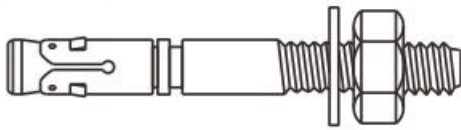


SW-E12 Series:



Material: SS. 304 / S.S. 316

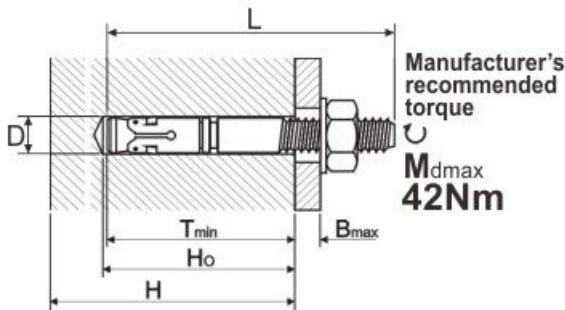

 (Cracked Concrete Tested
ETAG-001-Annex-A)

Tested By:



Tested as per BS 5080

Installation Parameters



Installation Parameters Table

Item	Model	SW-E12x80	SW-E12x100
H (mm) Min, Concrete thickness.		100	100
D (mm) Drill hole diameter		12	12
H _o (mm) Manufacturer's recommended drill hole depth		60	60
T _{min} (mm) Manufacturer's recommended embedment depth		50	50
B _{max} (mm) Max. Thickness of installation material		13	23
L (mm) Anchor total length		80	100
M_{dmax}	Manufacturer's recommended torque	42Nm	42Nm

Relationship between safety loading and working angle (concrete grade C20)



Loading Type	Working Angle	SW-E12
Z _T Safety pullout(KN)	90°	8.16
Z _s Safety shear(KN)	0°	11.37



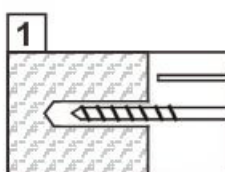
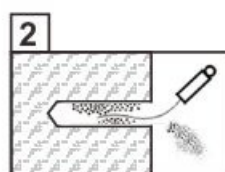
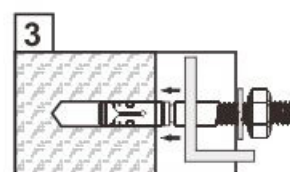
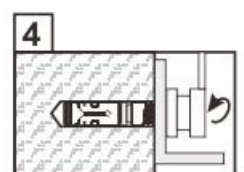
Relationship between safety loading and working angle (concrete grade C30)



Loading Type	Working Angle	SW-E12
Z _T Safety pullout(KN)	90°	8.30
Z _s Safety shear(KN)	0°	11.40



Installation Procedure


 鑽孔
Drill Hole

 清灰塵
Clean the dust inside

 碼片與螺絲一併安裝
Insert Bracket &
Expansion Bolt Together

 扭距
Torque **42Nm**

SW-E12 Series:
(Cracked concrete
tested by: **MaterialLab**)



Material: SS. 304 / S.S. 316

The relationship between cracked concrete and safety loading (concrete grade C20/C30)

Loading Type	Working Angle	C20	C30
Z _T Safety pullout(kN)	90°	6.44	7.87
Z _S Safety shear(kN)	0°	9.11	10.39

Recommended pullout(kN) = Maximum Applied Force / 3

Recommended shear(kN) = Maximum Applied Force / 3

Things need to know when using SUNWAY SW-E12 in cracked concrete:

- 1) When install SW-E12 in cracked concrete, the tensile and shear load is relatively lower than non-cracked concrete.
 - Please refer to the test data.
 - The test is to simulate a 0.3mm-0.4mm width crack occur on the concrete block.
- 2) Things need to remind workers on site:
 - When workers find out any crack on the concrete, they should report to site officer to determine that location install SW-E12 or not.
 - If the crack is wider than 0.3mm-0.4mm (hairline crack) by visual inspection, please do not install SW-E12 on that crack.

Tested by **MaterialLab**



如需更多資料或有任何疑問，請與我們聯絡。
For more information, please contact us.
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<http://www.sunwaymetal.com/>

SW-E12 Series:

(Material: S.S. 304 / S.S. 316)


 (Cracked Concrete Tested
ETAG-001-Annex-A)

Tested By:



Tested as per BS 5080



SW-E12

 f_A : Pullout Anchor Spacing Influence Factor

 If: $A_{min} \leq A < A_0$

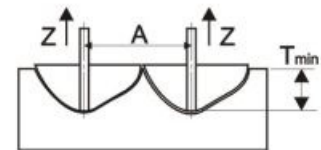
$$f_A = (0.2A / T_{min}) + 0.5$$

 If: $A \geq A_0$

$$f_A = 1.0$$

Anchor Type	SW-E12
T_{min} Manufacturer's Recommended Embedment Depth	50mm
A_{min} Min. Anchor Spacing	80mm
A_0 Recommend Anchor Spacing	120mm or above

Anchor space = A


 f_{RS} : Factor for Pullout Force

 If: $R_{min} \leq R < R_0$

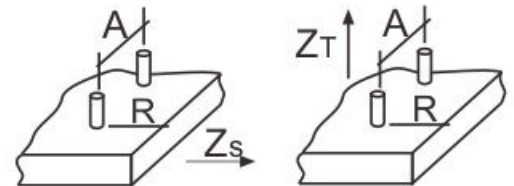
$$f_{RS} = (0.2R / T) + 0.68$$

 If: $R \geq R_0$

$$f_{RS} = 1.0$$

Anchor Type	SW-E12
T_{min} Manufacturer's Recommended Embedment Depth	50mm
R_{min} Min. Edge Distance	60mm
R_0 Recommend Anchor Edge	75mm or above

Edge distance = R

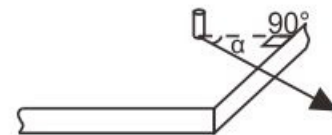

 f_{RQ} : Factor for Shear Force

 Case 1: $90^\circ \leq \alpha \leq 180^\circ$

$$f_{RQ} = 1.0$$

 Case 2: $0^\circ \leq \alpha \leq 90^\circ$

$$f_{RQ} = 0.53R / T_{min} \text{ (When } f_{RQ} \geq 1, \text{ adopt } f_{RQ} = 1.0)$$


Tension Capacity

$$T = Z_S \times F_A \times F_{RS}$$

Shear Capacity (min. Spacing = 80mm)

$$V = Z_Q \times F_{RQ}$$

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SW-E12 Series:

(Material: S.S. 304 / S.S. 316)


 (Cracked Concrete Tested
ETAG-001-Annex-A)

Tested By:



Tested as per BS 5080

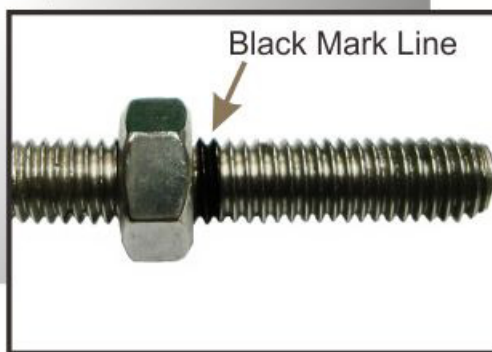


SW-E12

SW-E12 設計特點如下：

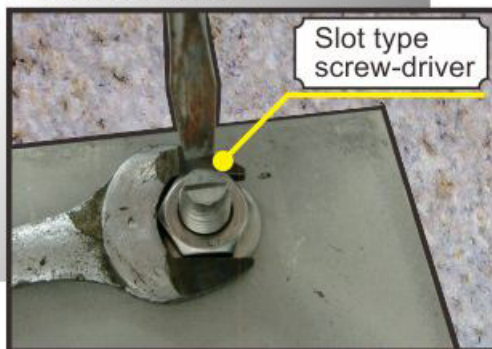
SW-E12 Design features are as follow:

Expansion Mark Line

 拉爆
標記

Expansion Mark Line

- 黑色標記線
- Black Colour Mark Line

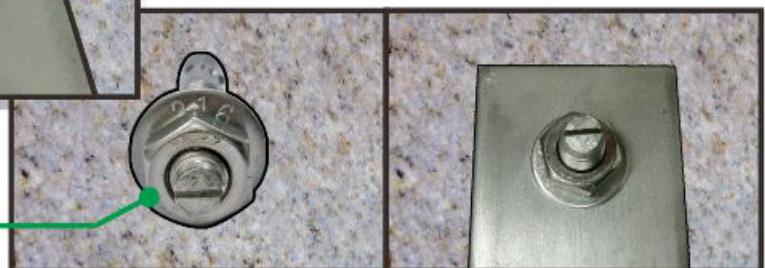
Product Feature

 產品
特徵

產品特徵
Product Feature

- 一字螺絲批安裝設計；
- Slot type screw driver installation design;
- 減低自轉問題。
- Minimize the chance of screw rotation.

一字頭設計

Slot type head design



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