

# Liebig Safety bolt S M12-20/80/15 ZP

SORMAT CODE 9650080115



# Legendary twin-cone heavy duty anchor for hipower performance

- Torque-controlled twin-cone heavy duty anchor for push-through installations.
- Suitable for heavy loads due to optimal friction resistance.
- Cylindrical, wide expansion of sleeve over entire length.
- Equipped with domed washers providing a visual installation control.
- ZP for dry indoor and temporary outdoor use.

#### PRODUCT OVERVIEW

Other codes

Material Packages

Weight

Steel, zinc plated box (bag): 10 / outer

carton: 50 / pallet: 2800

248.0 kg / 1000

### **APPLICATIONS**

- Steel structures
- Machines
- Guardrails
- Car lifting systems
- Railings
- Base plates
- Warehouse racks

#### **BASE MATERIALS**

#### APPROVED FOR

- · Cracked concrete
- Non-cracked concrete

#### ALSO SUITABLE FOR

Natural stone

#### APPROVALS / CERTIFICATES



ETA-06/0108 + DoPs



Fire resistance (ETA-06/0108)

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0809-CPR-19006293

#### Technical data

**INSTALLATION DETAILS** 

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<b>Size</b> M1	Hole in fixture (D <sub>f</sub> )
Length (L) 12	Drill hole diameter (d <sub>0</sub> ) Ø
Width across flats (SW)	Minimum drill hole depth
Max. fixture thickness (T <sub>fix</sub> )	Drill hole depth (h <sub>1</sub> )
1	Nominal setting depth (H <sub>nom</sub> )
<u> </u>	Effective setting depth (H <sub>ef</sub> )
SV SV	Installation torque (T <sub>inst</sub> )
1 4 0 0 0 0 M	
d <sub>0</sub> (T <sub>inst</sub>	
1 0000	

 $h_{\text{ef}}$ 

h<sub>nom</sub>

## Performance data

Base material All	Load type	Embedment depth (h <sub>nom</sub> )	Load direction	Load value
Non-cracked concrete C20/25	N <sub>Rec</sub>	92 mm	<b>**</b>	17.1 kN
Non-cracked concrete C20/25	$V_{Rec}$	92 mm		34.3 kN
Cracked concrete C20/25	N <sub>Rec</sub>	92 mm	<b>**</b>	12.3 kN
Cracked concrete C20/25	$V_{Rec}$	92 mm		24.5 kN

## Installation









