

Concrete screw UltraCut FBS II US R hexagon head with integral washer and FBS II SK R countersunk head

Permissible loads of a single anchor¹⁾ in normal concrete of strength class C20/25.
For the design the complete current assessment ETA-17/0740 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]	Cracked concrete				Non-cracked concrete			
					Permissible tension (N_{perm}) and shear loads (V_{perm}); minimum spacing (s_{min}) and edge distances (c_{min}) with reduced loads				Permissible tension (N_{perm}) and shear loads (V_{perm}); minimum spacing (s_{min}) and edge distances (c_{min}) with reduced loads			
					$N_{perm}^{3)}$ [kN]	$V_{perm}^{3)}$ [kN]	$s_{min}^{3)}$ [mm]	$c_{min}^{3)}$ [mm]	$N_{perm}^{3)}$ [kN]	$V_{perm}^{3)}$ [kN]	$s_{min}^{3)}$ [mm]	$c_{min}^{3)}$ [mm]
FBS II 8	R	50	100	450	1.9	4.1	35	35	3.3	5.9	35	35
FBS II 8	R	65	120	450	4.3	6.1	35	35	6.7	8.8	35	35
FBS II 10	R	55	100	450	2.1	4.6	40	40	4.0	6.6	40	40
FBS II 10	R	65	120	450	2.9	6.0	40	40	6.7	8.5	40	40
FBS II 10	R	85	140	450	7.6	18.4	40	40	13.1	20.9	40	40
FBS II 12	R	60	110	650	2.1	5.3	50	50	4.8	7.5	50	50
FBS II 12	R	75	130	650	5.2	15.2	50	50	5.7	21.8	50	50
FBS II 12	R	100	150	650	12.0	23.9	50	50	17.1	26.2	50	50

¹⁾ Design according to EN 1992-4:2018 (for static resp. quasi-static loads). The partial safety factors for material resistance as regulated in the ETA as well as a partial safety factor for load actions of $\gamma_L = 1.4$ are considered. As a single anchor counts e.g. an anchor with a spacing $s \geq 3 \times h_{ef}$ and an edge distance $c \geq 1.5 \times h_{ef}$. Accurate data see ETA.

²⁾ Maximum allowable torque for installation with any tangential impact screw driver. Further technical data see ETA.

³⁾ In the case of combinations of tension and shear loads, bending moments with reduced or minimum spacing and edge distances (anchor groups), the design must be carried out in accordance with the provisions of the complete ETA and the provisions of the EN 1992-4:2018. We recommend using our anchor design software C-FIX.