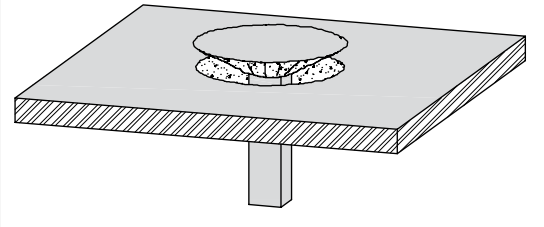
Schöck
Innovative Building Solutions

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.



Information flag
At the first flag with exact description of the element.

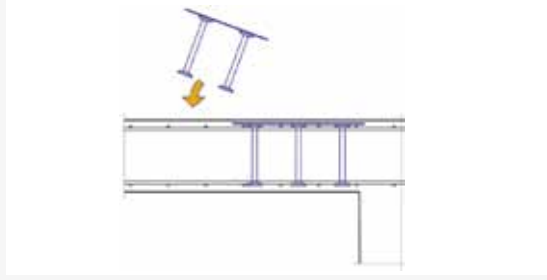
To overcome the well-known danger of punching failure in flat slabs and foundations, the Schöck Bole system offers a very flexible solution. The combination of high planning reliability and user friendly installation enables the system to play a critical role in the reliable and economical stud rail concreting system.

None load-bearing weld
The studs are only weld on spacer bars in order to ensure the distances.

Perfect anchoring
Due to forged double head with 3-times the diameter from the bars.

Tested and approved by different Institutes
e.g.

- University Cottbus
- University Stuttgart
- wide variety of tests in our own laboratory



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

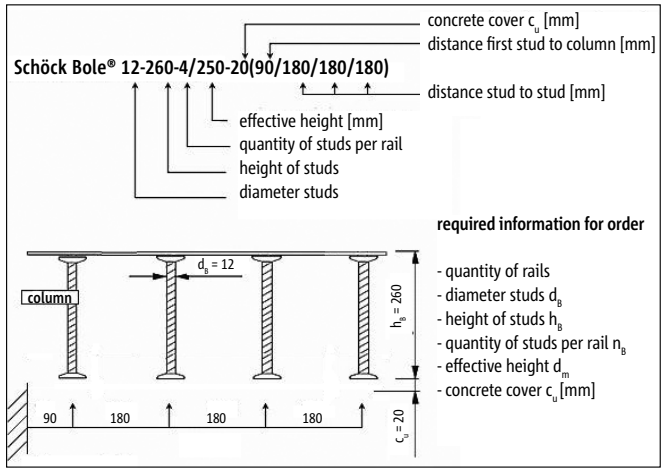
Bole Standard, Bole U

Schöck Bole.
Basic specifications.

Stud height**	Stud diameter ø 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	x
270	x	x	x	x	x	x
280	x	x	x	x	x	x
290	x	x	x	x	x	x
300	x	x	x	x	x	x
310	–	–	x	x	x	x
320	–	–	x	x	x	x
330	–	–	x	x	x	x
340	–	–	x	x	x	x
350	–	–	x	x	x	x
360	–	–	x	x	x	x
370	–	–	x	x	x	x
380	–	–	x	x	x	x
390	–	–	x	x	x	x
400	–	–	x	x	x	x

* yield strength 500 MPa, tensile strength 550 MPa
** other stud heights are available on request

Stud diameter	Head diameter	Stud cross section	Bearing capacity	Stud height
d_B	d_K	A_B	(A*fyd)	h_B
[mm]	[mm]	[mm²]	[kN]	[mm]
10	30	79	34.1	$h_B = h - c_o - c_u$
12	36	113	49.2	
14	42	154	67.0	
16	48	201	87.5	h: slab thickness
20	60	314	136.7	c_o: concrete cover c_o
25	75	491	213.7	c_u: concrete cover c_u



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