

XSAH-Z

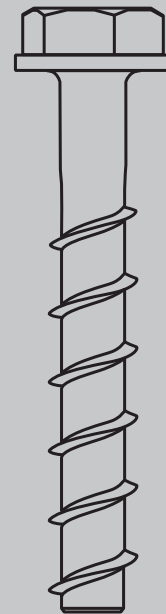
CONCRETE SCREW-ANCHOR HEX HEAD / ZINC PLATED / SEISMIC C1 & C2 RATED

ZP

CERTIFICATION

TDS

Technical Data Sheet



For Install Support

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For Customer Support

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CONCRETE SCREW-ANCHOR HEX HEAD / ZINC PLATED / SEISMIC C1 & C2 RATED

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Concrete Screw-Anchors Hex Head,
Zinc Plated, Seismic C1 & C2 Rated



High Performance ● ● ● ● ●

NCC
COMPLIANT
AS 5216



- Connecting structural steel or timber to concrete
- Lengths of up to 320mm
- Balustrades, building services, height access systems, temporary works
- Zinc Plated for dry internal environments or temporary works
- Supported by AFOS anchor design software

Hexagon head with pressed-on washer

Self cutting threads

Zinc plated coating ($\geq 5\mu\text{m}$)

AS 5216 Compliant

ETA Cracked & Uncracked Concrete

C1 & C2 Seismic Rating

R30 - R120 Fire Rating

Anchor Summary

Part Number	Description, Dia x L	Max. Fixture Thickness, t_{fix}	Embedment Depth, h_{nom}	Drill Hole Dia x Depth, $d_0 \times h_1$	Min. Concrete Thickness, h_{min}	Seismic C1/C2	Design Capacity in 32MPa Cracked Concrete ²⁾		Indicative Price Per Fixing ³⁾
							Tension	Shear	
1XSAHZ06040	6 x 40mm	5mm	35mm ¹⁾	6 x 40mm	80mm	- / -	0.7kN ¹⁾	0.7kN ¹⁾	\$0.78
1XSAHZ06050	6 x 50mm	15mm	40mm	6 x 45mm		✓ / -	1.6kN	5.0kN	\$0.72
1XSAHZ06060	6 x 60mm	25mm	35mm ¹⁾	6 x 40mm		- / -	0.7kN ¹⁾	0.7kN ¹⁾	\$0.82
		20mm	40mm	6 x 45mm		✓ / -	1.6kN	5.0kN	
		5mm	55mm	6 x 60mm		- / -	3.3kN	5.6kN	
1XSAHZ06080	6 x 80mm	45mm	35mm ¹⁾	6 x 40mm		- / -	0.7kN ¹⁾	0.7kN ¹⁾	\$1.12
		40mm	40mm	6 x 45mm		✓ / -	1.6kN	5.0kN	
		25mm	55mm	6 x 60mm		- / -	3.3kN	5.6kN	
1XSAHZ08060	8 x 60mm	15mm	45mm	8 x 55mm	80mm	- / -	4.2kN	6.0kN	\$1.38
1XSAHZ08070	8 x 70mm	5mm	55mm	8 x 65mm		- / -	7.5kN	8.1kN	\$1.46
		25mm	45mm	8 x 55mm		- / -	4.2kN	6.0kN	
		15mm	55mm	8 x 65mm		✓ / ✓	7.5kN	8.1kN	
1XSAHZ08100	8 x 100mm	5mm	65mm	8 x 75mm		✓ / ✓	10.0kN	10.8kN	\$1.91
		55mm	45mm	8 x 55mm		- / -	4.2kN	6.0kN	
		45mm	55mm	8 x 65mm		- / -	7.5kN	8.1kN	
		35mm	65mm	8 x 75mm		✓ / ✓	10.0kN	10.8kN	
1XSAHZ10060	10 x 60mm	5mm	55mm	10 x 65mm	80mm	✓ / -	7.5kN	8.1kN	\$1.98
1XSAHZ10070	10 x 70mm	15mm		10 x 65mm	80mm	✓ / -	7.5kN	8.1kN	\$2.03
1XSAHZ10090	10 x 90mm	35mm		10 x 65mm	80mm	✓ / -	7.5kN	8.1kN	\$2.26
		15mm	75mm	10 x 85mm	90mm	- / -	13.5kN	27.0kN	
		5mm	85mm	10 x 95mm	102mm	✓ / ✓	16.2kN	27.2kN	

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Part Number	Description, Dia x L	Max. Fixture Thickness, t_{fix}	Embedment Depth, h_{nom}	Drill Hole Dia x Depth, $d_0 \times h_1$	Min. Concrete Thickness, h_{min}	Seismic C1/C2	Design Capacity in 32MPa Cracked Concrete ²⁾		Indicative Price Per Fixing ³⁾
							Tension	Shear	
1XSAHZ10120	10 x 120mm	65mm	55mm	10 x 65mm	80mm	✓ / -	7.5kN	8.1kN	\$2.53
		45mm	75mm	10 x 85mm	90mm	- / -	13.5kN	27.0kN	
		35mm	85mm	10 x 95mm	102mm	✓ / ✓	16.2kN	27.2kN	
1XSAHZ10160	10 x 160mm	105mm	55mm	10 x 65mm	80mm	✓ / -	7.5kN	8.1kN	\$3.22
		85mm	75mm	10 x 85mm	90mm	- / -	13.5kN	27.0kN	
		75mm	85mm	10 x 95mm	102mm	✓ / ✓	16.2kN	27.2kN	
1XSAHZ10200 ⁴⁾	10 x 200mm	141mm	55mm	10 x 65mm	80mm	✓ / -	7.5kN	8.1kN	\$5.57
		121mm	75mm	10 x 85mm	90mm	- / -	13.5kN	27.0kN	
		111mm	85mm	10 x 95mm	102mm	✓ / ✓	16.2kN	27.2kN	
1XSAHZ10240 ⁴⁾	10 x 240mm	181mm	55mm	10 x 65mm	80mm	✓ / -	7.5kN	8.1kN	\$6.09
		161mm	75mm	10 x 85mm	90mm	- / -	13.5kN	27.0kN	
		151mm	85mm	10 x 95mm	102mm	✓ / ✓	16.2kN	27.2kN	
1XSAHZ10280 ⁴⁾	10 x 280mm	221mm	55mm	10 x 65mm	80mm	✓ / -	7.5kN	8.1kN	\$6.87
		201mm	75mm	10 x 85mm	90mm	- / -	13.5kN	27.0kN	
		191mm	85mm	10 x 95mm	102mm	✓ / ✓	16.2kN	27.2kN	
1XSAHZ10320 ⁴⁾	10 x 320mm	261mm	55mm	10 x 65mm	80mm	✓ / -	7.5kN	8.1kN	\$8.06
		241mm	75mm	10 x 85mm	90mm	- / -	13.5kN	27.0kN	
		231mm	85mm	10 x 95mm	102mm	✓ / ✓	16.2kN	27.2kN	
1XSAHZ12110	12 x 110mm	45mm	65mm	12 x 75mm	80mm	- / -	10.0kN	10.2kN	\$5.91
		25mm	85mm	12 x 95mm	101mm	- / -	15.9kN	31.8kN	
		10mm	100mm	12 x 110mm	120mm	✓ / ✓	20.7kN	33.6kN	
1XSAHZ12150	12 x 150mm	85mm	65mm	12 x 75mm	80mm	- / -	10.0kN	10.2kN	\$6.81
		65mm	85mm	12 x 95mm	101mm	- / -	15.9kN	31.8kN	
		50mm	100mm	12 x 110mm	120mm	✓ / ✓	20.7kN	33.6kN	
1XSAHZ14130	14 x 130mm	55mm	75mm	14 x 85mm	87mm	- / -	12.8kN	12.8kN	\$9.13
		30mm	100mm	14 x 110mm	119mm	- / -	20.3kN	40.7kN	
		15mm	115mm	14 x 125mm	138mm	✓ / ✓	25.6kN	44.8kN	
1XSAHZ14150	14 x 150mm	75mm	75mm	14 x 85mm	87mm	- / -	12.8kN	12.8kN	\$10.50
		50mm	100mm	14 x 110mm	119mm	- / -	20.3kN	40.7kN	
		35mm	115mm	14 x 125mm	138mm	✓ / ✓	25.6kN	44.8kN	

1) For embedment $h_{nom}=35mm$, the fixing is to be used only for multiple anchor redundant non-structural systems in concrete and pre-stressed hollow core slabs. Higher design capacities are possible depending on specific system arrangement (up to 2.5kN tension and 3.0kN shear).

2) Without concrete edge or anchor spacing influence. This table contains preliminary design information only. Please refer to our AFOS Anchor Design Software and the ETA for more details.

3) Based on a volume of 1000+ fixings, as of January 2023.

4) Comes with a 44x4mm oversized removable washer

Structural Timber to Concrete Connections

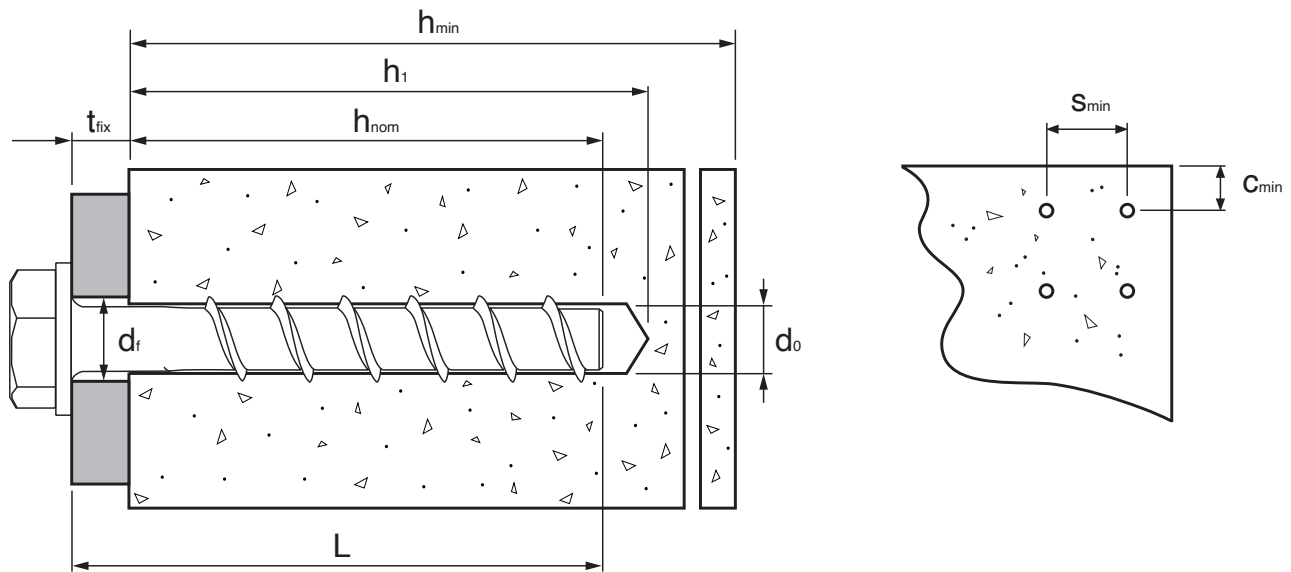
- 10mm XSAH-Z anchors
- Lengths: 200mm, 240mm 280mm and 320mm
- Removable oversized washer 44 x 4mm



Installation Parameters

Anchor Size		[mm]	6			8			10			12			14		
Driver	Hex	[mm]	13			13			15			17			21		
Diameter of clearance hole in fixture	$d_f \leq$	[mm]	8			12			14			16			18		
Tangential impact screw driver ¹⁾	$T_{imp,max}$	[Nm]	160			300			400			650			650		
Nominal embedment depth	h_{nom}	[mm]	35	40	55	45	55	65	55	75	85	65	85	100	75	100	115
Minimum thickness of member	h_{min}	[mm]	80			80			80	90	102	80	101	120	87	119	138
Minimum spacing	s_{min}	[mm]	35	40		40	50		50			50		70	50	70	
Minimum edge distance	c_{min}	[mm]	35	40		40	50		50			50		70	50	70	

1) Installation with tangential impact screw driver, with maximum power output $T_{inst,max}$ according to manufacturer's instructions is possible



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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 concrete screw-anchor		
3		Screw in anchor by using an impact driver to installation torque $T_{imp,max}$.
4		Observe completed setting and full contact of screw head with fixture. Head must be undamaged.

Adjustment (if needed):

Adjustment 1:		
5		Anchor maybe untightened maximum 10mm.
6		After adjustment, screw in the anchor with a tangential impact driver to $T_{imp,max}$.
7		After initial adjustment the anchor must be in full contact with fixture. Head must remain undamaged.
Adjustment 2:		
8		Anchor maybe untightened a second time by maximum 10mm.
9		After adjustment, screw in the anchor with a tangential impact driver to $T_{imp,max}$.
10		After the second adjustment the anchor must be in full contact with fixture. Head must remain undamaged.

Notes:

- Adjustment is permitted for fixings with concrete screw anchors size 8mm, 10mm, 12mm and 14mm, all anchorage depths
- The anchor may be adjusted max. 2 times. The anchor must not be screwed back by more than 10mm in each case. The relining carried out during adjustments must not exceed 10mm in total. Specified embedment depth, h_{nom} , must still be maintained after adjustment.

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



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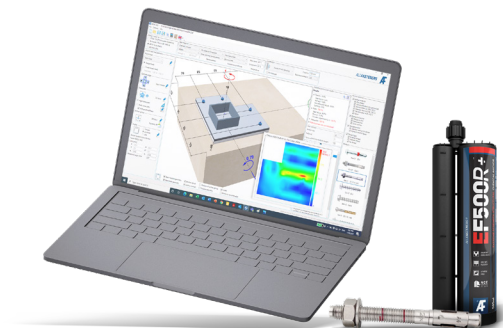
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AFOS[®]
Anchor Design Software

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