



## screw anchors

Designed for use with Siniat's steel wall framing and ceiling frame systems, the Siniat screw anchor range has been purpose made to provide a complete framing solution from one manufacturer with full certification

The Siniat **screw anchor** range is an integral part of achieving the full Siniat system performance, as such it is essential for the Siniat System Warranty and engineering certification.

### application

The Siniat screw anchor range is compatible with the following substrates:

- Cracked and uncracked concrete for wall, floor and overhead applications.
- Autoclaved aerated concrete for walls.
- Solid brick for walls.

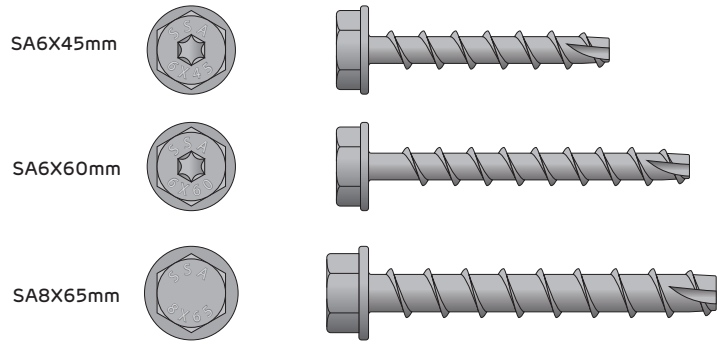
### suitable for use in the following loads:

- Static loads
- Quasi-static load
- Seismic C1 load certified
- Fire resistance loads

For internal use and behind external cladding. Not for use outside the building envelope.

### key benefits

- part of the complete certified Siniat wall and ceiling system
- compatible with Siniat metal products
- minimal edge distance and anchor spacing required
- ETA certified and complies with AS 5216:2018 *Design of post-installed and cast-in fastenings in concrete*



## product information

### anchor dimensions

anchor	sa6x45	sa6x60	sa8x65
nominal embedment depth $h_{nom}$ (mm)	40	55	60
maximum fixture thickness $t_{fix}$ (mm)	5	5	5
threaded outer diameter $d_t$ (mm)	7.85	7.85	10.3
core diameter $d_k$ (mm)	5.85	5.85	7.85
shaft diameter $d_s$ (mm)	6.15	6.15	8.45
shaft length (mm)	45	60	65

### properties

anchor	sa6x45	sa8x65
	sa6x60	
head type	hex-head SW13	hex-head SW13
corrosion protection	8 $\mu$ m zinc coating	8 $\mu$ m zinc coating
nominal tensile strength $f_{uk}$ (N/mm <sup>2</sup> )	930	810
yield strength $f_{yk}$ (N/mm <sup>2</sup> )	745	695
stressed cross-section $a_s$ (mm <sup>2</sup> )	26.9	48.4

### concrete thickness and anchor placement

anchor	sa6x45	sa6x60	sa8x65
minimum concrete thickness (mm)	80	100	100
minimum spacing $S_{min}$ (mm)	35	35	50
minimum edge distance $C_{min}$ (mm)	35	35	40

## product information

### static and quasi-static performance in concrete

		static / quasi-static loads					
design resistance in cracked concrete		pull-out (kN)			pull-out (kN)		
		sa6x45	sa6x60	sa8x65	sa6x45	sa6x60	sa8x65
nominal embedment depth $h_{nom}$ (mm)		40	55	60	40	55	60
concrete grade (mpa)	20	1.39	3.33	6.00	3.77	8.33	12.67
	25	1.54	3.70	6.66	4.22	8.33	12.67
	32	1.76	4.22	7.59	4.77	8.33	12.67
	40	1.96	4.70	8.46	5.33	8.33	12.67
	50	2.19	5.27	9.48	5.96	8.33	12.67

1. No edge distance and spacing influence, or reinforcement affects.

2. Interaction of both Pull-out and Shear to be considered as per AS5216-2018 Equation 8.2.1(1) and 8.2.1(2)

### seismic c1 performance in concrete

		seismic c1 loads					
design resistance in cracked concrete		pull-out (kN)			pull-out (kN)		
		sa6x45	sa6x60	sa8x65	sa6x45	sa6x60	sa8x65
nominal embedment depth $h_{nom}$ (mm)		40	55	60	40	55	60
concrete grade (mpa)	20	1.39	2.22	6.00	1.60	1.67	3.97
	≥25	1.39	2.22	6.00	1.67	1.67	3.97

1. No edge distance and spacing influence, or reinforcement affects.

2. Interaction of both Pull-out and Shear to be considered as per AS5216-2018 Equation 8.2.1(1) and 8.2.1(2)

3.  $agap = 0.5$

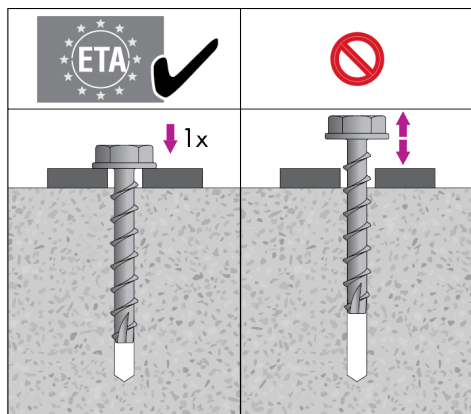
## design service

Siniat provides a free design service for metal products backed up by the Siniat Warranty.

The detailed engineering designs for walls, ceilings and window or door openings take into consideration specific project needs and meet the building code requirements.

# Siniat Screw Anchor Installation

## SA6x45 and SA6x60

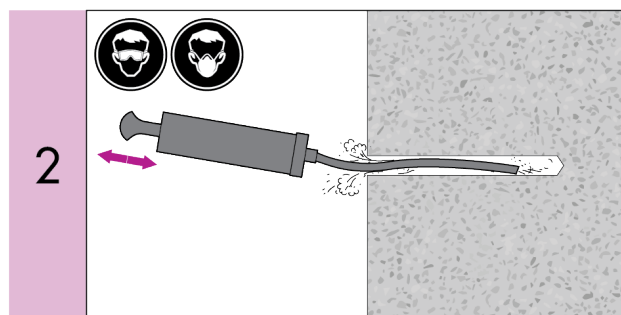
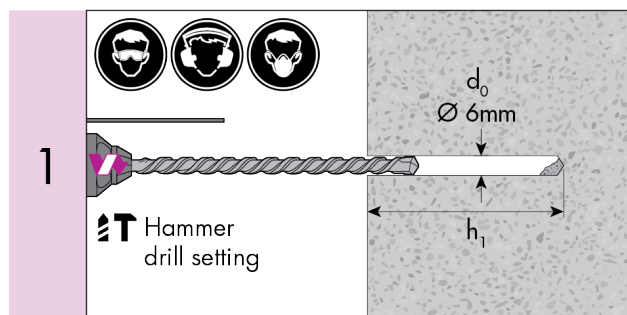


	SA6x45	
	$h_1$	50mm
	$h_{nom}$	40mm
	$t_{fix}$	5mm maximum
	SA6x60	
	$h_1$	65mm
	$h_{nom}$	55mm
	$t_{fix}$	5mm maximum

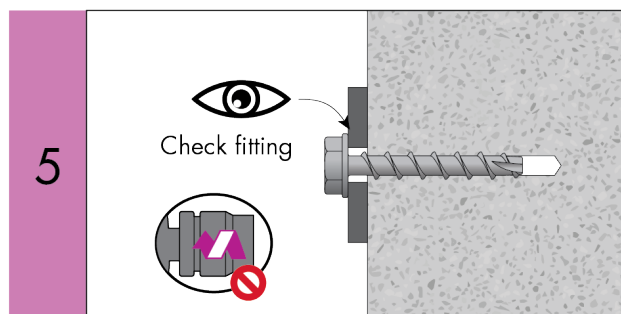
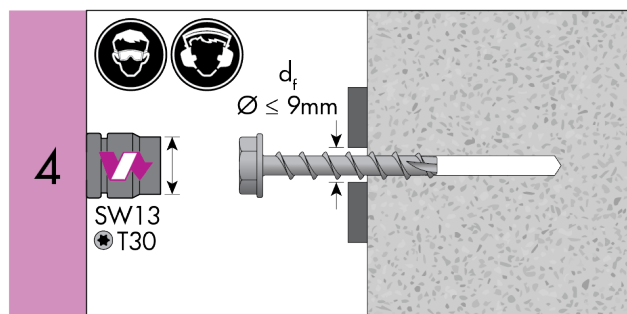
### General Applications Section

	SA6x45	
	$h_1$	48mm
	$h_{nom}$	40mm
	$t_{fix}$	5mm maximum
	SA6x60	
	$h_1$	63mm
	$h_{nom}$	55mm
	$t_{fix}$	5mm maximum

### Overhead Applications Section

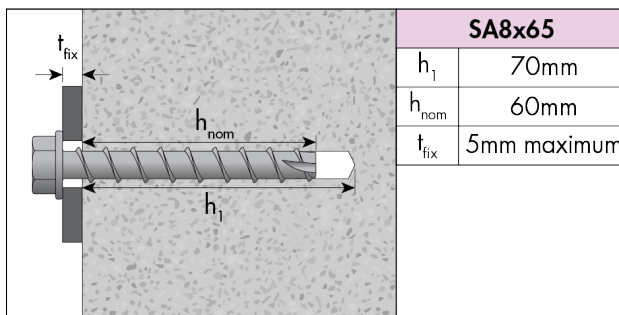
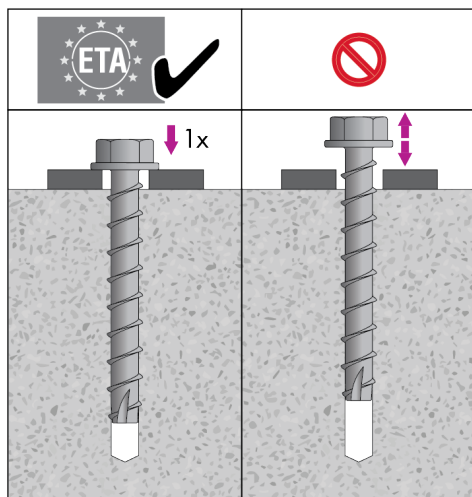


3	$h_{nom}$	Hilti Impact Driver / Wrench			Installation torque
		SID 2-A 1/2"	SIW 6AT-A22 1/2"	SIW 22T-A 1/2"	
	40mm	✓		✗	20 Nm
	55mm	✓		✗	25 Nm

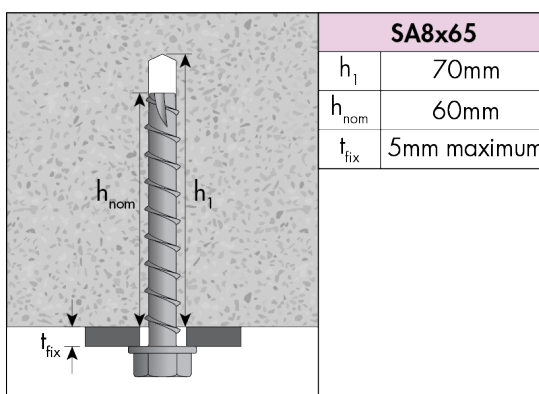


# Siniat Screw Anchor Installation

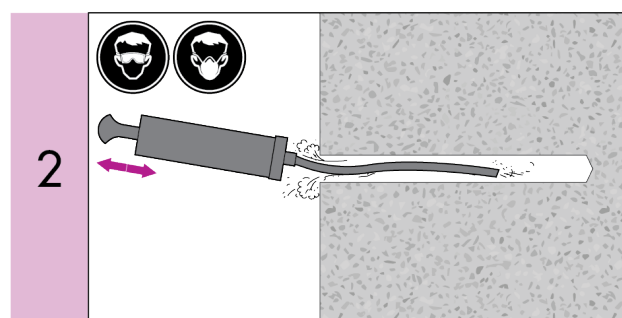
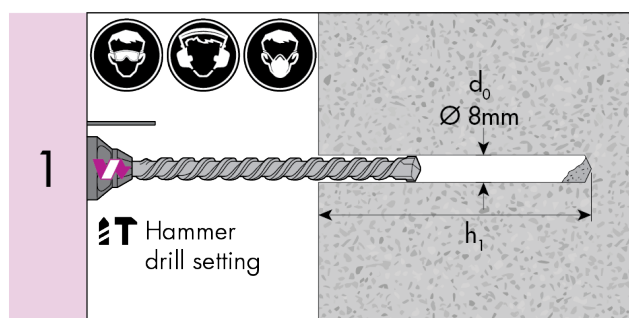
## SA8x65



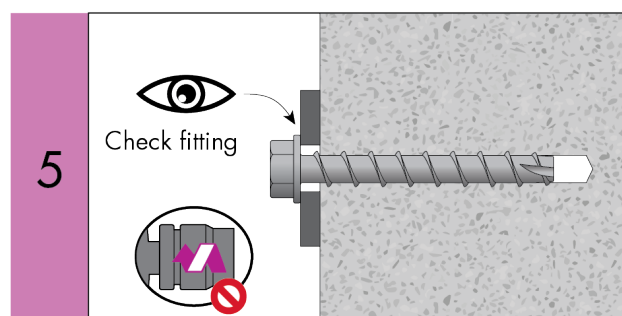
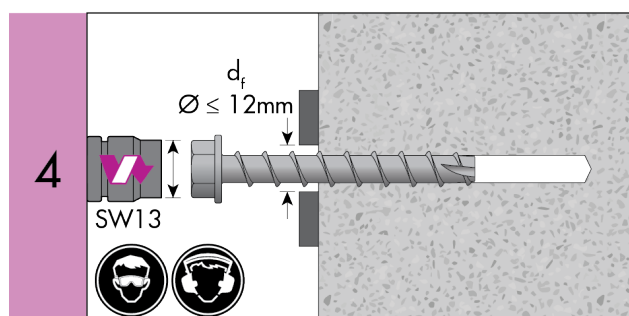
General Applications  
Section



Overhead Applications  
Section



3	$h_{nom}$	Hilti Impact Driver / Wrench				
		SIW 22-A 1/2"	SIW 6AT-A22 1/2"	SIW 22T-A 1/2"	SIW 22TA 3/4"	SIW 9-A22 3/4"
	60mm	✓	✓	✓	✓	✗





Quality  
ISO 9001



All Siniat products have been developed to meet the specific needs of the Australian market. Products manufactured in Australia comply with quality systems certified as complying with AS/NZS ISO 9001:2008 and meet the requirements of AS/NZS 2588, Gypsum Plasterboard.



The following Siniat products have been independently certified by Global GreenTag to GreenRate Level A: **mastashield**, **fireshield**, **fireshield h**, **soundshield**, **watershield**, **spanshield**, **multishield**, **curveshield**, **opal**, **trurock** and **trurock hd**. Compliance certificates are available on [siniat.com.au](http://siniat.com.au).



All Siniat plasterboard and metal products are available on the Siniat Carbon Neutral Opt-In program to help you meet your sustainability goals. Visit [siniat.com.au](http://siniat.com.au) to find out more.

#### Disclaimer

Products manufactured and systems designed by Etex Australia Pty Ltd and branded Siniat, are produced in accordance with the Building Code of Australia and relevant Australian Standards. Information in this document is to be used as a guide only and is subject to project approval as many aspects of construction are not comprehensively covered. It is also the responsibility of the project to determine if Siniat's products and systems are suitable for the intended application. Etex Australia Pty Ltd will not be held responsible for any claims resulting from the installation of its products or other associated products not in accordance with the recommendations of the manufacturer's technical literature or relevant Australian Standards. Siniat technical information is regularly updated. To ensure this document is current with the latest information, visit [siniat.solutions](http://siniat.solutions)

**Siniat.solutions provides a host of online solutions for your product**

#### **siniat SELECT®**

offers an online system selector and custom design specification proposal, developed by us and catered to your project's requirements.

#### **siniat CALCULATE®**

is a range of online calculation tools for the professional. Explore [siniat.solutions](http://siniat.solutions) on [siniat.com.au](http://siniat.com.au).



**Etex Australia Pty Ltd**

ABN 61 003 621 010  
31 Military Road, Matraville  
NSW 2036

**[siniat.com.au](http://siniat.com.au)**



#### warranty

Siniat's products are guaranteed by a 10 Year Warranty. For details visit [siniat.com.au](http://siniat.com.au)

technical advice  
**AU 1300 724 505**