

Concrete screw BSZ2 A4

Stainless steel A4

NEW



Concrete screw BSZ2-SU A4

NEW



Concrete screw BSZ2-SK A4

NEW



Concrete screw BSZ2-LK A4

NEW

With improved tip and thread geometry

Range of loading:
Range of concrete quality:

0,7 kN–19,4 kN
C20/25–C50/60

Description

The new concrete screw BSZ2 A4 with European technical approval option 1 was redesigned in order to achieve better safety features and comfortable installation. The new cutting grooves on the tip of the screw in conjunction with the optimised thread geometry allow for easier insertion and easier screwing into the concrete. Due to the under cut similar shape it is possible to have very low spacing and minimum edge distance.

The approved adjustment enables subsequent alignment to compensate for unevenness. Installation with an impact screwdriver means that you do not need to use a torque wrench. It is quick, reliable and reduces assembly errors. The BSZ A4 concrete screws are available with connection thread and with a range of different head shapes for a wide variety of applications.

Advantages

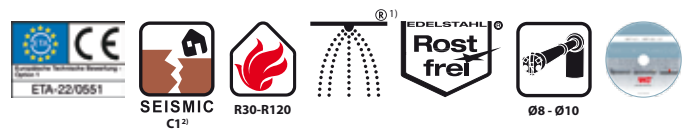
- European Technical Assessment for anchoring in cracked and uncracked concrete (Option 1)
- With up to 3 embedment depths, it is versatile for high loads or low levels of drilling and installation effort
- Easy to apply due to conical shape and cutting grooves on the tip of the BSZ2 A4
- Easy to screw in due to optimised tip and thread geometry
- Approved for use under seismic conditions of category C1²⁾
- Approved for use under fire exposure (R30-R120)
- Small drill hole diameter, small edge and axial gap
- Rapid push-through installation with an impact screwdriver without torque regulation
- No curing times, can be loaded immediately
- Adjustable to compensate for unevenness
- Can be fully removed
- Wide range of possible applications through numerous variants
- Visually appealing through different head shapes

¹⁾Only for use in solid concrete

²⁾For head designs, diameters and screw-in depths, see product tables and ETA-22/0551



Mechanical Heavy Duty Anchors

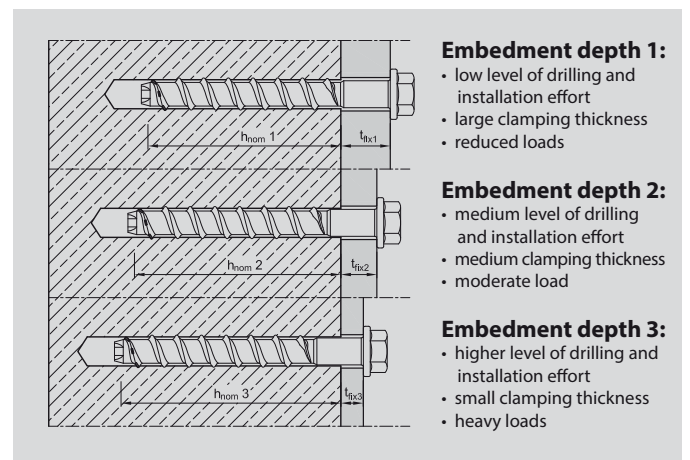


– Without assessment, can also be used in compression-resistant natural stone, various solid bricks and green concrete

Applications

To anchor moderate to heavy loads outside and inside in cracked and uncracked concrete: Railings and handrails, steel beams, wooden beams, brackets, pipeline and cable routes, etc.

Highly versatile for up to three different embedment depths



Concrete screw BSZ2-SU A4



- Sechskantkopf mit angepresster Scheibe
- Stainless steel A4
- Easy to screw in due to optimised tip and thread geometry
- Through smaller drive and pressed on washer also suitable for areas where access is difficult and elongated holes

NEW

| Description | Ref. No. | Embedment depth h 1 | | | | Embedment depth h 2 | | | | Embedment depth h 3 | | | | Anchor Length L mm | Head-Ø mm | Drive | Pkg. content pcs. | Weight per pkg. kg |
|-------------------|----------|---------------------------------------|-------------------------|---------------------------------------|------------|---------------------------------------|-------------------------|---------------------------------------|------------|---------------------------------------|-------------------------|---------------------------------------|------------|--------------------|-----------|-------|-------------------|--------------------|
| | | Fixture thickness t _{fix} mm | Drill hole Ø x depth mm | Embedment depth h _{nom 1} mm | Seismic C1 | Fixture thickness t _{fix} mm | Drill hole Ø x depth mm | Embedment depth h _{nom 2} mm | Seismic C1 | Fixture thickness t _{fix} mm | Drill hole Ø x depth mm | Embedment depth h _{nom 3} mm | Seismic C1 | | | | | |
| BSZ2-SU 6x50 A4 | 59121101 | 15 | 6x40 | 35 | - | 5 | 6x50 | 45 | ✓ | - | - | - | - | 50 | 17 | SW 13 | 100 | 1,79 |
| BSZ2-SU 6x60 A4 | 59121601 | 25 | 6x40 | 35 | - | 15 | 6x50 | 45 | ✓ | 5 | 6x60 | 55 | ✓ | 60 | 17 | SW 13 | 100 | 2,17 |
| BSZ2-SU 8x70 A4 | 59132101 | 25 | 8x55 | 45 | ✓ | 15 | 8x65 | 55 | - | 5 | 8x75 | 65 | ✓ | 70 | 16 | SW 13 | 50 | 2,05 |
| BSZ2-SU 8x80 A4 | 59132601 | 35 | 8x55 | 45 | ✓ | 25 | 8x65 | 55 | - | 15 | 8x75 | 65 | ✓ | 80 | 16 | SW 13 | 50 | 2,20 |
| BSZ2-SU 10x90 A4 | 59142601 | 35 | 10x65 | 55 | ✓ | 15 | 10x85 | 75 | - | 5 | 10x95 | 85 | ✓ | 90 | 20 | SW 15 | 50 | 3,82 |
| BSZ2-SU 10x100 A4 | 59143101 | 45 | 10x65 | 55 | ✓ | 25 | 10x85 | 75 | - | 15 | 10x95 | 85 | ✓ | 100 | 20 | SW 15 | 50 | 4,13 |
| BSZ2-SU 10x120 A4 | 59144101 | 65 | 10x65 | 55 | ✓ | 45 | 10x85 | 75 | - | 35 | 10x95 | 85 | ✓ | 120 | 20 | SW 15 | 50 | 4,73 |

Concrete screw BSZ2-SK A4



- Countersunk head with Torx drive
- Stainless steel A4
- Easy to screw in due to optimised tip and thread geometry
- For installations being flush with the fixture

NEW

| Description | Ref. No. | Embedment depth h 1 | | | | Embedment depth h 2 | | | | Embedment depth h 3 | | | | Anchor Length L mm | Head-Ø mm | Drive | Pkg. content pcs. | Weight per pkg. kg |
|-------------------|----------|---------------------------------------|-------------------------|---------------------------------------|------------|---------------------------------------|-------------------------|---------------------------------------|------------|---------------------------------------|-------------------------|---------------------------------------|------------|--------------------|-----------|-------|-------------------|--------------------|
| | | Fixture thickness t _{fix} mm | Drill hole Ø x depth mm | Embedment depth h _{nom 1} mm | Seismic C1 | Fixture thickness t _{fix} mm | Drill hole Ø x depth mm | Embedment depth h _{nom 2} mm | Seismic C1 | Fixture thickness t _{fix} mm | Drill hole Ø x depth mm | Embedment depth h _{nom 3} mm | Seismic C1 | | | | | |
| BSZ2-SK 6x50 A4 | 59321601 | 15 | 6x40 | 35 | - | 5 | 6x50 | 45 | ✓ | - | - | - | - | 50 | 13 | T 30 | 100 | 1,30 |
| BSZ2-SK 6x65 A4 | 59322601 | 30 | 6x40 | 35 | - | 20 | 6x50 | 45 | ✓ | 10 | 6x60 | 55 | ✓ | 65 | 13 | T 30 | 100 | 1,57 |
| BSZ2-SK 6x85 A4 | 59323601 | 50 | 6x40 | 35 | - | 40 | 6x50 | 45 | ✓ | 30 | 6x60 | 55 | ✓ | 85 | 13 | T 30 | 100 | 2,05 |
| BSZ2-SK 6x105 A4 | 59324601 | 70 | 6x40 | 35 | - | 60 | 6x50 | 45 | ✓ | 50 | 6x60 | 55 | ✓ | 105 | 13 | T 30 | 100 | 2,35 |
| BSZ2-SK 8x80 A4 | 59332601 | 35 | 8x55 | 45 | ✓ | 25 | 8x65 | 55 | - | 15 | 8x75 | 65 | ✓ | 80 | 19,5 | T 40 | 50 | 1,95 |
| BSZ2-SK 10x90 A4 | 59342601 | 35 | 10x65 | 55 | ✓ | 15 | 10x85 | 75 | - | 5 | 10x95 | 85 | ✓ | 90 | 21,5 | T 50 | 50 | 3,10 |
| BSZ2-SK 10x120 A4 | 59344101 | 65 | 10x65 | 55 | ✓ | 45 | 10x85 | 75 | - | 35 | 10x95 | 85 | ✓ | 120 | 21,5 | T 50 | 50 | 4,17 |

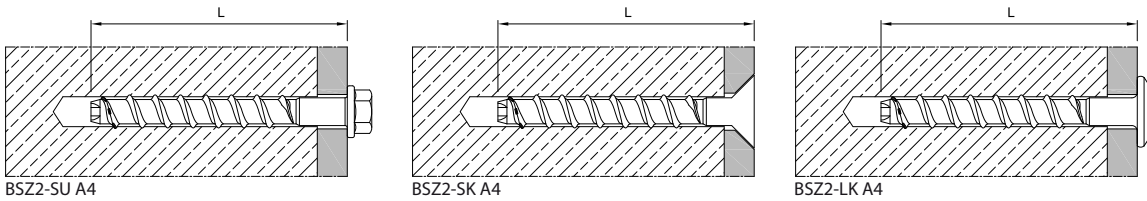
Concrete screw BSZ2-LK A4



- Pan head with Torx drive
- Stainless steel A4
- Easy to screw in due to optimised tip and thread geometry
- For a flat fixing which has a high-quality look

NEW

| Description | Ref. No. | Embedment depth h 1 | | | | Embedment depth h 2 | | | | Embedment depth h 3 | | | | Anchor Length L mm | Head-Ø mm | Drive | Pkg. content pcs. | Weight per pkg. kg |
|------------------|----------|---------------------------------------|-------------------------|---------------------------------------|------------|---------------------------------------|-------------------------|---------------------------------------|------------|-----------------------------------|---------------------------------------|---------------------------------------|------------|--------------------|-----------|-------|-------------------|--------------------|
| | | Fixture thickness t _{fix} mm | Drill hole Ø x depth mm | Embedment depth h _{nom 1} mm | Seismic C1 | Fixture thickness t _{fix} mm | Drill hole Ø x depth mm | Embedment depth h _{nom 2} mm | Seismic C1 | Klemmstärke t _{fix 3} mm | Fixture thickness t _{fix} mm | Embedment depth h _{nom 3} mm | Seismic C1 | | | | | |
| BSZ2-LK 6x50 A4 | 59421601 | 15 | 6x40 | 35 | - | 5 | 6x50 | 45 | ✓ | - | - | - | - | 50 | 15 | T 30 | 100 | 1,45 |
| BSZ2-LK 6x60 A4 | 59422101 | 25 | 6x40 | 35 | - | 15 | 6x50 | 45 | ✓ | 5 | 6x60 | 55 | ✓ | 60 | 15 | T 30 | 100 | 1,67 |
| BSZ2-LK 6x80 A4 | 59423101 | 45 | 6x40 | 35 | - | 35 | 6x50 | 45 | ✓ | 25 | 6x60 | 55 | ✓ | 80 | 15 | T 30 | 100 | 2,08 |
| BSZ2-LK 6x100 A4 | 59424101 | 65 | 6x40 | 35 | - | 55 | 6x50 | 45 | ✓ | 45 | 6x60 | 55 | ✓ | 100 | 15 | T 30 | 100 | 2,57 |

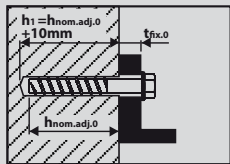


Recommended impact screwdriver

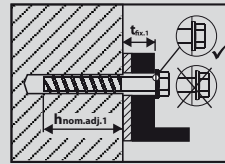
| Description of concrete screw | recommended impact screwdriver |
|---|---|
| BSZ2 A4 Ø6 | <ul style="list-style-type: none"> • Milwaukee C 12 IW (Square drive, Battery operation, max. torque 136 Nm) • Milwaukee C 12ID (Multi-toothed drive, Battery operation, max. torque 96 Nm) • DeWalt DEDC 840 KB (Square drive, Battery operation, max. torque 160 Nm) • Würth ASS 14 (1/4 inch drive, Battery operation, max. torque 150 Nm) |
| BSZ2 A4 Ø8 BSZ2 A4 Ø10 | <ul style="list-style-type: none"> • Milwaukee C 18 IW (Square drive, Battery operation, max. torque 250 Nm) • Bosch GDS 18E (Square drive, Mains operation, max. torque 250 Nm) • Makita 6905H (Square drive, Mains operation, max. torque 300 Nm) • Würth ASS 18 (1/2 inch drive, Battery operation, max. torque 180 Nm) • Würth ESS (1/2 inch drive, Mains operation, max. torque 250 Nm) |

Mechanical Heavy Duty Anchors

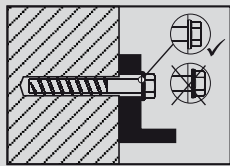
Notes for subsequent adjustment



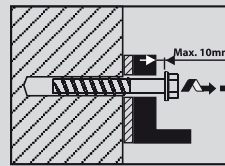
1. In order to be able to carry out subsequent adjustment, the concrete screw must be screwed at least 10 mm deeper than the nominal embedding depth. This must be taken into account at the point when you are selecting the length of the concrete screw.



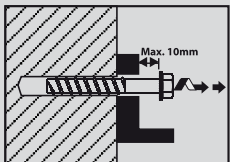
4. After fitting the lining, then re-mount the fixture in accordance with the installation instructions.



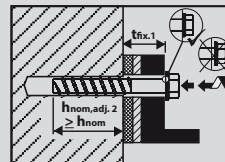
2. After successful installation, if relining is necessary for compensation, this is possible with the concrete screw BSZ2 A4.



5. If the first lining is not sufficient then it is possible to repeat the adjustment. To do this, once again, the concrete screw must be turned back by a maximum of 10 mm so that another lining can be fitted.



3. To do this, when the adjustment is carried out for the first time, the concrete screw must be turned back by a maximum of 10 mm.



6. After the second lining, then re-mount the fixture in accordance with the installation instructions..

- The anchor can only be adjusted twice. When doing this the anchor can only be screwed back to a maximum of 10 mm.
- In total the lining which is a result of the adjustment must be a maximum of 10 mm.
- The required seating depth h_{nom} must be maintained after adjustment ($h_{nom} = L - t_{fix}$).



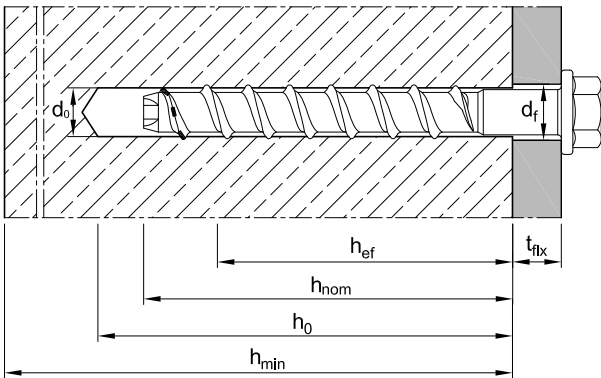
Extract from Permissible Service Conditions of European Technical Assessment ETA-22/0551 for use in cracked and uncracked concrete (Option 1)

Approved loads according to EN 1992-4 for single anchors without the influence of spacing and edge distances. The total safety factor (γ_M und γ_r) is included. Load capacities under fire exposure see page 198.

| Loads and performance data | | Concrete screw size | | BSZ2 6 A4 | | | BSZ2 8 A4 | | | BSZ2 10 A4 | | |
|---|----------------|---------------------|------------------|-----------|-----|-----|-----------|------|------|-------------|-------------|------|
| Nominal embedment depth 1 | $h_{nom 1}$ | [mm] | 35 ¹⁾ | - | - | 45 | - | - | 55 | - | - | |
| Nominal embedment depth 2 | $h_{nom 2}$ | [mm] | - | 45 | - | - | 55 | - | - | 75 | - | |
| Nominal embedment depth 3 | $h_{nom 3}$ | [mm] | - | - | 55 | - | - | 65 | - | - | 85 | |
| cracked concrete | | | | | | | | | | | | |
| Approved loads, tension | C20/25 | appr. N | [kN] | 1,2 | 0,7 | 1,4 | 1,4 | 2,6 | 3,8 | 2,9 | 6,2 | 8,1 |
| | C25/30 | appr. N | [kN] | 1,3 | 0,8 | 1,6 | 1,6 | 2,9 | 4,3 | 3,2 | 6,8 | 8,8 |
| | C30/37 | appr. N | [kN] | 1,4 | 0,8 | 1,7 | 1,7 | 3,2 | 4,7 | 3,5 | 7,3 | 9,5 |
| | C40/50 | appr. N | [kN] | 1,6 | 0,9 | 2,0 | 2,0 | 3,7 | 5,4 | 4,0 | 8,1 | 10,6 |
| | C50/60 | appr. N | [kN] | 1,7 | 1,0 | 2,3 | 2,3 | 4,1 | 6,0 | 4,5 | 8,8 | 11,6 |
| uncracked concrete | | | | | | | | | | | | |
| Approved loads, tension | C20/25 | appr. N | [kN] | 1,7 | 1,9 | 4,0 | 4,2 | 5,7 | 8,0 | 5,2 | 9,0 | 11,9 |
| | C25/30 | appr. N | [kN] | 1,8 | 2,1 | 4,4 | 4,7 | 6,4 | 8,7 | 5,9 | 10,1 | 13,3 |
| | C30/37 | appr. N | [kN] | 1,9 | 2,3 | 4,7 | 5,2 | 7,0 | 9,1 | 6,4 | 11,1 | 14,6 |
| | C40/50 | appr. N | [kN] | 2,1 | 2,7 | 5,3 | 6,0 | 8,1 | 10,0 | 7,4 | 12,8 | 16,8 |
| | C50/60 | appr. N | [kN] | 2,3 | 3,0 | 5,7 | 6,7 | 9,0 | 10,7 | 8,3 | 14,3 | 18,8 |
| cracked / uncracked concrete | | | | | | | | | | | | |
| Approved loads, shear | C20/25 | appr. V | [kN] | 2,0 / 2,9 | 4,0 | 4,0 | 6,2 / 7,7 | 7,7 | 9,7 | 10,4 / 12,9 | 17,6 / 19,4 | 19,4 |
| | \geq C25/30 | appr. V | [kN] | 2,3 / 3,3 | 4,0 | 4,0 | 7,0 / 7,7 | 7,7 | 9,7 | 11,6 / 12,9 | 19,4 | 19,4 |
| Approved bending moments | | appr. M | [Nm] | 6,2 | 6,2 | 6,2 | 14,9 | 14,9 | 14,9 | 32,0 | 32,0 | 32,0 |
| Spacing and edge distance | | | | | | | | | | | | |
| Effective anchorage depth | h_{ef} | [mm] | 25 | 34 | 42 | 32 | 41 | 49 | 40 | 57 | 65 | |
| Characteristic spacing | $s_{cr, N}$ | [mm] | 75 | 102 | 126 | 96 | 123 | 147 | 120 | 171 | 195 | |
| Characteristic edge distance | $c_{cr, N}$ | [mm] | 37,5 | 51 | 63 | 48 | 61,5 | 73,5 | 60 | 85,5 | 97,5 | |
| Minimum thickness of concrete slab | h_{min} | [mm] | 80 | 80 | 100 | 80 | 100 | 120 | 100 | 130 | 130 | |
| Minimum spacing | s_{min} | [mm] | 35 | 35 | 35 | 35 | 35 | 35 | 40 | 40 | 40 | |
| Minimum edge distance | c_{min} | [mm] | 35 | 35 | 35 | 35 | 35 | 35 | 40 | 40 | 40 | |
| Installation parameters | | | | | | | | | | | | |
| Drill hole diameter | d_o | [mm] | 6 | 6 | 6 | 8 | 8 | 8 | 10 | 10 | 10 | |
| Diameter of clearance hole in the fixture | $d_f \leq$ | [mm] | 8 | 8 | 8 | 12 | 12 | 12 | 14 | 14 | 14 | |
| Depth of drill hole | $h_o \geq$ | [mm] | 40 | 50 | 60 | 55 | 65 | 75 | 65 | 85 | 95 | |
| Tangential impact screwdriver ¹⁾ | $T_{imp, max}$ | [Nm] | 160 | 160 | 160 | 300 | 300 | 300 | 450 | 450 | 450 | |

¹⁾Only for statically indeterminate non-structural systems (multiple use) according to EN 1992-4:2018, in dry internal conditions.

²⁾It is possible to fit with a tangential screwdriver with maximum output of $T_{imp, max}$ in accordance with the manufacturer's specifications



Installation

