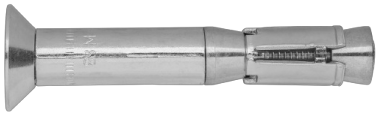


# Liebig Safety bolt SK M12-20/80/15 ZP

SORMAT CODE 9650080415



## Legendary twin-cone heavy duty anchor for hi-power 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.
- ZP for dry indoor and temporary outdoor use.

## PRODUCT OVERVIEW

Other codes	/
Material	Steel, zinc plated
Packages	box (bag): 10 / outer carton: 50 / pallet: 2800
Weight	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)



0809-CPR-19006293

## Technical data

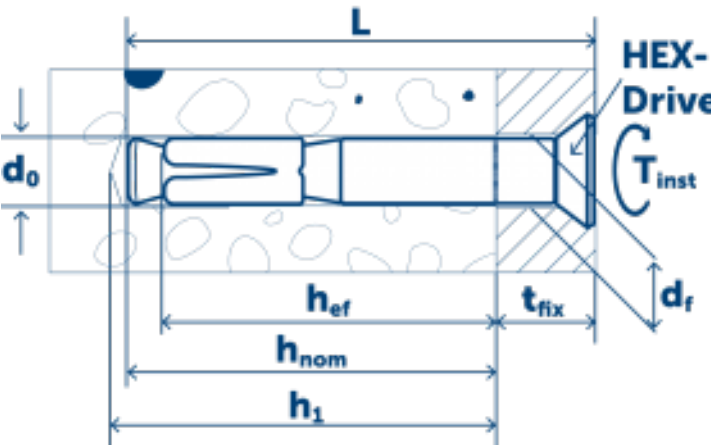
### INSTALLATION DETAILS

Size	M12
Length (L)	110

### INSTALLATION DETAILS

Hole in fixture (D <sub>f</sub> )	21
Drill hole diameter (d <sub>0</sub> ) Ø	20

Drive	HEX8	Minimum drill hole depth	100
Max. fixture thickness ( $T_{fix}$ )	15	Drill hole depth ( $h_1$ )	100
		Nominal setting depth ( $H_{nom}$ )	92
		Effective setting depth ( $H_{ef}$ )	80
		Installation torque ( $T_{inst}$ )	90



HEAD DETAILS	
Head diameter $\varnothing$	33
Head height	8
Diameter, other	19

# Performance data

Base material	Load type	Load direction	Load value
All			
Non-cracked concrete C20/25	N <sub>Rec</sub>		17.1 kN
Non-cracked concrete C20/25	V <sub>Rec</sub>		34.3 kN
Cracked concrete C20/25	N <sub>Rec</sub>		12.3 kN
Cracked concrete C20/25	V <sub>Rec</sub>		24.5 kN

## Installation

