

Universal plug DuoPower

Permissible loads¹⁾²⁾³⁾ of a single anchor as part of a multiple fixing of non-structural systems.
For the design the complete current assessment ETA-22/0512 of 04.11.2022 has to be considered.

Type			DuoPower ETA 8x40 Power Fast II	DuoPower ETA 8x40 Spezialschraube	DuoPower ETA 10x50 Spezialschraube	
Anchor diameter	d_0	[mm]	8	8	10	
Screw diameter	d	[mm]	6	6	7	
Anchorage depth	h_{nom}	[mm]	40	40	50	
Anchorage in concrete \geq C16/20⁴⁾						
Permissible tensile load N_{perm}		[kN]	0.12	0.79	0.79	
Permissible shear load V_{perm}	zinc coated screws (gvz)	[kN]	3.10	4.23	5.98	
	stainless steel screw (R)	[kN]	-	3.93	5.98	
Minimum member thickness	h_{min}	[mm]	150	150	150	
Characteristic edge distance	$c_{cr,N}$	[mm]	55	90	80	
Characteristic spacing	a resp. $s_{cr,N}$	[mm]	15	50	50	
Minimum spacing	s_{min}	[mm]	50	50	50	
with an edge distance	$c \geq$	[mm]	100	100	100	
Minimum edge distance	c_{min}	[mm]	50	80	80	
with a spacing	$s \geq$	[mm]	100	160	160	
Anchorage in masonry						
Permissible load ⁵⁾ F_{perm} in solid brick	$\geq Mz$ 10/2; NF	[kN]	-	-	0.40	-
	$\geq Mz$ 16/2; NF	[kN]	-	-	0.57	-
	$\geq Mz$ 20/2; NF	[kN]	-	-	0.71	-
Permissible load ⁵⁾ F_{perm} in solid sand-lime brick	$\geq KS$ 8/2; 2DF	[kN]	-	-	0.60	0.70 ⁶⁾
	$\geq KS$ 12/2; 2DF	[kN]	-	-	0.60	0.70 ⁶⁾
Permissible load ⁵⁾ F_{perm} in perforated clay brick	$\geq Hlz$ 10/1.2; 9 DF	[kN]	-	-	0.17	
	$\geq Hlz$ 12/1.2; 9 DF	[kN]	-	-	0.21	
Minimum member thickness	h_{min}	[mm]	-	-	115	
Minimum spacing (single anchor)	a_{min}	[mm]	-	-	250	
Minimum spacing (anchor group)	s_{min}	[mm]	-	-	50	
Minimum edge distance (anchor group)	c_{min}	[mm]	-	-	80	

¹⁾ Valid for zinc coated (gvz) Power Fast II and special screw and as well as for special screw made of stainless steel (R). For exterior use of the zinc coated screws measures against incoming humidity have to be taken.

²⁾ The required partial safety factors for material resistance as well as a partial safety factor for load actions $\gamma_L = 1.4$ are considered.

As a single anchor counts e.g. an anchor with a minimum spacing according to Annex B 2 or B 3 of the assessment.

³⁾ Valid for temperatures in the substrate up to +24 °C (resp. short term up to +40 °C).

⁴⁾ For values in concrete C12/15 see assessment.

⁵⁾ Valid for tensile load, shear load and oblique load under any angle. For combinations of tensile loads, shear loads and bending moments see assessment. Bulk density of stone in [kg/dm³] and minimum compressive strength in [N/mm²] according to EN 771.

⁶⁾ Only valid for c_{min} 110 mm and c_{2min} 165 mm.