

# 注射式裂缝可靠化学锚栓 VMZ

## 锚固设计辅助表

### (非开裂混凝土 C25)



表中列数据是根据欧洲技术认证 ETA-04/0091 计算的容许使用荷载。

承载力设计值可由表中数据乘以荷载分项系数 1.4 求得。

适用条件:

- 荷载作用在锚板中心, 荷载方向见图 2
- 主要是静荷载
- 刚性锚板符合平面假设
- 锚栓按 MKT 公司要求正确安装
- 分项系数:
  - 荷载分项系数  $\gamma_F = 1.4$
  - 锚栓材料分项系数  $\gamma_M$  见 MKT 产品技术参数



锚栓在非开裂混凝土 C25 中的容许使用荷载, 安全系数已考虑在内

		[Diagram: Single Anchor]							[Diagram: Two Anchors]							[Diagram: Two Anchors]			
s[mm] ≥	h[mm] ≥	100	120	160	200	250	340	400	40	50	70	70	70	95	105	80	90	135	135
		50 M8	60 M10	80 M12	100 M12	125 M16	170 M20	200 M24	50 M8	60 M10	80 M12	100 M12	125 M16	170 M20	200 M24	50 M8	60 M10	80 M12	100 M12
<b>远离边缘</b>																			
	zul. N 90° [kN] →	8.5	11.2	17.2	24.0	33.5	53.2	67.9	10.7	14.3	22.2	29.6	39.8	63.1	79.8	13.0	16.7	26.8	34.8
	zul. F 60° [kN]	7.3	10.1	15.8	19.4	30.2	54.2	67.9	10.7	14.7	23.1	28.5	41.8	67.9	85.8	12.3	16.5	26.6	31.8
	zul. F 45° [kN]	7.0	9.8	15.5	18.2	29.5	55.6	69.1	10.9	15.2	24.0	28.5	43.5	71.4	90.2	12.2	16.7	26.9	31.2
	zul. F 20° [kN]	7.6	11.0	17.6	19.2	33.1	68.8	84.1	13.3	19.0	30.3	33.6	55.4	93.3	117.9	14.1	20.1	32.5	35.3
	zul. V 0° [kN]	8.0	12.0	19.4	19.4	36.0	85.3	101.7	16.0	24.0	38.9	38.9	72.0	126.2	159.5	16.0	24.0	38.9	38.9
<b>近下边缘</b>																			
	c[mm] ≥	40	55	70	70	70	95	105	50	65	100	100	90	95	105	40	55	70	70
	zul. N 90° [kN] →	4.2	6.2	11.9	13.0	16.8	29.6	36.9	5.1	7.7	19.3	18.0	21.0	35.2	43.3	5.3	8.1	18.6	17.4
	zul. F 60° [kN]	2.4	3.9	6.7	7.1	8.4	15.2	18.8	3.5	5.5	12.5	12.4	13.2	19.4	23.9	3.5	5.5	10.7	10.7
	zul. F 45° [kN]	2.0	3.4	5.7	6.0	7.0	12.8	15.7	3.2	5.0	11.0	11.1	11.6	16.5	20.3	3.1	4.9	9.2	9.3
	zul. F 20° [kN]	1.7	3.1	4.9	5.1	5.8	10.6	13.1	3.1	4.9	10.3	10.7	10.6	14.1	17.4	2.9	4.7	8.1	8.4
	zul. V 0° [kN]	1.7	2.9	4.7	4.9	5.5	10.1	12.4	2.9	4.7	9.8	10.3	10.1	13.4	16.5	2.8	4.5	7.7	8.0
<b>在柱上</b>																			
	c[mm] ≥	40	55	70	70	70	95	105	50	65	100	100	90	95	105	40	55	70	70
	zul. N 90° [kN] →	2.0	4.1	8.8	7.5	7.4	16.1	19.1	3.6	7.0	18.4	15.4	13.6	24.1	28.7	3.9	7.5	17.2	14.7
	zul. F 60° [kN]	2.0	4.1	7.9	7.2	7.4	15.3	18.3	4.1	7.6	19.1	16.9	15.1	24.8	29.8	4.1	7.6	15.6	14.2
	zul. F 45° [kN]	2.1	4.1	7.7	7.2	7.5	15.2	18.3	4.4	8.1	19.8	17.9	16.2	25.6	30.8	4.2	7.7	15.2	14.2
	zul. F 20° [kN]	2.6	4.9	8.6	8.4	9.1	17.7	21.5	6.1	10.8	24.9	23.8	22.0	32.0	38.8	5.2	9.5	17.1	16.8
	zul. V 0° [kN]	3.3	5.8	9.3	9.7	11.0	20.1	24.8	9.3	15.0	31.8	33.3	32.0	40.3	49.5	6.6	11.7	18.6	19.5
<b>在梁上</b>																			
	c[mm] ≥	40	55	70	70	70	95	105	50	65	100	100	90	95	105	40	55	70	70
	zul. N 90° [kN] →	2.0	4.1	8.8	7.5	7.4	16.1	19.1	3.3	6.4	17.6	14.1	11.4	19.1	22.5	3.0	6.2	13.7	10.8
	zul. F 60° [kN]	1.6	3.1	5.8	5.5	5.8	11.6	14.0	2.7	5.0	12.0	10.9	9.6	14.5	17.4	2.6	4.8	9.3	8.4
	zul. F 45° [kN]	1.5	2.9	5.2	5.0	5.3	10.5	12.8	2.6	4.6	10.7	10.1	9.1	13.4	16.1	2.4	4.4	8.3	7.8
	zul. F 20° [kN]	1.6	3.0	4.9	5.0	5.5	10.4	12.8	2.8	4.8	10.2	10.4	9.7	13.6	16.6	2.6	4.6	8.0	8.1
	zul. V 0° [kN]	1.7	2.9	4.7	4.9	5.5	10.1	12.4	2.9	4.7	9.8	10.3	10.1	13.4	16.5	2.8	4.5	7.7	8.0
<b>在角部</b>																			
	c[mm] ≥	40	55	70	70	70	95	105	50	65	100	100	90	95	105	40	55	70	70
	zul. N 90° [kN] →	2.7	4.4	9.4	8.8	10.8	20.3	24.9	3.6	6.8	18.1	15.2	15.1	25.9	31.4	3.8	7.1	16.1	13.9
	zul. F 60° [kN]	1.6	2.8	5.1	5.1	5.9	11.0	13.5	2.6	4.6	10.6	10.0	9.9	14.9	18.2	2.6	4.6	8.9	8.6
	zul. F 45° [kN]	1.4	2.5	4.3	4.4	5.1	9.3	11.5	2.4	4.1	9.1	8.9	8.8	12.7	15.6	2.4	4.1	7.6	7.5
	zul. F 20° [kN]	1.3	2.3	3.7	3.8	4.3	8.0	9.8	2.4	3.8	8.0	8.3	8.2	11.1	13.7	2.3	3.8	6.5	6.8
	zul. V 0° [kN]	1.2	2.2	3.5	3.7	4.1	7.5	9.3	2.3	3.7	7.6	8.0	7.9	10.6	13.0	2.2	3.6	6.2	6.5

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(非开裂混凝土 C25)



图1

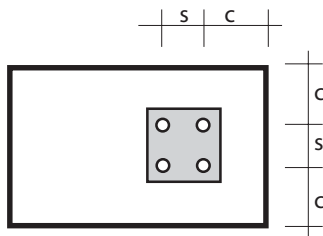
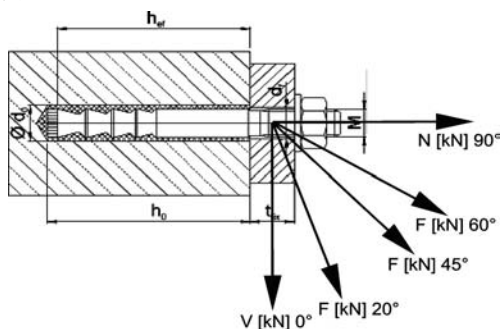





图2



																		
135	95	105	40	50	70	70	70	95	105	80	90	135	135	135	95	105	s(mm)	h(mm)
250	340	400	100	120	160	200	250	340	400	100	120	160	200	250	340	400		
125 M16	170 M20	200 M24	50 M8	60 M10	80 M12	100 M12	125 M16	170 M20	200 M24	50 M8	60 M10	80 M12	100 M12	125 M16	170 M20	200 M24		
																	→ 远离边缘	
45.6	63.1	79.8	13.6	18.2	28.7	36.5	47.2	74.9	93.7	19.9	25.1	41.9	50.5	62.0	74.9	93.7	→	zul. N 90° [kN]
46.3	67.9	85.8	14.6	19.6	30.8	39.3	50.8	80.5	100.8	20.3	26.7	44.3	50.9	66.7	80.5	100.8		zul. F 60° [kN]
47.4	71.4	90.2	15.4	20.6	32.4	41.3	53.4	84.7	106.0	20.9	28.0	46.2	51.9	70.2	84.7	106.0	↘	zul. F 45° [kN]
58.4	93.3	117.9	20.1	26.9	42.3	54.0	69.8	110.7	138.5	25.8	36.1	59.3	63.6	91.7	110.7	138.5		zul. F 20° [kN]
72.0	126.2	159.5	27.2	36.4	57.3	73.0	94.5	149.7	187.4	32.0	48.0	77.7	77.7	124.1	149.7	187.4	↓	zul. V 0° [kN]
																	→ 近下边缘	
70	95	105	50	65	100	100	90	95	105	40	55	70	70	70	95	105	c(mm)	
21.4	35.2	43.3	6.1	10.2	25.5	22.6	25.3	44.7	54.6	7.5	13.2	31.8	27.5	30.4	44.7	54.6	→	zul. N 90° [kN]
12.5	19.4	23.9	3.9	6.3	14.1	13.8	14.3	21.2	26.0	4.1	6.8	13.0	12.8	14.3	21.2	26.0		zul. F 60° [kN]
10.8	16.5	20.3	3.4	5.5	12.0	12.0	12.2	17.5	21.5	3.4	5.7	10.5	10.5	11.8	17.5	21.5	↘	zul. F 45° [kN]
9.5	14.1	17.4	3.1	5.0	10.3	10.8	10.6	14.2	17.5	2.9	4.8	8.1	8.5	9.5	14.2	17.5		zul. F 20° [kN]
9.0	13.4	16.5	2.9	4.7	9.8	10.3	10.1	13.4	16.5	2.8	4.5	7.7	8.0	9.0	13.4	16.5	↓	zul. V 0° [kN]
																	→ 在柱上	
70	95	105	50	65	100	100	90	95	105	40	55	70	70	70	95	105	c(mm)	
14.5	24.1	28.7	4.6	8.9	23.7	19.0	15.9	28.6	33.7	6.0	11.2	26.9	21.3	19.3	28.6	33.7	→	zul. N 90° [kN]
14.5	24.8	29.8	5.1	9.7	24.4	20.8	17.9	30.3	36.1	6.4	11.4	24.7	21.3	20.4	30.3	36.1		zul. F 60° [kN]
14.8	25.6	30.8	5.6	10.3	25.1	22.1	19.4	31.7	37.9	6.6	11.7	24.3	21.7	21.3	31.7	37.9	↘	zul. F 45° [kN]
18.1	32.0	38.8	7.7	13.6	31.3	29.4	26.8	40.7	49.2	8.5	14.6	27.6	26.4	27.4	40.7	49.2		zul. F 20° [kN]
22.0	40.3	49.5	11.7	18.9	39.2	41.0	40.3	53.7	66.0	11.0	18.1	30.6	32.0	36.1	53.7	66.0	↓	zul. V 0° [kN]
																	→ 在梁上	
70	95	105	50	65	100	100	90	95	105	40	55	70	70	70	95	105	c(mm)	
9.8	19.1	22.5	4.6	8.9	23.7	19.0	15.9	28.6	33.7	6.0	11.2	26.9	21.3	19.3	28.6	33.7	→	zul. N 90° [kN]
8.4	14.5	17.4	3.3	5.9	13.7	12.7	11.5	17.8	21.4	3.7	6.4	12.3	11.6	12.0	17.8	21.4		zul. F 60° [kN]
8.0	13.4	16.1	3.0	5.2	11.8	11.3	10.5	15.5	18.8	3.2	5.5	10.1	9.9	10.4	15.5	18.8	↘	zul. F 45° [kN]
8.6	13.6	16.6	3.0	4.9	10.3	10.7	10.5	14.1	17.3	2.9	4.8	8.1	8.4	9.5	14.1	17.3		zul. F 20° [kN]
9.0	13.4	16.5	2.9	4.7	9.8	10.3	10.1	13.4	16.5	2.8	4.5	7.7	8.0	9.0	13.4	16.5	↓	zul. V 0° [kN]
																	→ 在角部	
70	95	105	50	65	100	100	90	95	105	40	55	70	70	70	95	105	c(mm)	
15.3	25.9	31.4	4.7	9.1	23.8	19.5	18.2	32.9	39.5	6.2	11.5	27.6	22.4	21.8	32.9	39.5	→	zul. N 90° [kN]
9.6	14.9	18.2	3.0	5.2	11.8	11.2	10.8	16.3	19.9	3.3	5.6	10.7	10.4	11.1	16.3	19.9		zul. F 60° [kN]
8.4	12.7	15.6	2.6	4.4	9.8	9.6	9.3	13.6	16.6	2.8	4.7	8.5	8.5	9.3	13.6	16.6	↘	zul. F 45° [kN]
7.7	11.1	13.7	2.4	3.9	8.1	8.4	8.3	11.2	13.7	2.4	3.8	6.6	6.8	7.7	11.2	13.7		zul. F 20° [kN]
7.3	10.6	13.0	2.3	3.7	7.6	8.0	7.9	10.6	13.0	2.2	3.6	6.2	6.5	7.3	10.6	13.0	↓	zul. V 0° [kN]