



Punching reinforcement.
Perfect solution for flat slabs.

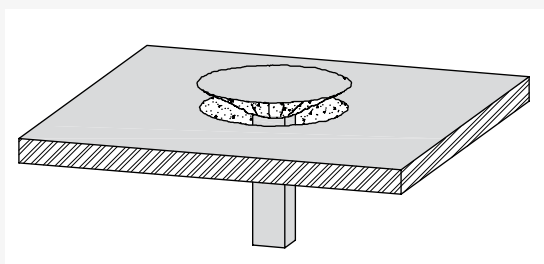


Flat slabs. Cost-effective solution.



Punching of flat slabs

The shear force capacity of flat slabs at the column connection is very limited. High loads can occur to a fatal punching failure. This can be avoided by Schöck Bole®.



Perfect anchorage
Due to forged head on both ends of the stud.

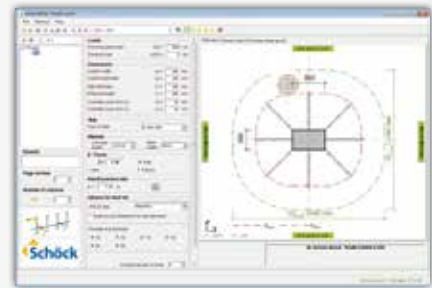


Reference flag
The flag at the first stud shows the exact description of the element.

To overcome the danger of punching failure in flat slabs and foundations, the Schöck Bole® system offers a very cost effective solution. The system is highly engineered, reliable and easy to install.

None load-bearing weld

The studs are only welded on spacer bars in order to ensure the distances.



Software

The user friendly design software enables a fast and simple dimensioning of the Schöck Bole®.

- design according to British Standard
- export of CAD drawings with dxf-format
- consideration of openings



Simple installation

The subsequent installation through the upper reinforcement layer is possible without problem



Schöck Bole® Type U



European technical assessed with CE-mark based on ETA-13/0076.

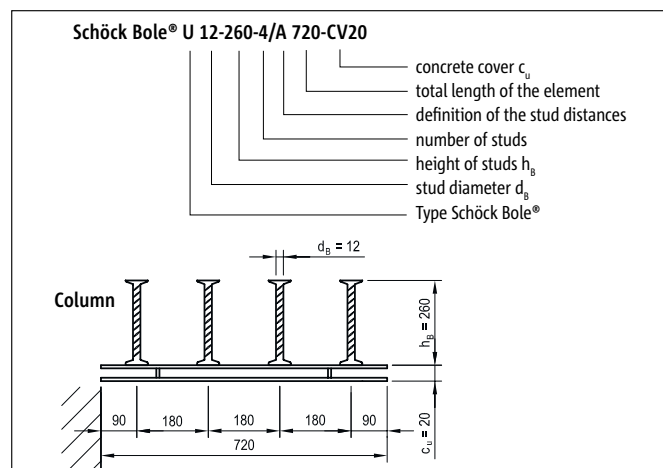
Schöck Bole®.

Basic specifications.

| Stud height** | Stud diameter \varnothing mm* | | | | | |
|---------------|---------------------------------|----|----|----|----|----|
| | 10 | 12 | 14 | 16 | 20 | 25 |
| 130 | X | X | – | – | – | – |
| 140 | X | X | – | – | – | – |
| 150 | X | X | – | – | – | – |
| 160 | X | X | X | X | – | – |
| 170 | X | X | X | X | – | – |
| 180 | X | X | X | X | – | – |
| 190 | X | X | X | X | X | X |
| 200 | X | X | X | X | X | X |
| 210 | X | X | X | X | X | X |
| 220 | X | X | X | X | X | X |
| 230 | X | X | X | X | X | X |
| 240 | X | X | X | X | X | X |
| 250 | X | X | X | X | X | X |
| 260 | – | X | X | X | X | X |
| 270 | – | – | – | X | X | X |
| 280 | – | – | – | X | X | X |
| 290 | – | – | – | X | X | X |
| 300 | – | – | – | X | X | X |
| 310 | – | – | – | X | X | X |
| 320 | – | – | – | X | X | X |
| 330 | – | – | – | X | X | X |
| 340 | – | – | – | X | X | X |
| 350 | – | – | – | X | X | X |
| 360 | – | – | – | X | X | X |
| 370 | – | – | – | – | X | X |
| 380 | – | – | – | – | X | X |
| 390 | – | – | – | – | X | X |
| 400 | – | – | – | – | X | X |

* yield strength ≥ 500 N/mm², tensile strength ≥ 550 N/mm² (B500B)
 ** further heights of studs available on request

| Stud diameter | Head diameter | Stud cross section | Tensile yield strength | Stud height |
|---------------|---------------|--------------------|------------------------|------------------------------|
| d_B | d_K | A_B | $(A \cdot f_{yd})$ | h_B |
| [mm] | [mm] | [mm ²] | [kN] | [mm] |
| 10 | 30 | 79 | 34,4 | $h_B = h - c_o - c_u$ |
| 12 | 36 | 113 | 49,2 | |
| 14 | 42 | 154 | 67,0 | |
| 16 | 48 | 201 | 87,4 | h: slab thickness |
| 20 | 60 | 314 | 136,6 | c_o : concrete cover c_o |
| 25 | 75 | 491 | 213,6 | c_u : concrete cover c_u |



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