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WA-S3D

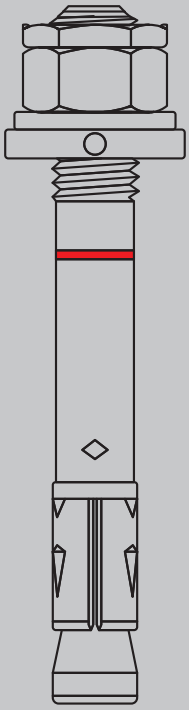
DYNAMIC WEDGE ANCHOR / 316 (A4) STAINLESS STEEL / FATIGUE RATED

316

CERTIFICATION | TDS | FIRE REPORT

Technical Data Sheet

- High performance anchor
- Approved for cracked and uncracked concrete
- ETA fatigue rated
- C1 & C2 seismic rated
- Very low splitting forces at small edge distances



ETA | NCC COMPLIANT AS 5216

For Install Support
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For Specification Support
engineering@allfasteners.com.au

For Customer Support
1800 255 349

Certified System Quality ISO 9001 SAI GLOBAL

WA-S3D

Dynamic Wedge Anchor,
316 (A4) Stainless Steel, Fatigue Rated

NCC COMPLIANT AS 5216

- High performance anchor for dynamic loading including fatigue and seismic
- Tunnel services, crane systems, industrial robots, elevator guides, antenna masts, conveyor systems
- Economical alternative to chemical and undercut anchors
- Through-set and pre-set installation for flexible application
- A4 stainless steel for corrosive environments, outdoors. HCR available on request.

AS 5216 Compliant

ETA Cracked and Uncracked Concrete

ETA Fatigue Rated

C1 & C2 Seismic Rated

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

Supported by AFOS Anchor Design Software

Anchor Summary

WA-S3D with EF500R+ (for the filling washer)

Part Number	Description, Dia x L	Min. - Max. Fixture Thickness, t_{fix} [1]	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 [2]		Indicative Price Per Fixing [3]
								Tension	Shear	
1070.0100100	M10 x 100mm	5 - 10mm	60mm	69mm	10 x 71mm	90mm	✓ / ✓	13.4kN	22.2kN	$27.04
1070.0100120	M10 x 120mm	10 - 30mm					✓ / ✓			$29.15
1070.0100140	M10 x 140mm	30 - 50mm					✓ / ✓			$29.53
1070.0120115	M12 x 115mm	6 - 10mm	70mm	80mm	12 x 83mm	105mm	✓ / ✓	17.0kN	31.8kN	$34.76
1070.0120135	M12 x 135mm	10 - 30mm					✓ / ✓			$36.48
1070.0120155	M12 x 155mm	30 - 50mm					✓ / ✓			$41.36
1070.0160155	M16 x 155mm	8 - 25mm	85mm	99mm	16 x 102mm	128mm	✓ / ✓	22.7kN	55.6kN	$66.53
1070.0160180	M16 x 180mm	25 - 50mm					✓ / ✓			$81.57
1010.5850001	EF500R+ 585ml Chemical Anchor									

1) Fixture thickness (t_{fix}) must be within the minimum and maximum fixture thickness limits.

2) 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.

3) Based on a volume of 200+ to 500+ fixings, 96+ chemical tubes, as of March 2026. Includes cost of chemical, anchor, nut and washer.

Fatigue Design

For assistance with fatigue design, please contact Allfasteners. This will be covered by the new version of AS 5216, however currently EN 1992-4 and EOTA TR-061 provide guidance, as well as AEFAC TN14.

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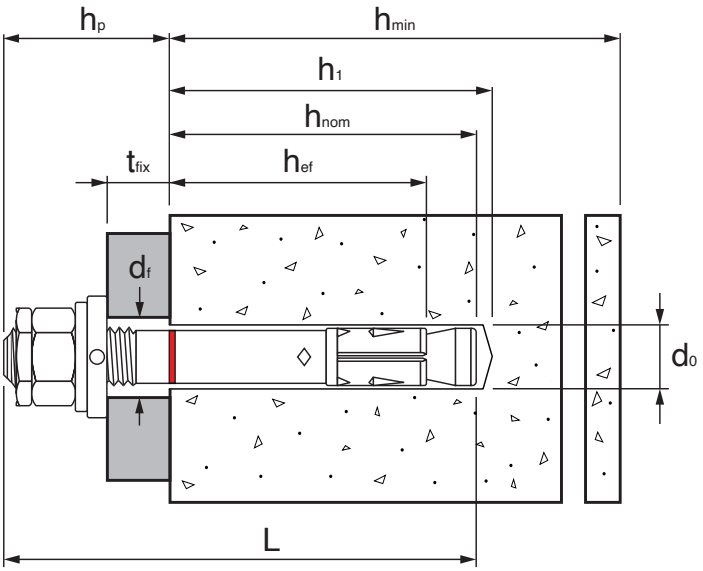
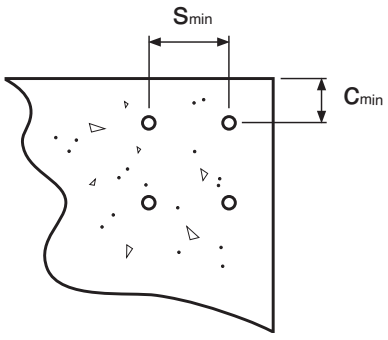
Installation Parameters

Anchor Size			M10	M12	M16
Effective anchor depth[1]	$h_{ef} \geq$	[mm]	60	70	85
Embedment depth	$h_{nom} \geq$	[mm]	69	80	99
Drill hole diameter	d_o	[mm]	10	12	16
Depth of drill hole	$h_1 \geq$	[mm]	71	83	102
Diameter of clearance hole in the fixture	d_f	[mm]	12	14	18
Minimum thickness of fixture	$t_{fix, min}$	[mm]	5	6	8
Overstand	$h_p \leq$	[mm]	$21.5 + t_{fix}$	$25.5 + t_{fix}$	$29.5 + t_{fix}$
Installation torque	T_{inst}	[Nm]	40	55	100
Width across nut	SW	[mm]	17	19	24
Minimum thickness of concrete member	h_{min}	[mm]	90	105	128
Minimum spacing[2]	s_{min}	[mm]	40	50	65
Minimum edge distance[2]	c_{min}	[mm]	45	55	65

1) End of thread must be above the concrete surface.

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





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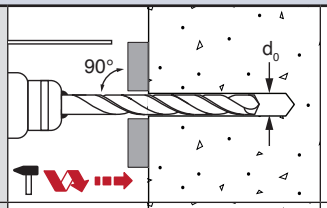
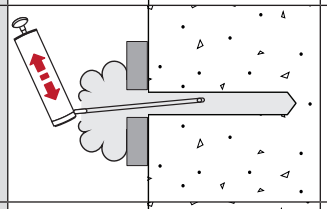
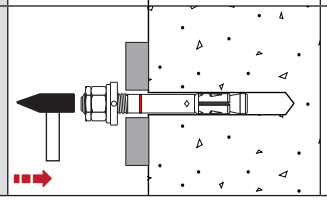
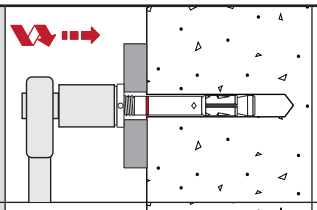
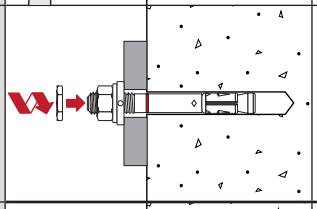
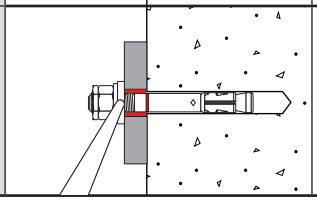
Installation Instructions

Install through fixture with filling of annular gap

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.
3		Drive in anchor with additionally mounted Filling Washer. Ensure h_{ef} depth is met.
4		Apply installation torque T_{inst} by using a calibrated torque wrench.
5		Screw on locknut until hand tight then tighten ¼ to ½ turn using a screw wrench.
6		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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