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CHARTERED VERIFIED ENGINEER

August | 2025 NZ

Reid™ SwiftLift™ Foot Anchors

Compliance Document

Reid™ SwiftLift™
NZ Good Practice Guide:
Safe Work with
Precast Concrete: 2018

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SwiftLift™ Foot Anchors

The SwiftLift™ system utilises a fully engineered approach combining cast-in lifting anchors, recess formers, and custom-fitting lifting clutches. Using the SwiftLift™ system results in fewer failures, saving time and costs due to damage or construction delays.

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NZ GPG 2018 Compliant

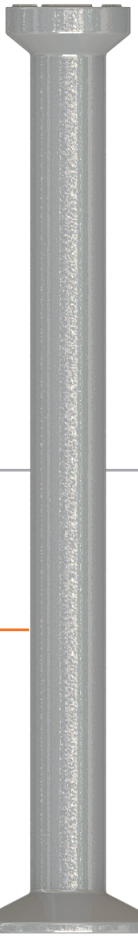
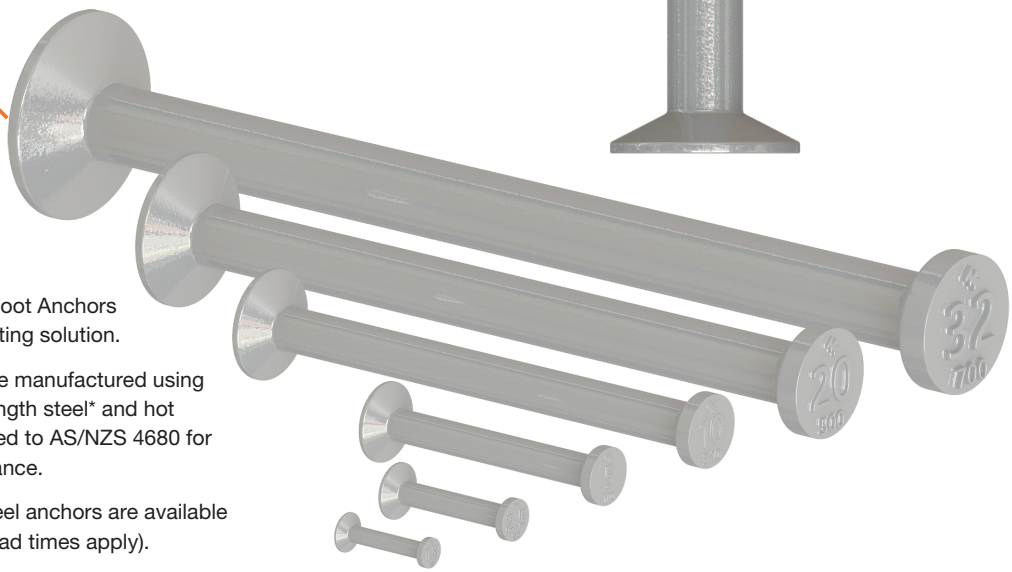


Figure 1:
Reid™ SwiftLift™ Foot Anchors

Foot Anchor size variations



- Reid SwifLift™ Foot Anchors are a versatile lifting solution.
- Foot Anchors are manufactured using forged high strength steel* and hot dipped galvanised to AS/NZS 4680 for corrosion resistance.
- 316 stainless steel anchors are available upon request (lead times apply).
- 1.3t & 2.5t foot anchors are manufactured from high tensile steel for added strength.

*Note: Factor of Safety (FoS) for high tensile steel is 4 which is significantly greater than the minimum requirement stipulated in NZ GPG 2018.

Compliance Details

Table I: NZ GPG 2018 Compliance Details

Clause	Requirement	Compliant
6.6	The minimum FOS for general lifting needs to be 3 and for repetitive lifting needs to be 5.0.	✓
6.6	The design of the Lifting anchor shall include the ductile behavior and robustness of the anchor.	✓
10.11	Lifting clutches are to be made in accordance with a valid international standard or technical reference.	✓
10.11	Every item of lifting equipment should be clearly and permanently marked with its WLL. A unique numbering system to clearly identify individual items should be used.	✓
10.11	Lifting clutches are to be tested for loads in all directions and initially tested by the supplier to a factor of safety of 2.0	✓
10.11	Inspected at least every 12 months by a competent person, and a record kept of those inspections.	✓

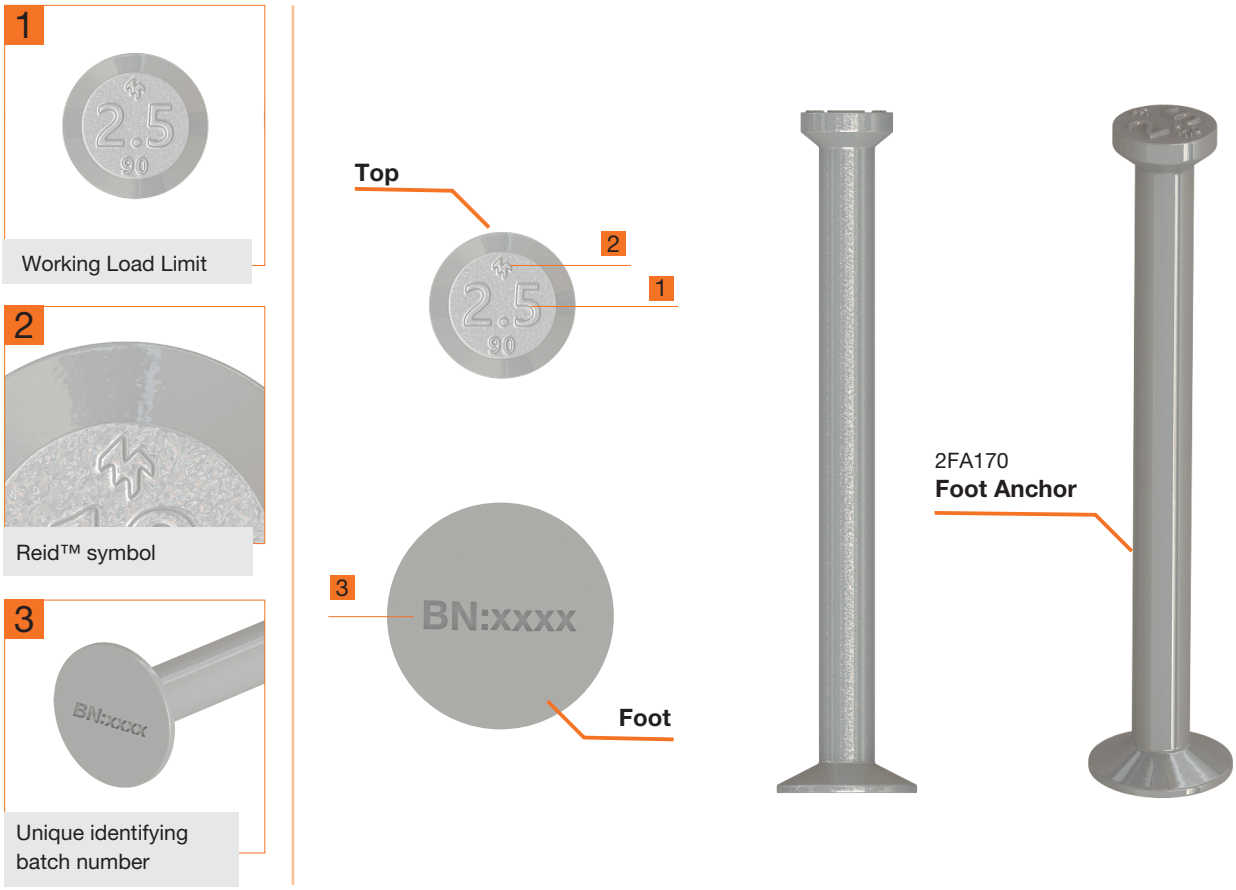
Reid™ SwiftLift™ Foot Anchors comply with NZ GPG 2018 ✓

Reid™ Foot Anchors

Consistent with the Reid™ commitment to local testing, SwiftLift™ Foot Anchors have been extensively tested in concrete comprising of over 500 individual tests, and consuming approximately 150 tonnes of concrete.

Analysis of the subsequent test data in accordance with AS3850.1:2015 Appendix A results in SwiftLift™ Foot Anchors having Working Load Limit capacities that are far higher and more accurate than those simply calculated using the CCD method.

Figure 2: Reid™ Foot Anchor Markings



Product Specifications

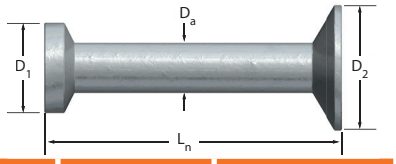


Table 2: Part Numbers & Anchor Dimensions (mm)

Part No.	Length L_n (mm)	Description	Shaft Diameter D_a (mm)	Head Diameter D_1 (mm)	Foot Diamter D_2 (mm)	Clutches	Void	Ring (if required)
		1.3 tonne WLL (Max)						
1FA035H	35mm	SwiftLift™ Foot Anchor - Hi-tensile	10	19	30	1LE	1RFRO 1SRFRO 1SRFROART	- 1RR -
1FA045H	45mm							
1FA055H	55mm							
1FA066H	66mm				25			
1FA085H	85mm							
1FA120H	120mm							
1FA240H	240mm							
		2.5 tonne WLL (Max)						
2FA055H	55mm	SwiftLift™ Foot Anchor - Hi-tensile	14	26	35	2LE	2RFRO 2SRFRO 2SRFROART 2PR	- 2RR - -
2FA065H	65mm							
2FA075H	75mm							
2FA090H	90mm							
2FA120H	120mm							
2FA170H	170mm							
		5 tonne WLL (Max)						
5FA065	65mm	SwiftLift™ Foot Anchor	20	36	50	5LE	5RFRO 5SRFRO 5SRFROART 5PR	- 5RR - -
5FA075	75mm							
5FA090	90mm							
5FA095	95mm							
5FA120	120mm							
5FA145	145mm							
5FA170	170mm							
5FA240	240mm							
5FA480	480mm							
		10 tonne WLL (Max)						
10FA120	120mm	SwiftLift™ Foot Anchor	28	47	70	10LE	10RFRO	-
10FA135	135mm							
10FA150	150mm							
10FA170	170mm							
10FA200	200mm							
10FA340	340mm							
		20 tonne WLL (Max)						
20FA200	200mm	SwiftLift™ Foot Anchor	38	70	98	20LE	20RFRO	-
20FA500	500mm							
		32 tonne WLL (Max)						
32FA700	700mm	SwiftLift™ Foot Anchor	50	88	135	32LE	32RFRO	-

Performance Data

Table 3: NZ GPG 2018 Tensile and Shear Performance Data (WLL), tonnes

Part No.	Concrete Compressive Strength, MPa							
	15	20	25	30	35	40	45	50
1FA035H	0.6	0.7	0.7	0.8	0.9	1.0	1.0	1.1
1FA045H	0.8	0.9	1.0	1.2	1.2	1.3	1.3	1.3
1FA055H	1.1	1.2	1.3	1.3	1.3	1.3	1.3	1.3
1FA066H	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
1FA085H	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
1FA120H	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
1FA240H	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
2FA055H	1.1	1.3	1.5	1.6	1.7	1.9	2.0	2.1
2FA065H	1.4	1.6	1.8	2.0	2.2	2.3	2.5	2.5
2FA075H	1.7	2.0	2.2	2.4	2.5	2.5	2.5	2.5
2FA090H	2.1	2.4	2.5	2.5	2.5	2.5	2.5	2.5
2FA120H	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
2FA170H	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
5FA065	1.4	1.6	1.8	2.0	2.2	2.3	2.5	2.6
5FA075	1.7	2.0	2.2	2.4	2.6	2.8	3	3.2
5FA090	2.1	2.5	2.8	3.1	3.4	3.7	4.0	4.3
5FA095	2.4	2.7	3.1	3.5	3.9	4.3	4.6	5.0
5FA120	3.4	4.1	4.8	5.0	5.0	5.0	5.0	5.0
5FA145	4.8	5.0	5.0	5.0	5.0	5.0	5.0	5.0
5FA170	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
5FA240	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
5FA480	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
10FA120	3.4	4.1	4.8	5.4	6.0	6.6	7.1	7.6
10FA135	4.2	5.1	6.0	6.7	7.5	8.2	8.9	9.5
10FA150	5.2	6.3	7.3	8.2	9.1	10.0	10.0	10.0
10FA170	6.5	7.9	9.2	10.0	10.0	10.0	10.0	10.0
10FA200	8.9	10.0	10.0	10.0	10.0	10.0	10.0	10.0
10FA340	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
20FA200	8.9	10.0	10.6	12.0	12.5	13.4	14.2	15.0
20FA500	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
32FA700	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0

Lead time applies on any 316 Stainless Steel anchors requests. Capacities highlighted in orange are limited by the system capacity.

Figure 3: Foot Anchor tested close to an edge.

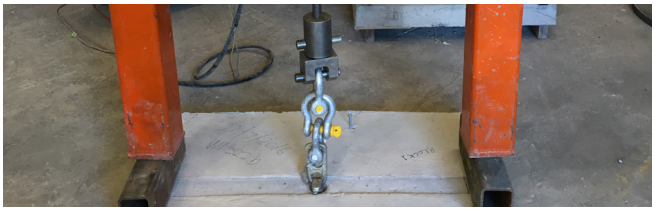


Figure 4: Foot Anchor tested in tension.

TESTED TO LOCAL CONDITIONS

Product Specifications (mm)

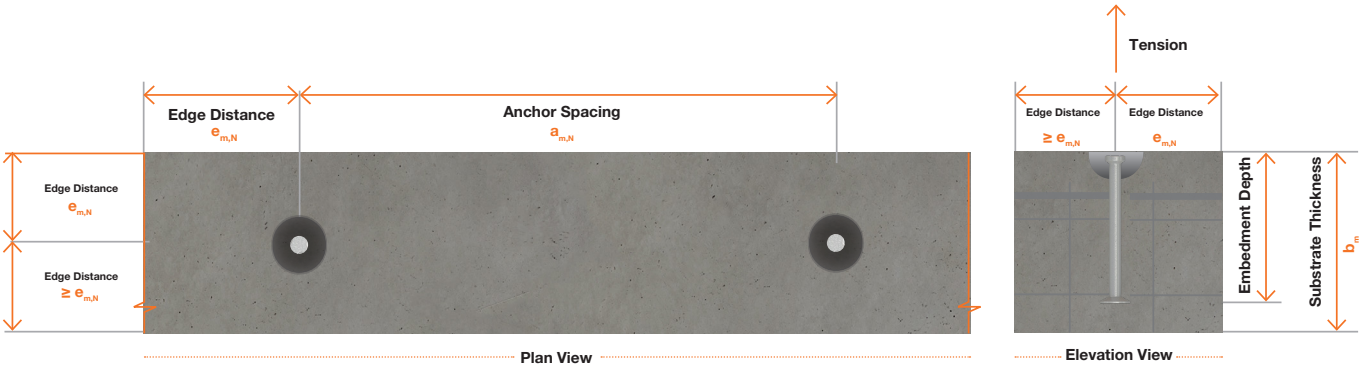


Table 4:

Optimal edge and spacing distances required to achieve tensile performances in Table 3

Anchor Length L (mm)	35	55	75	120	150	170	200	340	500	700
Embedment Depth h_{of} (mm)*	42	62	85	130	160	180	210	350	510	715
Edge Distance, tension $e_{m,N}$ (mm)	126	186	255	390	480	540	630	1050	1530	2145
Anchor Spacing, tension $a_{m,N}$ (mm)	252	372	510	780	960	1080	1260	2100	3060	4290

Note: Substrate Thickness (b_m) should be greater than the embedment depth with allowance for adequate concrete cover.

Product Specifications (mm)

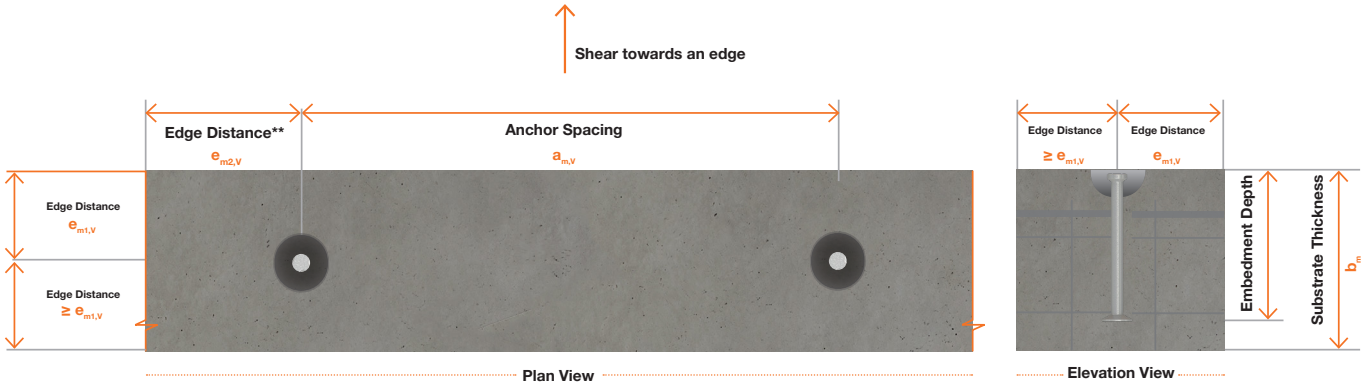


Table 5a:

When applied load is towards an edge, refer below table for edge and spacing distances to achieve shear performances in table 3

Optimal dimensions	Substrate Thickness - b_m (mm)	Typical Foot Anchor Part Numbers***							
		1FA055H	1FA085H	2FA090H	2FA120H	5FA120	5FA170	10FA150	10FA170
Edge Distance, shear $e_{m1,V}$ (mm)*	125	250	300	500	N/A	N/A	N/A	N/A	N/A
	150	200	250	400	400	600	N/A	N/A	N/A
	200	150	170	300	300	540	600	850	950
Anchor Spacing, shear $a_{m,V}$ (mm)*	125	700	850	1320	N/A	N/A	N/A	N/A	N/A
	150	640	720	1200	1330	1900	N/A	N/A	N/A
	200	600	690	900	1050	1360	2180	2000	2600

***Note:** The optimal dimensions stated are based on achieving the corresponding WLL stated in Table 3 of this document which assumes unreinforced concrete. The edge distance and spacing may be further reduced with the consideration of reinforcement of which the details need to be checked and approved by an experienced engineer.

****Note:** Edge distance $e_{m2,V}$ at end of row is half the anchor spacing (i.e. $a_{m,V}/2$)

*****Note:** For optimal dimensions on other Foot Anchor Part Numbers, please refer to guide in Table 5b

Product Specifications (mm)

Table 5b:
Optimal dimensions guide to achieve shear toward an edge performance in Table 3

Optimal dimensions	Substrate Thickness - b_m (mm) **					
	L=80-100	L=125	L=150-175	L=200		L=300
	Load Group Range - 1.3t to 5t			1.3t to 5t	10t	1.3t to 10t
Edge Distance, shear $e_{m1,V}$ (mm)*	7 x L	6 x L	5 x L	5 x L	6 x L	6 x L
Edge Distance, shear $e_{m2,V}$ (mm)*	9 x L	8 x L	8 x L	6.5 x L	7.5 x L	7 x L
Anchor Spacing, shear $a_{m,V}$ (mm)*	14 x L	14 x L	14 x L	14 x L	14 x L	14 x L

*** Note:** L = Total Length of Foot Anchor(mm)

The optimal dimensions stated are based on achieving the corresponding WLL stated in Table 3 of this document which assumes unreinforced concrete. The edge distance and spacing may be further reduced with the consideration of reinforcement of which the details need to be checked and approved by an experienced engineer.

****Note:** Ensure the anchor length selected is suitable for the corresponding substrate thickness. Please contact the Reid™ Engineering Team for further information.

For optimized edge distance and anchor spacing design, please contact the Reid™ Engineering Team.

Miniumum concrete strength must be 15 MPa.

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Reid™ undertake strict quality control processes to ensure performance specifications and metallurgical properties are maintained.

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