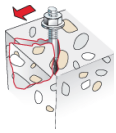
$V_{Rk,cp}$ kN	γ_{Mc}	$V_{Rd,cp}$ kN	V_{Sd} kN	$\beta_{V,cp}$ %
49.59	1.50	33.06	5.80	17.5

Anchor no.	$\beta_{V,cp}$ %	GroupIndex	VariableName
1	17.5	1	$\beta_{V,cp;1}$

Concrete edge failure



$$V_{Sd} \leq \frac{V_{Rk,c}}{\gamma_{Mc}} \qquad (V_{Rd,c})$$

$$V_{Rk,c} = V^0_{Rk,c} \cdot \frac{A_{c,V}}{A^0_{c,V}} \cdot \Psi_{s,V} \cdot \Psi_{h,V} \cdot \Psi_{\alpha,V} \cdot \Psi_{ec,V} \cdot \Psi_{re,V} \qquad \text{Eq. (5.7)}$$

$$V_{Rk,c} = 17.27kN \cdot \frac{28{,}500mm^2}{45{,}000mm^2} \cdot 0.880 \cdot 1.000 \cdot 1.255 \cdot 1.000 \cdot 1.200 = 14.49kN$$

$$V^0_{Rk,c} = k_1 \cdot d^{\alpha}_{nom} \cdot h^{\beta}_{ef} \cdot \sqrt{f_{ck,cube}} \cdot c_1^{1.5} \qquad \text{Eq. (5.7a)}$$

$$V^0_{Rk,c} = 1.7 \cdot \left(16mm\right)^{0.081} \cdot \left(65mm\right)^{0.069} \cdot \sqrt{37.0N/mm^2} \cdot \left(100mm\right)^{1.5} = 17.27kN$$

$$\alpha = 0.1 \cdot \sqrt{\frac{l_f}{c_1}} = 0.1 \cdot \sqrt{\frac{65mm}{100mm}} = 0.081 \qquad \beta = 0.1 \cdot \left(\frac{d_{nom}}{c_1}\right)^{0.2} = 0.1 \cdot \left(\frac{16mm}{100mm}\right)^{0.2} = 0.069 \qquad \text{Eq. (5.7b/c)}$$

$$\Psi_{s,V} = 0.7 + 0.3 \cdot \frac{c_2}{1.5c_1} = 0.7 + 0.3 \cdot \frac{90mm}{1.5 \cdot 100mm} = 0.880 \leq 1 \qquad \text{Eq. (5.7e)}$$

$$\Psi_{h,V} = max\left(1; \sqrt{\frac{1.5c_1}{h}}\right) = max\left(1; \sqrt{\frac{1.5 \cdot 100mm}{150mm}}\right) = 1.000 \geq 1 \qquad \text{Eq. (5.7f)}$$

$$\Psi_{\alpha,V} = \sqrt{\frac{1}{\left(cos\ \alpha_V\right)^2 + \left(\frac{sin\ \alpha_V}{\Psi_{90,V}}\right)^2}} = \sqrt{\frac{1}{\left(cos\ 54.1\right)^2 + \left(\frac{sin\ 54.1}{1.5}\right)^2}} = 1.255 \geq 1 \qquad \text{Eq. (10.2-5f)}$$

$$\Psi_{ec,V} = \frac{1}{1 + \frac{2\ e_v}{3\ c_1}} = \frac{1}{1 + \frac{2 \cdot 0mm}{3 \cdot 100mm}} = 1.000 \leq 1 \qquad \text{Eq. (5.7h)}$$

$$\Psi_{re,V} = 1.200$$

$V_{Rk,c}$ kN	γ_{Mc}	$V_{Rd,c}$ kN	V_{Sd} kN	$\beta_{V,c}$ %
14.49	1.50	9.66	5.80	60.0

Anchor no.	$\beta_{V,c}$ %	GroupIndex	VariableName
1	60.0	1	$\beta_{V,c;1}$