Loads

Bolt anchor FAZ II Classic

Permissible loads of a single anchor[1] in normal concrete of strength class C20/25.
For the design the complete current assessment ETA-23/0162 of 14.03.2023 has to be considered.

					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			
Type	Material/ surface[2]	Effective anchorage depth h_{ef} [mm]	Minimum member thickness h_{min} [mm]	Instal-lation torque T_{inst} [Nm]	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]
FAZ II Classic 8	gvz	35	80	20	2.6	8.1	35	40	4.9	8.1	40	40
	gvz	90	140	20	3.8	8.1	35	40	6.7	8.1	40	40
	R	35	80	20	2.6	8.2	35	40	4.9	8.2	40	40
	R	90	140	20	3.8	8.2	35	40	6.7	8.2	40	40
FAZ II Classic 10	gvz	40	80	45	4.1	10.8	40	45	5.9	13.1	40	45
	gvz	100	150	45	6.2	13.1	40	45	9.5	13.1	40	45
	R	40	80	45	4.1	10.8	40	45	5.9	11,0	40	45
	R	100	150	45	6.2	11,0	40	45	9.5	11,0	40	45
FAZ II Classic 12	gvz	50	80	60	5.8	18.0	50	55	8.3	18.5	50	55
	gvz	125	190	60	9.5	18.5	50	55	10.5	18.5	50	55
	R	50	80	60	5.8	18.0	50	55	8.3	22.1	50	55
	R	125	190	60	9.5	22.1	50	55	10.5	22.1	50	55
FAZ II Classic 16	gvz	65	100	110	8.6	27.5	65	65	12.3	34.2	65	65
	gvz	160	240	110	12.9	34.2	65	65	18.4	34.2	65	65
	R	65	100	110	8.6	27.5	65	65	12.3	36.9	65	65
	R	160	240	110	12.9	36.9	65	65	18.4	36.9	65	65

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 $c \geq 1.5 \times h_{ef}$. For anchorage depths of less than 40 mm, the use of a single anchor is only permitted for multiple use of redundant non-structural applications. Accurate data see ETA.

2) Further steel grades, versions and technical data see ETA, e.g. for dry internal conditions, galvanised steel (gvz); for damp interiors and for outdoor use, stainless steel (R).

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.