

WIT-VM 250, OPTION 1

23.5

Cracked and uncracked concrete Performance data and characteristic installation values														
Temperature range: 24 °C ¹⁾ /40 °C ²⁾				(temperature ranges 50 °C/80 °C and 72 °C/120 °C see ETA-12/0164)										
Anchoring base: Dry and moist concrete				(anchoring base: Water-filled drilled hole, see ETA-12/0164)										
Pressure resistance of concrete: C20/25														
Anchor diameter		M20			M24			M27			M30			
Effective anchoring depth	h_{ef} [mm]	90	170	400	96	210	480	108	240	540	120	270	600	
Cracked concrete														
Permissible central tensile load³⁾ (single anchor without edge influence)	Galvanized steel, 5.8	$N_{perm.}$ [kN]	12.2	23.3	54.9	13.4	34.6	79.0	16.0	52.5	109.5	18.8	63.4	133.3
	Galvanized steel, 8.8	$N_{perm.}$ [kN]	12.2	23.3	54.9	13.4	34.6	79.0	16.0	52.5	118.1	18.8	63.4	145.9
	Stainless steel A4 and HCR	$N_{perm.}$ [kN]	12.2	23.3	54.9	13.4	34.6	79.0	16.0	52.5	57.4	18.8	63.4	70.2
Permissible transverse load³⁾ (single anchor without edge influence)	Galvanized steel, 5.8	$V_{perm.}$ [kN]	29.3	34.9	34.9	32.2	50.3	50.3	38.5	65.7	65.7	45.1	80.0	80.0
	Galvanized steel, 8.8	$V_{perm.}$ [kN]	29.3	55.9	56.0	32.2	80.6	80.6	38.5	105.1	105.1	45.1	128.0	128.0
	Stainless steel A4 and HCR	$V_{perm.}$ [kN]	29.3	39.4	39.4	32.2	56.8	56.8	34.5	34.5	34.5	42.0	42.0	42.0
Uncracked concrete														
Permissible central tensile load³⁾ (single anchor without edge influence)	Galvanized steel, 5.8	$N_{perm.}$ [kN]	17.1	44.4	58.1	18.9	61.0	83.8	22.5	74.5	109.5	26.3	88.9	133.4
	Galvanized steel, 8.8	$N_{perm.}$ [kN]	17.1	44.4	93.3	18.9	61.0	134.3	22.5	74.5	175.2	26.3	88.9	202.0
	Stainless steel A4 and HCR	$N_{perm.}$ [kN]	17.1	44.4	65.3	18.9	61.0	94.4	22.5	57.4	57.4	26.3	70.2	70.2
Permissible transverse load³⁾ (single anchor without edge influence)	Galvanized steel, 5.8	$V_{perm.}$ [kN]	34.9	34.9	34.9	45.2	50.3	50.3	54.0	65.7	65.7	63.2	80.0	80.0
	Galvanized steel, 8.8	$V_{perm.}$ [kN]	41.1	56.0	56.0	45.2	80.6	80.6	54.0	105.1	105.1	63.2	128.0	128.0
	Stainless steel A4 and HCR	$V_{perm.}$ [kN]	39.4	39.4	39.4	45.2	56.8	56.8	34.5	34.5	34.5	42.0	42.0	42.0
Nom. drill dia.	d_0 [mm]	24			28			32			35			
Drilled hole depth/Anchoring depth	h_0/h_{ef} [mm]	90	170	400	96	210	480	108	240	540	120	270	600	
Minimum edge spacing	c_{min} [mm]	100			120			135			150			
Minimum axial spacing	s_{min} [mm]	100			120			135			150			
Minimum component thickness	h_{min} [mm]	138	218	448	152	266	536	172	304	604	190	340	670	
Through-hole in the component being connected	$d_f \leq$ [mm]	22			26			30			33			
Torque while installing anchor	$T_{inst} \leq$ [Nm]	120			160			180			200			

¹⁾ Maximum long-term temperature

²⁾ Maximum short-term temperature

³⁾ The part safety coefficients of the resistances regulated in the approval and a part safety coefficient of the effects of $\gamma_F = 1.4$ have been taken into account. With a combination of tensile and transverse loads, with edge influence and anchor groups, please observe the EOTA Technical Report TR029 "Design of Bonded Anchors".

Minimum hardening times			
Temperature in anchoring base	Application time	Minimum hardening time in dry concrete	Minimum hardening time in wet concrete
$\geq -10^\circ\text{C}^{1)}$	90 min	24 h	48 h
$\geq -5^\circ\text{C}^{2)}$	90 min	14 h	28 h
$\geq 0^\circ\text{C}^{2)}$	45 min	7 h	14 h
$\geq +5^\circ\text{C}^{2)}$	25 min	2 h	4 h
$\geq +10^\circ\text{C}^{2)}$	15 min	80 min	160 min
$\geq +20^\circ\text{C}^{2)}$	6 min	45 min	90 min
$\geq +30^\circ\text{C}^{2)}$	4 min	25 min	50 min
$\geq +35^\circ\text{C}^{2)}$	2 min	20 min	40 min
$\geq +40^\circ\text{C}^{3)}$	1.5 min	15 min	30 min

¹⁾ Cartridge temperature $\geq +15^\circ\text{C}$

²⁾ Cartridge temperature: $+5^\circ\text{C}$ to $+25^\circ\text{C}$

³⁾ Cartridge temperature: $< +20^\circ\text{C}$

Würth System Components

