

### Chemical reaction anchors VBA-Z

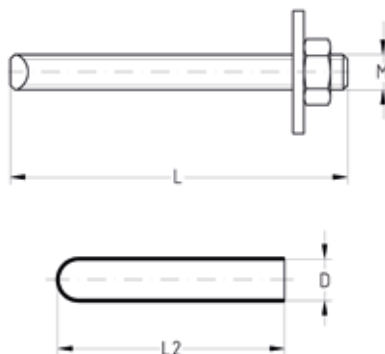
type MKT chemical reaction anchor VZ

#### Application

- For anchorages free of expansion pressure in cracked and non-cracked concrete

#### Your advantages

- Safety anchor for transferring large loads
- Splay-free anchoring enables low axial and edge distances when fastening
- European Technical Assessment for cracked and non-cracked concrete
- Can also be used in damp concrete
- Homogenous secure connection between anchor rod and structural element, after hardening
- Anchor rods in other dimensions and stainless steel also available upon request



#### Features




	Size	Diameter D [mm]	Drilling diameter [mm]	Length L2 [mm]	Part no.	Sales unit	Pack unit
Mortar cartridge for chemical reaction anchors VBA-Z	M8	9	10	85	176908	10	piece
	M10	11	12	90	176909		
	M12	13	14	95	176910		
	M16	17	18		176911		

	Size	Length L [mm]	Anchoring depth $h_{ef}$ [mm]	For mortar cartridge	Part no.	Sales unit	Pack unit
Anchor rod for chemical reaction anchors VBA-Z	M8	110	80	VBA-Z M8	135521	10	piece
	M10	130	90	VBA-Z M10	135522		
	M12	160	110	VBA-Z M12	135523		
	M16	165	125	VBA-Z M16	135548		

	Type	Drilling diameter [mm]	Drilling depth [mm]	Clamping thickness $t_{fix}$ [mm]	Admissible tensile load cracked concrete C20/25 <sup>1)</sup> [kN]	Admissible tensile load uncracked concrete C20/25 <sup>1)</sup> [kN]
Chemical reaction anchors VBA-Z	M8	10	80	20	4	8
	M10	12	90	30	7.3	13.8
	M12	14	110	35	11.5	20
	M16	18	125	20	18.7	27.3

<sup>1)</sup> Permissible loads according to EN 1992-4 without the influence of axial spacing and edge spacing in dry or wet concrete for temperature range I -40 °C to +24 °C (briefly up to +40 °C). The influence of the permanent load with the factor  $\Psi_{sus} = 1.0$  and the overall safety factor ( $\gamma_M$  and  $\gamma_F$ ) were taken into account. All the specifications of the European Technical Assessment ETA-20/0533 must be considered for dimensioning.

 For additional characteristic values of plugs for use in areas with requirements on the duration of fire resistance, please refer to the „Technical information“ chapter.

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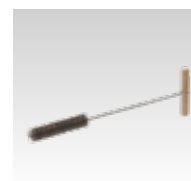
Temperature in borehole [°C]	Min. hardening time
-20 to -16	17 h
-15 to -11	7 h
-10 to -6	4 h
-5 to -1	3 h
0 to +4	50 min
+5 to +9	25 min
+10 to +19	15 min
+20 to +29	6 min
+30 to +40	

Cartridge temperature during processing -15 °C to +40 °C

### Steel wire brushes

for chemical reaction anchors VBA-Z

Suitable for	Diameter [mm]	Size	Part no.	Sales unit	Pack unit
10 mm borehole	11	M8	135571	1	Pieces
12 mm borehole	13	M10	135572		
14 mm borehole	16	M12	135573		
18 mm borehole	20	M16	135574		



The load-bearing capability of the plug at all frictional and chemical plug and anchor connections is influenced decisively by the cleanliness of the drilled hole. Residues such as drill dust reduce the effectiveness of the connection. For this reason, blow or brush out the hole with the steel wire brush to free it from dust before inserting the mortar cartridges and anchor rods.

