

Concrete screw UltraCut FBS II for temporary fastening

Permissible loads of a single anchor¹⁾ in normal concrete of strength class C20/25 to C50/60.

For the design the complete current assessment Z-21.8-2049 has to be considered.

Type	Material/ surface	Screw-in depth h_{nom} [mm]	Minimum member thickness h_{min} [mm]	Maximum installation torque $T_{imp, max}^{2)}$ [Nm]	Minimum spacing (s_{min}) and edge distances (c_{min})		Cracked and non-cracked concrete			
					s_{min} [mm]	$c_{min}^{3)}$ [mm]	Permissible load $F_{perm}^{4)}$			
							$f_{c, cube} \geq 10 \text{ N/mm}^2$ [kN]	$f_{c, cube} \geq 15 \text{ N/mm}^2$ [kN]	$f_{c, cube} \geq 20 \text{ N/mm}^2$ [kN]	$f_{c, cube} \geq 25 \text{ N/mm}^2$ [kN]
FBS II 8	gvz	50	100	400	200	65	1.9	2.3	2.6	2.9
	gvz	65	150	400	300	100	3.6	4.4	5.1	5.6
FBS II 10	gvz	55	105	400	210	70	2.2	2.7	3.1	3.5
	gvz	65	130	400	260	85	2.9	3.5	4.1	4.5
	gvz	85	205	650	410	135	5.8	7.1	8.1	9.1
FBS II 12	gvz	60	120	400	240	80	2.8	3.4	3.9	4.4
	gvz	75	150	400	300	100	4.0	4.9	5.6	6.1
	gvz	100	240	650	480	160	7.6	9.3	10.8	12.0
FBS II 14	gvz	65	115	400	230	75	2.3	2.8	3.2	3.6
	gvz	85	150	400	300	100	3.6	4.4	5.0	5.6
	gvz	115	255	650	510	170	8.9	10.9	12.6	14.0

¹⁾ Material safety factor as well as a partial safety factor for load actions of $\gamma_L = 1.4$ is considered. The screw may be used in the concrete member before the characteristic compressive strength $f_{c, cube}$ is reached. In this case, the concrete compressive strength $f_{c, cube}$ must have reached a value of at least 10 N/mm². Only intended for temporary use and one-time screwing into the same drill hole. Conditions for reuse of the screw see, approval.

²⁾ Values for impulse wrenches with tangential impact and automatic stop device.

³⁾ In case of combined action of shear load and installation close to the edge, the edge distance must be $\geq c_{min} \times 1.5$. Detail see approval.

⁴⁾ Values valid for all load directions.