Loads

Injection system FIS V Plus with internal threaded anchor RG M I

Permissible loads of a single anchor[1) 2)] in normal concrete of strength class C20/25.
For the design the complete current assessment ETA-20/0603 has to be considered.

					Non-cracked concrete			
	Screw Material[3)]	Effective anchorage depth	Minimum member thickness	Maximum installation torque	Permissible tension (N_{perm}) and shear loads (V_{perm}); minimum spacing (s_{min}) and edge distances (c_{min}) with reduced loads			
Type		h_{ef} [mm]	h_{min} [mm]	$T_{inst,\,max}$ [Nm]	N_{perm}[4)] [kN]	V_{perm}[4)] [kN]	s_{min}[4)] [mm]	c_{min}[4)] [mm]
RG M 8 I	5.8	90	120	10	9.0	5.3	55	55
	8.8	90	120	10	13.8	8.3	55	55
	R-70	90	120	10	9.9	5.9	55	55
RG M 10 I	5.8	90	130	20	13.8	8.3	65	65
	8.8	90	130	20	20.0	13.3	65	65
	R-70	90	130	20	15.7	9.3	65	65
RG M 12 I	5.8	125	170	40	20.5	12.1	75	75
	8.8	125	170	40	32.0	19.3	75	75
	R-70	125	170	40	22.5	13.5	75	75
RG M 16 I	5.8	160	210	80	37.6	22.4	95	95
	8.8	160	210	80	47.4	30.9	95	95
	R-70	160	210	80	42.0	25.1	95	95
RG M 20 I	5.8	200	260	120	58.6	35.4	125	125
	8.8	200	260	120	66.3	51.4	125	125
	R-70	200	260	120	65.7	39.4	125	125

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) The specified loads are valid for anchorages in dry and damp concrete. For temperatures in the anchoring substrate up to 50 °C (resp. short term up to 80 °C). Drill hole cleaning as per specification in the ETA. The factor Ψ_{sus} for sustained load was taken into account with 1.0.

3) 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).

4) 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.