

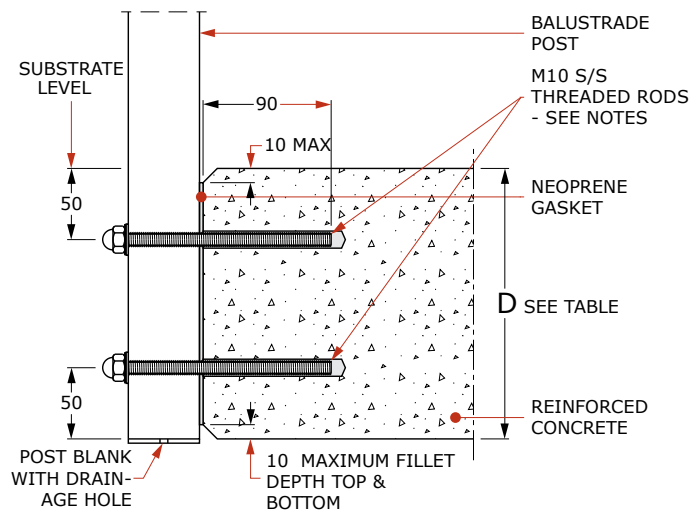
# FIXING SPECIFICATIONS

NZBAL-C12.0 | SPEC ID **FS.3S.19.03**

## CONCRETE - SIDE FIXING, EPOXY-SET ANCHORS

Refer to all notes on Pages 100 and 101 which shall apply to this specification and the relevant pages in Chapter 5 Installation Guides. Refer also to Chapter 2 for the Style Specification.

### APS & APE POST TYPES ONLY



1. Fixings shall be 10mm diameter 316 stainless steel threaded rod epoxied into the concrete substrate as shown using EPCON C6 epoxy.
2. Washers to be fitted under all stud dome nuts as follows
  - For 10mm studs - 21mm O.D. S/S washer (Part No. FW10-21) with a polymer washer (Part No. FWP10-22G) between the S/S and the aluminium.
3. A neoprene adhesive gasket shall be fixed to the post to prevent contact between the concrete and the aluminium post. Part No. SG36-12 for 40mm wide posts, SG42-12 for 50mm wide posts and SG50-12 for 60mm wide posts.
4. For details of anchoring studs to the substrate refer to General Notes Page 101 note 6.
5. Substrate design, including waterproofing, is beyond the scope of this specification and shall be carried out by others. Concrete shall have a 28 day Compressive Strength of 20MPa or more (as required for substrate design) and be adequately reinforced.



### MAXIMUM POST CENTRES 'S max' (metres) ALWAYS TAKE THE LESSER OF THE VALUE BELOW AND THE VALUE FROM THE STYLE SPECIFICATION

Height <sup>(3)</sup>	Post Type	'D' (See diagram)	LOADING CLASS <sup>(1)</sup>																			
			N07C/N07R								N03R	Not Preventing Fall										
			Design Wind Speed <sup>(3)</sup>									Design Wind Speed <sup>(3)</sup>										
			VH				EH					M	H			VH						
50	52	54	56	58	60	62	64	N/A	38	40	42	44	46	48	50	52	54	56				
<b>1.0</b>	APS	150	1	0.90	0.90	0.90	0.90	0.86	0.80	0.75	0.70	1.94	1.76	1.76	1.63	1.49	1.36	1.25	1.15	1.07	0.99	0.92
		170	2	1.13	1.13	1.13	1.13	1.08	1.01	0.95	0.89	2.40	2.21	2.21	2.06	1.88	1.72	1.58	1.46	1.35	1.25	1.16
		190	3	1.22	1.22	1.22	1.22	1.22	1.22	1.15	1.08	2.55	2.39	2.39	2.39	2.29	2.09	1.92	1.77	1.64	1.52	1.41
	APE	150	4	0.92	0.92	0.92	0.92	0.88	0.83	0.77	0.72	1.99	1.81	1.81	1.68	1.54	1.40	1.29	1.19	1.10	1.02	0.95
		170	5	1.15	1.15	1.15	1.15	1.12	1.04	0.98	0.92	2.45	2.26	2.26	2.13	1.94	1.78	1.63	1.50	1.39	1.29	1.20
		190	6	1.37	1.37	1.37	1.37	1.35	1.26	1.18	1.11	2.70	2.65	2.65	2.58	2.35	2.15	1.98	1.82	1.68	1.56	1.45
<b>1.1</b>	APS	150	7	0.83	0.83	0.82	0.76	0.71	0.66	0.62	0.58	1.78	1.62	1.50	1.36	1.24	1.13	1.04	0.96	0.88	0.82	0.76
		170	8	1.04	1.04	1.04	0.97	0.91	0.85	0.79	0.74	2.20	2.04	1.90	1.73	1.57	1.44	1.32	1.22	1.13	1.04	0.97
		190	9	1.12	1.12	1.12	1.12	1.10	1.03	0.96	0.90	2.35	2.18	2.18	2.10	1.91	1.75	1.60	1.48	1.37	1.27	1.18
	APE	150	10	0.85	0.85	0.85	0.79	0.74	0.69	0.65	0.61	1.82	1.66	1.56	1.41	1.28	1.18	1.08	1.00	0.92	0.85	0.79
		170	11	1.06	1.06	1.06	1.00	0.94	0.87	0.82	0.77	2.28	2.08	1.96	1.78	1.62	1.48	1.36	1.26	1.16	1.08	1.00
		190	12	1.26	1.26	1.26	1.21	1.13	1.06	0.99	0.93	2.55	2.47	2.38	2.15	1.96	1.80	1.65	1.52	1.41	1.30	1.21
<b>1.2</b>	APS	150	13	0.76	0.74	0.69	0.64	0.60	0.56	0.52	0.49	1.64	1.40	1.26	1.14	1.04	0.96	0.88	0.80	0.74	0.69	0.64
		170	14	0.96	0.95	0.88	0.82	0.76	0.71	0.67	0.63	2.05	1.78	1.60	1.46	1.33	1.22	1.12	1.03	0.95	0.88	0.82
		190	15	1.00	1.00	1.00	1.00	0.93	0.87	0.81	0.76	2.15	2.00	1.95	1.77	1.61	1.48	1.35	1.25	1.15	1.07	1.00
	APE	150	16	0.78	0.78	0.72	0.67	0.62	0.58	0.54	0.51	1.68	1.45	1.31	1.19	1.08	0.99	0.91	0.84	0.78	0.72	0.67
		170	17	0.98	0.98	0.91	0.84	0.79	0.74	0.69	0.65	2.10	1.84	1.66	1.50	1.37	1.25	1.15	1.06	0.98	0.91	0.84
		190	18	1.17	1.17	1.10	1.02	0.95	0.89	0.83	0.78	2.40	2.22	2.00	1.82	1.66	1.52	1.39	1.28	1.18	1.10	1.02

1. LOADING CLASS: Refer to Page 176 for the scope of the Loading Class designations.
2. HEIGHT 'H': is the overall height of the balustrade above the substrate level shown. Interpolate for Heights between those shown.
3. DESIGN WIND SPEED: in m/s, Refer to Pages 51 to 52 for details of applicable wind codes and the methods for determining the Design Wind Speed.

Specifications subject to change without notice