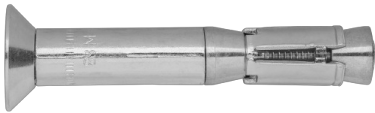


# Liebig Safety bolt SK M12-20/80/40 ZP

SORMAT CODE 9650080440



## 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: 40 / pallet: 2240 |
| Weight      | 290.0 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



0809-CPR-19006293



Fire resistance (ETA-06/0108)

## Technical data

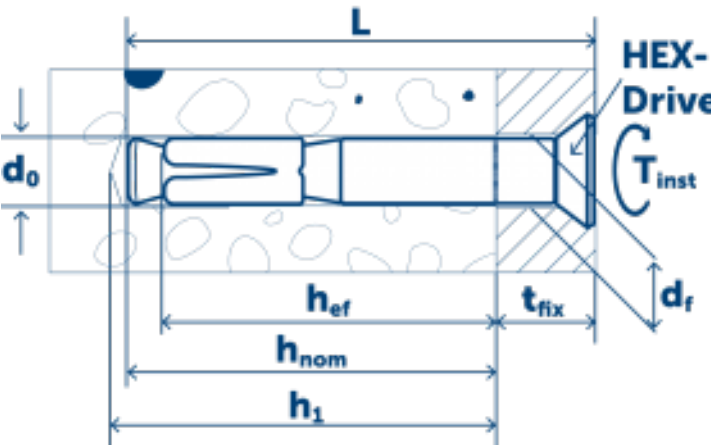
### INSTALLATION DETAILS

|            |     |
|------------|-----|
| Size       | M12 |
| Length (L) | 135 |

### 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 ( $T_{fix}$ ) | 40   | 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

