

Concrete screw UCS

Load table

Permissible loads of a single anchor¹⁾ in normal concrete of strength class C20/25

For the design the complete current assessment ETA-18/0762 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}), Shear loads (V_{perm}), minimum spacing (s_{min}) and edge distances (c_{min})				Permissible Tension (N_{perm}), Shear loads (V_{perm}), minimum spacing (s_{min}) and edge distances (c_{min})			
					$N_{perm}^{3)}$ [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]
UCS 8	zp	50	100	600	2.9	4.1	35	35	5.9	5.9	35	35
	zp	65	120	600	5.7	9	35	35	8.8	9	35	35
UCS 10	zp	55	100	650	4.3	4.6	40	40	6.6	6.6	40	40
	zp	65	120	650	5.7	11.9	40	40	8.5	14	40	40
	zp	85	140	650	9.2	16.6	40	40	13.1	16.6	40	40
UCS 12	zp	60	110	650	5.3	10.6	50	50	7.5	15.1	50	50
	zp	75	130	650	7.6	15.2	50	50	10.9	15.2	50	50
	zp	100	150	650	12	20.3	50	50	17.1	20.3	50	50
UCS 14	zp	65	120	650	5.8	11.6	60	60	8.3	16.6	60	60
	zp	85	140	650	9	18	60	60	12.8	22.1	60	60
	zp	115	180	650	14.7	29.4	60	60	21	29.4	60	60

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 tensile and shear loads, bending moments and reduced edge and axial spacings (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 to use our anchor design software DesignFix.