Bonded anchor glass capsule W-VPZ

Pre-assembled mortar cartridge for compound anchor W-VPZ (cracked and uncracked concrete). Can be used even in extremely low and high temperatures



Illustration only

22.4

- 2C glass cartridge with vinyl ester resin (styrene-free) and hardener
- Can be used all year round, even in frost and heat (temperature in concrete: -20°C to +40°C)
- Quick and economical installation thanks to the pre-portioned mortar quantities
- Rapid curing means hardly any waiting time until load capacity
- Drill hole cleaning does not require compressed air
- Allows interruption to work after inserting the mortar cartridge into the drill hole, as the chemical reaction only begins after the anchor rod has been inserted
- Hardened composite mortar seals the drill hole against water
- If a drill hole is created with a suction drill, subsequent drilling hole cleaning can be omitted (dust load is minimised)
- No plastic waste

Cracked and uncracked concrete: Performance data, individual anchor without the influence of the edge distance ($c \geq 10\ h_{ef}$)

Temperature range: 24 °C[1]/40 °C[2] (temperature ranges 50 °C/80 °C, see ETA-21/0168) **Base material: Dry and wet concrete** **Concrete compressive strength: C20/25** **Drill hole cleaning: 2x blow out/2x brush out/2x blow out or dust extraction drill bit**							
Anchor diameter			**M8**	**M10**	**M12**	**M16**	
Effective anchorage depth		h_{ef} [mm]	80	90	110	125	170
Cracked concrete							
Admissible centric tension load[3], (individual anchor without the influence of the edge distance and without dense reinforcement)	**Zinc-plated steel, 5.8**	N_{adm} [kN]	4,0	7,3	11,5	18,7	31,7
	Zinc-plated steel, 8.8	N_{adm} [kN]	4,0	7,3	11,5	18,7	31,7
	A4 and HCR stainless steel	N_{adm} [kN]	4,0	7,3	11,5	18,7	31,7
Admissible shear load[3] (individual anchor without the influence of the edge distance and without dense reinforcement)	**Zinc-plated steel, 5.8**	V_{adm} [kN]	6,3	9,7	14,3	26,9	41,7
	Zinc-plated steel, 8.8	N_{adm} [kN]	8,6	13,1	19,4	35,9	56,0
	A4 and HCR stainless steel	V_{adm} [kN]	6,0	9,2	13,7	25,2	39,4
Uncracked concrete							
Admissible centric tension load[3], (individual anchor without the influence of the edge distance and without dense reinforcement)	**Zinc-plated steel, 5.8**	N_{adm} [kN]	8,0	13,8	20,0	28,0	44,4
	Zinc-plated steel, 8.8	N_{adm} [kN]	8,0	14,6	21,4	28,0	44,4
	A4 and HCR stainless steel	N_{adm} [kN]	8,0	14,6	21,4	28,0	44,4

[1] Maximum long-term temperature
[2] Maximum short-term temperature
[3] The partial safety factors of the resistances regulated in the approval and a partial safety factor of the actions of γF = 1.4 have been taken into account. The tensile load portion "continuous load" (including constant loads and constant portions of variable loads) is less than 60% of the total tensile load. For information on combining tensile and shear loads, on the influence of the edge distance, and on anchor groups, please see standard EN 1992-4.

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Cracked and uncracked concrete: Performance data, individual anchor without the influence of the edge distance ($c \geq 10\ h_{ef}$)

Admissible shear load[3] (individual anchor without the influence of the edge distance and without dense reinforcement)	**Zinc-plated steel, 5.8**	V_{adm} [kN]	6,3	9,7	14,3	26,9	41,7
	Zinc-plated steel, 8.8	N_{adm} [kN]	8,6	13,1	19,4	35,9	56,0
	A4 and HCR stainless steel	V_{adm} [kN]	6,0	9,2	13,7	25,2	39,4

[1] Maximum long-term temperature
[2] Maximum short-term temperature
[3] The partial safety factors of the resistances regulated in the approval and a partial safety factor of the actions of γF = 1.4 have been taken into account. The tensile load portion "continuous load" (including constant loads and constant portions of variable loads) is less than 60% of the total tensile load. For information on combining tensile and shear loads, on the influence of the edge distance, and on anchor groups, please see standard EN 1992-4.

Assembly data

Nominal drill Ø	**d^0 [mm]**	10	12	14	18	22
Drill hole depth/effective anchorage depth	**h_0/h_{ef} [mm]**	80	90	110	125	170
Minimum edge distance[1]	**c_{min} [mm]**	40	45	45	50	55
Minimum axis distance[2]	**s_{min} [mm]**	40	50	60	75	90
Minimum member thickness	**h_{min} [mm]**	110	120	140	160	220
Through hole in the component being connected	**$d_f \leq$ [mm]**	9	12	14	18	22
Torque while installing anchor	**$T_{inst} \leq$ [Nm]**	10	20	40	80	150
Nut width across flats	**AF [mm]**	13	17	19	24	30
Anchor rod width across flats	**AF [mm]**	5	6	8	12	14

[1] If the characteristic edge distance is not met, the maximum load capacity is reduced. The smallest possible edge distance is c_{min}
[2] If the characteristic axis distance is not met, the maximum load capacity is reduced. The smallest possible axis distance is s_{min}

Details/Application

- Anchoring with European Technical Assessment in cracked and uncracked concrete
- The anchor may be used for anchorages with static loads (e.g. tare weight, fittings, stored materials) or quasi-static activity
- Suitable for fastening metal structures, metal profiles, brackets, base plates, supports, wooden structures, railings, stairs etc.

Minimum curing times

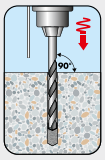
Concrete temperature Minimum curing time	Minimum curing time
-20°C to -16°C	17 hours
-15°C to -11°C	7 hours
-10°C to -6°C	4 hours
-5°C to -1°C	3 hours
0°C to +4°C	50 min
+5°C to +9°C	25 min
+10°C to +19°C	15 min
+20°C to +29°C	6 min
+30°C to +40°C	6 min
Cartridge temperature	-15°C to +40°C

Instructions

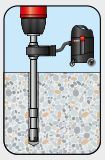
The anchor rod is set in a rotating stroke, the two mortar components are mixed by the rotation movement

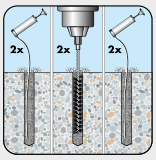
- Blow out the drill hole completely at least twice from the bottom of the drill hole using a blow-out pump or compressed air
- Brush out the drill hole twice with the WIT-RMB cleaning brush
- Blow out the drill hole completely at least twice from the bottom of the drill hole using a blow-out pump or compressed air
- The drill hole can be produced with a suction drill, which means that additional drilling hole cleaning can be omitted

Installation instructions concrete

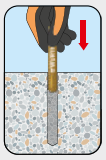


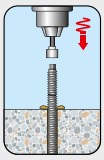
Create the drill hole

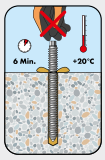

Make the drill hole with the Würth hollow drill bit. Hole cleaning can be dispensed with



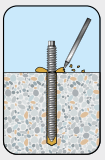
Clean the drill hole: 2x blow-out/2x brush-out/2x blow-out

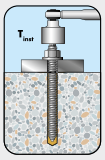

Place the capsule in the bore hole


Set anchor rod W-VD-A turning/with impact



Observe the curing time. Do not move or load the anchor rod until it is completely cured


Remove extruded mortar



Install attachment and apply torque T_{inst}

Proof of performance

- European Technical Assessment ETA-21/0168: Fixing point + cracked and non-cracked concrete (anchor rod W-VD-A)
- Leak test under the influence of water pressure up to 7 bar
- Fire resistance: $N_{Rk,fi(30)}$, $N_{Rk,fi(60)}$, $N_{Rk,fi(90)}$, $N_{Rk,fi(120)}$

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