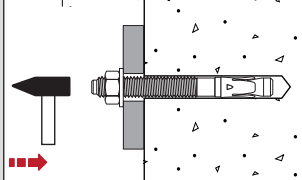
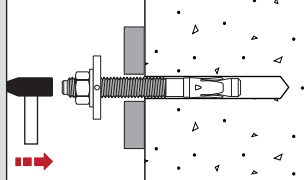
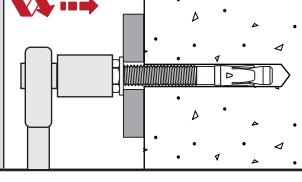
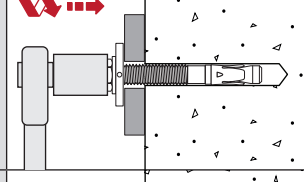
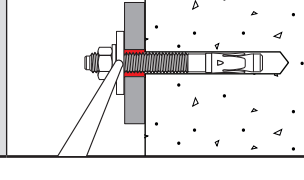
1) These minimum spacings and edge distances may not be possible concurrently. Please refer to AFOS Anchor Design Software to determine the optimal combination.



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Installation Instructions

Install through fixture			Install through fixture with filling of annular gap		
1		Drill hole perpendicular to concrete surface. If using a vacuum drill, continue with step 3.	1		Drill hole perpendicular to concrete surface. If using a vacuum drill, continue with step 3.
2		Blow out dust or alternatively vacuum clean down to the bottom of the hole.	2		Blow out dust or alternatively vacuum clean down to the bottom of the hole.
3		Drive in anchor, such that minimum h_{ef} depth is met as specified by the engineer.	3		Drive in anchor with additionally mounted Filling Washer. Ensure minimum h_{ef} depth is met as specified by the engineer.
4		Apply installation torque T_{inst} by using a calibrated torque wrench.	4		Apply installation torque T_{inst} by using a calibrated torque wrench.
			5		Fill annular gap between anchor and fixture with injection adhesive EF500R+ or VF22PRO+. Use enclosed reducing adapter. The annular gap is completely filled, when excess adhesive seeps out.

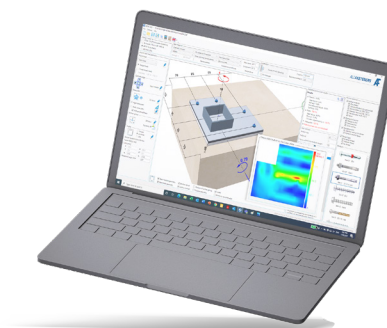
For other anchor properties, please refer to the ETA on our website.



AFOS[®]
Anchor Design Software

DOWNLOAD

allfasteners.com.au/afos



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