EPCON™ C6 PLUS

SEISMIC ANCHOR STUDS - CHEMICAL INJECTION

AVAILABLE IN NEW ZEALAND ONLY

(Australia refer to ChemSet™ Reo502™ PLUS range)

GENERAL INFORMATION

Performance Related	Material Specification	Installation Related

Product

EPCON™ C6 PLUS is a heavy duty pure Epoxy for anchoring threaded studs and reinforcing bar into cracked and uncracked concrete.

Compliance

European Technical Assessment (option 1) - ETA-18/0675

Design according to:

- AS1170.4 - Earthquake Actions
- EN1992-4 (formerly ETAG001 Annex C, E & TR045)
- NZS3101 (A3) Section 17 - Seismic Design C1
- Use enclosed data for simplified calculation method
  Use Ramset™ iExpert Anchor Software for optimised calculation or where a greater range of anchor layout detail is needed.

Benefits, Advantages and Features

- 100 year working life

Greater productivity:

- Anchors in dry, damp, wet or flooded holes
- Easy dispensing even in cold weather

Greater security:

- Strong bond
- Rated for sustained loading

Versatile:

- Anchors in carbide drilled and diamond drilled holes*
- Cold and temperate climates

Greater safety:

- Low odour
- VOC Compliant
- Suitable for contact with drinking water

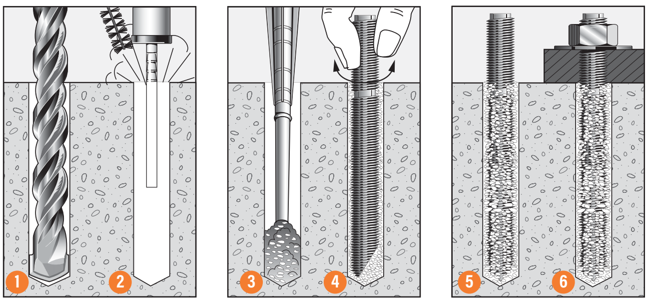
Principal Applications

- Threaded Studs
- Starter Bars
- Threaded Inserts
- Over-head installation
- Steel Columns
- Hand Rails
- Road Stitching

Recommended Installation Temperatures

	Minimum	Maximum
Substrate	5°C	40°C
Adhesive	10°C	40°C

Installation



1. Drill recommended diameter and depth hole.
2. **Important:** Use **Ramset™** Dustless Drilling System to ensure holes are clean. Alternativly clean dust and debris from hole with stiff wire or nylon brush and blower in the following sequence: blow x 2, brush x 2, blow x 2, brush x 2, blow x 2.
3. Dispense adhesive to waste until colour is uniform light grey (2-3 trigger pulls). Insert mixing nozzle to bottom of hole. Fill hole to 3/4 the hole depth slowly, ensuring no air pockets form.
4. Insert **Ramset™** ChemSet™ Anchor Stud/rebar to bottom of hole while turning.
5. Allow EPCON™ C6 PLUS to cure as per setting times.
6. Attach fixture.

Service Temperature Limits

-40°C to 70°C

Setting Times

Temperature of base material	Cartridge Temperature	Gel Time	Curing time in dry and wet concrete
5°C	Minimum 10°C	300 min	24 h
10°C	10°C	150 min	18 h
15°C	15°C	40 min	12 h
20°C	20°C	25 min	8 h
25°C	25°C	18 min	6 h
30°C	30°C	12 min	4 h
40°C	40°C	6 min	2 h
Note: Cartridge temperature minimum +10°C			

Note

*Performance of cored & oversized holes was not included in the ETAG test program and therefore is based on testing conducted at Ramset™ Product Engineering Laboratory.

EPCON™ C6 PLUS

SEISMIC ANCHOR STUDS - CHEMICAL INJECTION

AVAILABLE IN NEW ZEALAND ONLY

Installation and performance details: EPCON™ C6 Plus and ChemSet™ Anchor Studs

Anchor size, d_b (mm)	Drilled hole diameter, d_h (mm)	Fixture hole diameter, d_f (mm)	Anchor effective depth, h (mm)	Tightening torque, T_r (Nm)	Optimum dimensions*		Concrete substrate thickness, b_m (mm)	Seismic C1 Cracked Concrete reduced characteristic tensile capacity, $N^0_{Rd,p,seis}$ (kN) **		
								Concrete Compressive Strength, f'_c		
					Anchor* spacing, a_c (mm)	Edge* distance, e_c (mm)		20 MPa	30 MPa	40 MPa
								C1	C1	C1
M10	12	12	90	20	270	135	120	13.6	14.2	14.6
M12	14	14	110	40	330	165	140	17.9	18.6	19.1
M16	18	18	125	80	375	188	161	23.5	24.4	25.1
M20	22	22	170	120	510	255	214	40.3	41.9	43.1
M24	26	26	210	160	630	315	262	51.8	53.9	55.4
M30	35	33	280	200	840	420	350	69.6	72.4	74.5

* For anchor spacings or edge distances less than the minimum, please refer to the simplified strength limit state design process to verify capacity.

** Tension values are based on service temperature limits -40˚C to +70˚C only. If service temperature limits is beyond this range please contact Ramset Engineer.

**Note: Seismic Cracked concrete combined pull-out and concrete cone resistance, tension = $N^0_{Rd,p,seis} = \alpha_{Nseis} N^0_{Rk,p,seis} / \gamma_{Msp}$ where $\gamma_{Msp} = 1.5$

Anchor size, d_b (mm)	Reduced Characteristic Capacity							
	Grade 5.8 Steel Studs		Grade 8.8 Steel Studs		ANSI 316 Stainless Steel Studs		HCR 1.4529 Stainless Steel Studs	
	Shear, $V_{Rd,seis}$ (kN)##	Tension, $N_{Rd,seis}$(kN)***	Shear, $V_{Rd,seis}$ (kN)##	Tension, $N_{Rd,seis}$(kN)***	Shear, $V_{Rd,seis}$ (kN)##	Tension, $N_{Rd,seis}$(kN)***	Shear, $V_{Rd,seis}$ (kN)##	Tension, $N_{Rd,seis}$(kN)***
	C1 #	C1	C1 #	C1	C1	C1	C1	C1
M10	3.7	19.3	5.8	30.7	4.1	21.9	5.1	27.3
M12	5.4	28.0	8.5	44.7	6.0	31.6	7.5	39.3
M16	8.8	52.7	13.9	84.0	9.8	58.8	12.2	73.3
M20	13.6	82.0	21.8	130.7	15.3	92.0	19.0	114.7
M24	11.9	118.0	19.0	188.0	13.3	132.1	16.7	164.7
M30	19.0	187.3	30.6	299.3	21.5	210.2	26.9	262.0

***Note: Seismic Cracked Concrete steel resistance, tension = $N_{Rd,s,seis} = \alpha_{Nseis} N^0_{Rk,s,seis} / \gamma_{Ms}$ (kN) where $\gamma_{Ms} = 1.5$ (Grade 5.8 & 8.8 steel), $\gamma_{Ms} = 1.87$ (A4 316 SS) and $\gamma_{Ms} = 1.5$ (HCR 1.4529 stainless steel)

 # Note: HOT-DIP GALVANIZED ANCHORS - for Seismic C1reduced characteristic steel shear capacity the following reduction factors shall apply;

M10 Multiply $V_{Rd,seis}$ *0.47

M12 Multiply $V_{Rd,seis}$ *0.47

M16 Multiply $V_{Rd,seis}$ *0.54

M20 Multiply $V_{Rd,seis}$ *0.54

M24 Multiply $V_{Rd,seis}$ *0.88

M30 Multiply $V_{Rd,seis}$ *0.88

Note: Shear Data includes annular gap reduction factor of 0.5

For optimised performance data, please use Ramset iExpert Anchoring Software.

DESCRIPTION AND PART NUMBERS

Description	Cartridge Size	Part No.
EPCON C6 PLUS	600ml	EC6P600

ENGINEERING PROPERTIES ChemSet™ Anchor Studs and Threaded Rod

Anchor Size, d_b	Grade 8.8 Threaded Rod				Stainless Steel High Corrosion Resistance HCR Grade 1.4529/1.4565 Threaded Rod				Section modulus Z (mm³)
	Shank diameter, d_s (mm)	Stressed Area (mm²)	Yield Strength f_y MPa	UTS f_u MPa	Shank diameter, d_s (mm)	Stressed Area (mm²)	Yield Strength f_y MPa	UTS f_u MPa	
M10	8.6	58	640	800	8.2	52.8	450	650	62.3
M12	10.4	84.3	640	800	10	78.5	450	650	109.2
M16	14.1	157	640	800	14	153.9	450	650	277.5
M20	17.7	245	640	800	17.2	232.4	450	650	540.9
M24	21.2	353	640	800	20.7	336.5	450	650	935.5
M30	26.7	561	640	800	-	-	-	-	-

Refer to "Engineering Properties" for ChemSet™ Anchor Studs Grade 5.8 and AISI 316 Stainless Steel in the SARB ANZ on page 141.

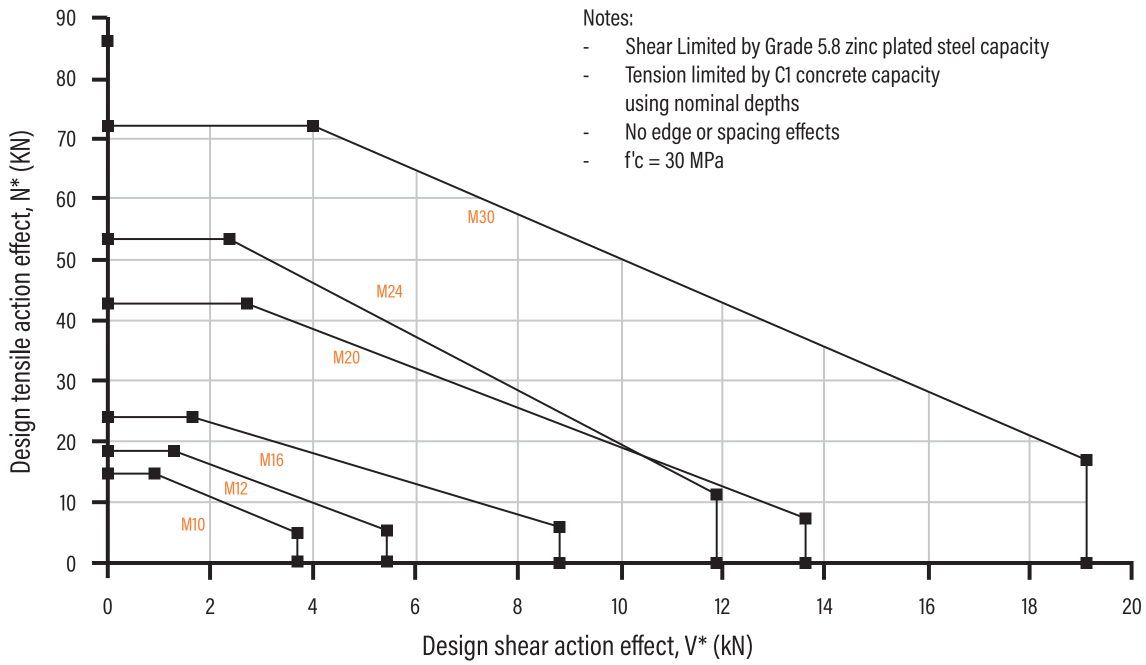
EPCON™ C6 PLUS

STRENGTH LIMIT STATE DESIGN

AVAILABLE IN NEW ZEALAND ONLY

STEP 1 Select anchor to be evaluated

Table 1a Indicative combined loading – interaction diagram



Notes:
- Shear Limited by Grade 5.8 zinc plated steel capacity
- Tension limited by C1 concrete capacity using nominal depths
- No edge or spacing effects
- f'c = 30 MPa

Table 1b Absolute minimum edge distance and anchor spacing values, e_m and a_m (mm)

Anchor size, d_b M10	M10	M12	M16	M20	M24	M30
Min. Anchor Spacing - a_m	40	40	40	50	50	60
Min. Edge Distance - e_m	40	40	40	50	50	60

Step 1c Calculate anchor effective depth, h (mm)

Refer to "Description and Part Numbers" table for ChemSet™ Anchor Studs page in the SARB ANZ on page 141.

Effective depth, h (mm)

Preferred h = h_n otherwise,

$$h = L_e - t$$

t = total thickness of material(s) being fastened.

Substrate thickness b_m (mm)		
Anchor Stud Size (mm)		
M10	M12	M16 to M24
h + 30mm ≥ 100mm		h + (2 x d_h)

Checkpoint 1 Anchor size determined, absolute minima compliance achieved, effective depth (h) calculated.

EPCON™ C6 PLUS

STRENGTH LIMIT STATE DESIGN

AVAILABLE IN NEW ZEALAND ONLY

STEP 2 Verify Seismic C1 cracked concrete tensile capacity - per anchor

Table 2a - Seismic (C1) Cracked concrete combinded Pull-out and concrete cone resistance, tension

$N^0_{Rd,p,seis} = \alpha_{seis} N^0_{Rk,p,seis} / \gamma_{Msp}$ (kN), $\gamma_{Msp} = 1.5$, $\alpha_{N,seis} = 0.85$, f'c = 30 MPa

where $N^0_{Rk,p,seis} = \pi * d_b * h * \tau_{Rk,cr,seis}$

Anchor Size, d_b	C1 Seismic Data					
	M10	M12	M16	M20	M24	M30
Drilled Hole Dia, d_h (mm)	12	14	18	22	26	35
Effective Depth, h (mm)						
70	11.0					
80	12.6					
90	**14.2**	15.2				
100	15.7	16.9				
110	17.3	**18.6**	21.5			
120	18.9	20.3	23.5			
125	19.7	21.1	**24.4**			
140	22.0	23.6	27.4			
150	23.6	25.3	29.3	37.0		
160	25.2	27.0	31.3	39.5		
170	26.8	28.7	33.2	**41.9**	43.6	
180	28.3	30.4	35.2	44.4	46.2	
190	29.9	32.1	37.1	46.9	48.8	
200	31.5	33.8	39.1	49.3	51.3	
210		35.5	41.1	51.8	**53.9**	54.3
240		40.5	46.9	59.2	61.6	62.1
280			54.7	69.1	71.9	**72.4**
320			62.6	78.9	82.1	82.7
350				86.3	89.8	90.5
400				98.6	102.6	103.4
450					115.5	116.3
480					123.2	124.1
550						142.2
600						155.1

Bold values are at ChemSet Anchors Stud nominal depths

All data relevant for Dry, Wet and Flooded Holes

For single anchor values: Multiply $N^0_{Rd,p,seis}$*1.17

For optimised performance data, please use Ramset iExpert Anchoring Software.

Table 2b-1 Seismic Cracked concrete service temperature limits effect, tension, X_{ns}

	Service temperature limits effect, tension,					
Anchor size, d_b	M10	M12	M16	M20	M24	M30
Service temperature (˚C)						
-40˚C to +70˚C	1.00					

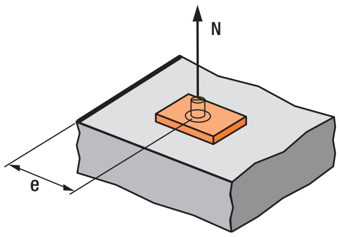
Table 2b-2 Seismic Cracked concrete compressive strength effect, tension, X_{nc}

f'c (MPa)	20	25	30	40	50
X_{nc}	0.96	0.98	1.00	1.029	1.048

EPCON™ C6 PLUS

STRENGTH LIMIT STATE DESIGN

AVAILABLE IN NEW ZEALAND ONLY



$X_{ne} = 0.25 + 0.5*(e/h)$

Where $e_m \le e \le e_c$

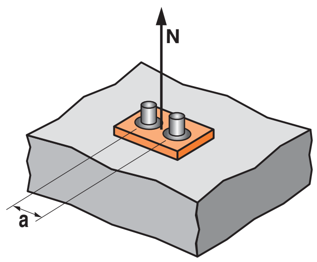
$e_c = 1.5*h$

Note: Tabled values are based on the nominal effective depth, h shown in the installation details.

For other values of X_{ne}, please use equation shown above.

Table 2c - Seismic cracked concrete Edge distance effect, tension, X_{ne}

Anchor size, db	M10	M12	M16	M20	M24	M30
Edge distance, e (mm)						
40	0.47	0.43	0.41			
45	0.50	0.45	0.43			
50	0.53	0.48	0.45	0.40	0.37	
55	0.56	0.50	0.47	0.41	0.38	
60	0.58	0.52	0.49	0.43	0.39	0.36
65	0.61	0.55	0.51	0.44	0.40	0.37
70	0.64	0.57	0.53	0.46	0.42	0.38
80	0.69	0.61	0.57	0.49	0.44	0.39
100	0.81	0.70	0.65	0.54	0.49	0.43
115	0.89	0.77	0.71	0.59	0.52	0.46
135	1.00	0.86	0.79	0.65	0.57	0.49
165		1.00	0.91	0.74	0.64	0.54
187			1.00	0.80	0.70	0.58
255				1.00	0.86	0.71
315					1.00	0.81
420						1.00



$X_{na} = 0.5 + a/(6*h)$

Where $a_m \le a \le a_c$

$a_c = 3*h$

Note: Tabled values are based on the nominal effective depth, h shown in the installation details.

For other values X_{na}, please use equation shown above.

Table 2d - Seismic cracked concrete anchor spacing effect, tension, X_{na}

Anchor size, d_b	M10	M12	M16	M20	M24	M30
Anchor spacing, a (mm)						
40	0.57	0.56	0.55			
45	0.58	0.57	0.56			
50	0.59	0.58	0.57	0.55	0.54	
55	0.60	0.58	0.57	0.55	0.54	
60	0.61	0.59	0.58	0.56	0.55	0.54
65	0.62	0.60	0.59	0.56	0.55	0.54
85	0.66	0.63	0.61	0.58	0.57	0.55
100	0.69	0.65	0.63	0.60	0.58	0.56
125	0.73	0.69	0.67	0.62	0.60	0.57
150	0.78	0.73	0.70	0.65	0.62	0.59
200	0.87	0.80	0.77	0.70	0.66	0.62
270	1.00	0.91	0.86	0.76	0.71	0.66
330		1.00	0.94	0.82	0.76	0.70
375			1.00	0.87	0.80	0.72
510				1.00	0.90	0.80
630					1.00	0.88
840						1.00

Checkpoint 2

Design seismic cracked concrete combined pull-out and concrete cone resistance, $N_{Rd,p,seis}$

$$N_{Rd,p,seis} = N^0_{Rd,p,seis} * X_{ns} * X_{nc} * X_{ne} * X_{na}$$

STEP 3

Verify seismic C1 cracked concrete tensile resistance - per anchor

Table 3a - Seismic C1 Cracked Concrete steel resistance, tensile, $N_{Rd,s,seis} = \alpha_{seis} N_{Rk,s,seis} / \gamma_{Ms}$ (kN), $\alpha_{seis} = 1.0$

γ_{Ms} = 1.5 for Grade 5.8 and Grade 8.8 Carbon Steel

γ_{Ms} = 1.87 for A4 316 Stainless Steel

γ_{Ms} = 1.5 for HCR Stainless Steel

Anchor size, d_b	M10	M12	M16	M20	M24	M30
Grade 5.8 Carbon Steel	19.3	28.0	52.7	82.0	118.0	187.3
Grade 8.8 Carbon Steel	30.7	44.7	84.0	130.7	188.0	299.3
A4 316 Stainless Steel	21.9	31.6	58.8	92.0	132.1	210.2
HCR 1.4529 Stainless Steel	27.3	39.3	73.3	114.7	164.7	262.2

Checkpoint 3

Design seismic C1 cracked concrete tensile resistance, $N_{Rd,seis}$

$N_{Rd,seis}$ = minimum of $N_{Rd,p,seis}$, $N_{Rd,s,seis}$

Check $N^*/N_{Rd,seis} \le 1$,

if not satisfied return to step 1

EPCON™ C6 PLUS

STRENGTH LIMIT STATE DESIGN

AVAILABLE IN NEW ZEALAND ONLY

STEP 4

Step 4 - Verify seismic C1 cracked concrete edge shear resistance - per anchor

Table 4a - Seismic (C1) cracked concrete edge resistance, $V^0_{Rd,c,seis} = \alpha_{seis} V^0_{Rk,c,seis} / \gamma_{Mc}$ (kN), $\gamma_{Mc} = 1.5$, $\alpha_{seis} = 0.85$, $f'_c = 30$ MPa

Anchor size, d_b	M10	M12	M16	M20	M24	M30
Effective depth, h (mm)	90	110	125	170	210	280
Edge distance, e_m						
40	1.3	1.5	1.6			
50				2.5	2.8	
60						4.2

Note: Data includes annular gap reduction factor of 0.5.
For single anchor values: Multiply $V^0_{Rd,c,seis}$ * 1.17

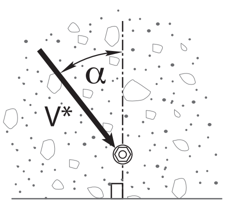
For optimised performance data, please use Ramset iExpert Anchoring Software.

Table 4b - Seismic cracked concrete compressive strength effect, shear, X_{vc}

f'c (MPa)	20	25	30	40	50
X_{vc}	0.82	0.91	1.00	1.15	1.29

Table 4c - Seismic cracked concrete load direction effect, concrete edge shear, X_{vd}

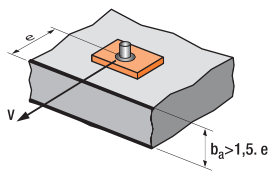
Angle, α°	0-55	60	70	80	90-180
X_{vd}	1	1.1	1.2	1.5	2



Load direction effect, conc. edge shear, X_{vd}

Table 4d - Seismic cracked concrete anchor spacing and edge distance effect, concrete edge shear, X_{ve}

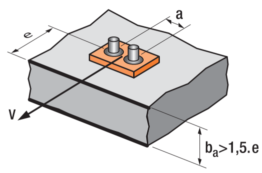
For single anchor fastening X_{ve}



$$X_{ve} = e/e_m * \sqrt{e/e_m}$$

e/e_m	1.0	1.2	1.4	1.6	1.8	2.0	2.2	2.4	2.6	2.8	3.0	3.2
X_{ve}	1.00	1.31	1.66	2.02	2.41	2.83	3.26	3.72	4.19	4.69	5.20	5.72

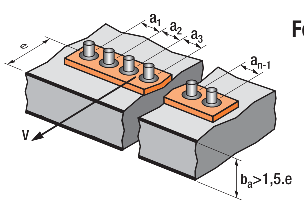
For 2 anchors fastening X_{ve}



$$X_{ve} = \frac{3*e+a}{6*e_m} * \sqrt{e/e_m}$$

e/e_m	1.0	1.2	1.4	1.6	1.8	2.0	2.2	2.4	2.6	2.8	3.0	3.2
a/e_m												
1.0	0.67	0.84	1.03	1.22	1.43	1.65	1.88	2.12	2.36	2.62	2.89	3.16
1.5	0.75	0.93	1.12	1.33	1.54	1.77	2.00	2.25	2.50	2.76	3.03	3.31
2.0	0.83	1.02	1.22	1.43	1.65	1.89	2.12	2.38	2.63	2.90	3.18	3.46
2.5	0.92	1.11	1.32	1.54	1.77	2.00	2.25	2.50	2.77	3.04	3.32	3.61
3.0	1.00	1.20	1.42	1.64	1.88	2.12	2.37	2.63	2.90	3.18	3.46	3.76
3.5		1.30	1.52	1.75	1.99	2.24	2.50	2.76	3.04	3.32	3.61	3.91
4.0			1.62	1.86	2.10	2.36	2.62	2.89	3.17	3.46	3.75	4.05
4.5				1.96	2.21	2.47	2.74	3.02	3.31	3.60	3.90	4.20
5.0					2.33	2.59	2.87	3.15	3.44	3.74	4.04	4.35
5.5						2.71	2.99	3.28	3.71	4.02	4.33	4.65
6.0						2.83	3.11	3.41	3.71	4.02	4.33	4.65

For 3 anchors fastening and more



$$X_{ve} = \frac{3*e + a_1 + a_2 + a_3 + ... + a_{n-1}}{3*n*e_m} * \sqrt{e/e_m}$$

EPCON™ C6 PLUS

STRENGTH LIMIT STATE DESIGN

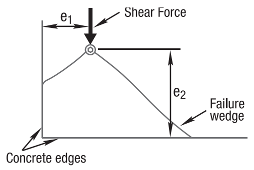
AVAILABLE IN NEW ZEALAND ONLY

Table 4e - Seismic (C1) Cracked concrete Pryout failure, $V^0_{Rd,cp,seis} = \alpha_{seis} V_{Rk,cp} / \gamma_{Mpr}$ (kN), $\gamma_{Mpr} = 1.5$, $\alpha_{seis} = 0.75$, $f'_c = 30$ Mpa

Anchor size, d_b	M10	M12	M16	M20	M24	M30
Effective depth, h (mm)	90	110	125	170	210	280
C1 Seismic Data	12.5	16.4	21.6	37.0	47.5	63.9

Note: Data includes annular gap reduction factor of 0.5

For single anchor values: Multiply $V^0_{Rd,cp,seis}$*1.13



ANCHOR AT A CORNER

Table 4f Anchor at a corner effect, concrete edge shear, X_{VS}

Note: For $e_1/e_2 > 1.25$, $X_{VS} = 1.0$

Edge distance, e_2 (mm)	25	30	35	50	60	75	125	200	300	400	600	900
Edge distance, e_1 (mm)												
25	0.86	0.77	0.70	0.58	0.53	0.49	0.41	0.37	0.35	0.34	0.32	0.32
30	0.97	0.86	0.78	0.64	0.58	0.52	0.43	0.38	0.36	0.34	0.33	0.32
35	1.00	0.95	0.86	0.69	0.63	0.56	0.46	0.40	0.37	0.35	0.33	0.32
50	1.00	1.00	1.00	0.86	0.77	0.67	0.52	0.44	0.39	0.37	0.35	0.33
60	1.00	1.00	1.00	0.97	0.86	0.75	0.57	0.47	0.41	0.38	0.36	0.34
75	1.00	1.00	1.00	1.00	1.00	0.86	0.64	0.51	0.44	0.41	0.37	0.35
125	1.00	1.00	1.00	1.00	1.00	1.00	0.86	0.65	0.53	0.48	0.42	0.38
200	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.86	0.67	0.58	0.49	0.42
300	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.86	0.72	0.58	0.49
400	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.86	0.67	0.55
500	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.77	0.61
600	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.86	0.67
900	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.86

Checkpoint 4a

Design seismic cracked concrete edge shear resistance, $V_{Rd,c,seis}$
$= V^0_{Rd,c,seis} * X_{vc} * X_{vd} * X_{ve} * X_{vs}$

Checkpoint 4b

Design seismic cracked concrete Pryout failure,
$V_{Rd,cp,seis} = V^0_{Rd,cp,seis} * X_{nc} * X_{ne} * X_{na}$

STEP 5

Verify seismic C1 cracked concrete shear resistance - per anchor

Table 5a - Seismic (C1) Cracked Concrete steel shear resistance, $V_{Rd,s,seis} = \alpha_{seis} V_{Rk,s,seis} / \gamma_{Ms}$ (kN), $\alpha_{seis} = 0.85$

$\gamma_{Ms} = 1.25$ for Grade 5.8 and Grade 8.8 Carbon Steel

$\gamma_{Ms} = 1.56$ for A4 316 Stainless Steel

$\gamma_{Ms} = 1.25$ for HCR 1.4529 Stainless Steel

Anchor size, db		C1 Seismic Data					
		M10	M12	M16	M20	M24	M30
Grade 5.8	Zinc Plated Steel	3.7	5.4	8.8	13.6	11.9	19.0
	Hot Dip Galv. Steel	1.8	2.6	4.8	7.3	10.5	16.8
Grade 8.8	Zinc Plated Steel	5.8	8.5	13.9	21.8	19.0	30.6
	Hot Dip Galv. Steel	2.7	4.0	7.5	11.8	16.8	26.9
A4 316	Stainless Steel	4.1	6.0	9.8	15.3	13.3	21.5
HCR 1.4529	Stainless Steel	5.1	7.5	12.2	19.0	16.7	26.9

Note: Data includes annular gap reduction factor of 0.5

For single anchor values: Multiply $V_{Rd,s,seis}$*1.17

Checkpoint 5

Design seismic C1 cracked concrete shear resistance, $V_{Rd,seis}$
$V_{Rd,seis}$ = minimum of $V_{Rd,c,seis}$, $V_{Rd,cp,seis}$, $V_{Rd,s,seis}$
Check $V^*/V_{Rd,seis} \leq 1$,
if not satisfied return to step 1

EPCON™ C6 PLUS

STRENGTH LIMIT STATE DESIGN

AVAILABLE IN NEW ZEALAND ONLY

STEP 6 Combined Loading

Checkpoint 6

Check

$N^*/N_{Rd,seis} + V^*/V_{Rd,seis} \leq 1.0$,

if not satisfied return to step 1

Specifiy - Threaded Stud Anchors

Ramset™ EPCON™ C6 PLUS with (Anchor Size) grade 5.8 ChemSet™ Anchor Stud (Anchor Stud Part Number) Drilled Hole Depth to be (h) mm.

Example

Ramset™ EPCON™ C6 PLUS Injection with M16 grade 5.8 ChemSet™ Anchor Stud (CS16190GH). Drilled hole depth to be 125mm. To be installed according to Ramset™ Installation Instructions.

Use Ramset™ iExpert Anchor Software for optimised calculation or where a greater range of anchor layout detail is needed.