

Drop-in anchor USA

Load table

Permissible loads for a single anchor¹⁾ for multiple use for non-structural applications in cracked and non-cracked concrete C20/25 up to C50/60.

For the design the complete current assessment ETA-10/0168 has to be considered.

Type	Material / surface ²⁾	Screw Material	Effective anchor- agedepth	Minimummember thickness	Maximuminstallation- torque	Permissible load (F_{perm}), minimum spacing (s_{min}) and edge distances (c_{min})		
			h_{ef} [mm]	h_{min} [mm]	$T_{inst,max}$ [Nm]	$F_{perm}^{3)}$ [kN]	s_{min} [mm]	c_{min} [mm]
USA M6	zp	4.6	25	80	4	1	30	60
	zp	4.6	30	80	4	1.2	65	115
USA M8	zp	4.6	25	80	8	1.4	50	100
	zp	4.6	30	80	8	2	70	115
	zp	4.6	40	80	8	2	70	115
USA M10	zp	4.6	25	80	15	1.9	60	100
	zp	4.6	30	80	15	2	85	140
	zp	4.6	40	80	15	3	95	150
USA M12	zp	4.6	25	80	35	1.9	100	110
	zp	4.6	50	100	35	3	145	200

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⁾ Further steel grades, versions and technical data see ETA.

³⁾ Valid for tensile load, shear load and oblique load under any angle. In the case of combinations of tensile, shear loads and bending moments, the design must be carried out in accordance with the provisions of the complete ETA and the provisions of the EN 1992-4:2018.

Load table

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

For the design the complete current assessment ETA-10/0172 has to be considered.

Type	Material / surface ²⁾	Screw Material	Effective anchor- agedepth	Minimummember thickness	Maximum installa- tiontorque	Permissible Tension (N_{perm}), Shear loads (V_{perm}), minimum spacing (s_{min}) and edge distances (c_{min})			
			$h_{ef,min}$ [mm]	h_{min} [mm]	$T_{inst,max}$ [Nm]	$N_{perm}^{3)}$ [kN]	$V_{perm}^{3)}$ [kN]	$s_{min}^{3)}$ [mm]	$c_{min}^{3)}$ [mm]
USA M8x40	zp	5.8	40	100	8	5.9	4.9	70	115
	zp	8.8	40	100	8	5.9	4.9	70	115
	R	A4-70	40	100	8	5.9	5.6	70	115
USA M10x40	zp	5.8	40	120	15	5.9	6.2	95	150
	zp	8.8	40	120	15	5.9	6.2	95	150
	R	A4-70	40	120	15	5.9	7.1	95	150
USA M12x50	zp	5.8	50	120	35	8.3	11.3	145	200
	zp	8.8	50	120	35	8.3	11.3	145	200
	R	A4-70	50	120	35	8.3	12.9	145	200
USA M16x65	zp	5.8	65	160	60	12.3	18.3	180	240
	zp	8.8	65	160	60	12.3	18.3	180	240
	R	A4-70	65	160	60	12.3	21.1	180	240
USA M20x80	zp	5.8	80	200	120	16.8	29.1	190	280
	zp	8.8	80	200	120	16.8	29.1	190	280
	R	A4-70	80	200	120	16.8	33.5	190	280

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⁾ Further steel grades, versions and 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.