



**COMPLIANT**

Safe work with precast concrete

GPG October 2018



January 2020

**Ancon**<sup>®</sup>

**Unilift Lifting Systems**

for the Precast Concrete Industry



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# Unilift Lifting Systems



## Unilift Systems

Unilift is the ideal lifting and handling system for a wide variety of precast concrete products, particularly in civil engineering applications. The system is typically used for lifting panels, pipes, pits, manholes, road barriers, bridge beams, planks, sound walls, culverts etc.

The Ancon Unilift Lifting System consists of a range of lifting anchors, clutches and recess formers used for the safe, fast and efficient handling of a wide range of precast concrete items during manufacture, transport and installation. Unilift components are available in 6 load classes with working loads reaching from 1.3t - 32t.

Unilift CA Cone Anchors and Unilift RA Reo Anchors are forged headed anchors that are cast into the concrete. Recess formers create a spherical recess around the anchor head. Unilift LK Locking Klaws engage with the anchor head and transfer the lifting loads safely into the anchor. Unilift components of different load groups are not interchangeable for maximum safety.

### Locking Klaw

*Safety clutch which locks to the anchor head*

### Anchor

*Forged anchor set below the concrete surface*

### Recess

*Formed in the concrete by a recess former to permit attachment of the Locking Klaw to the anchor head.*

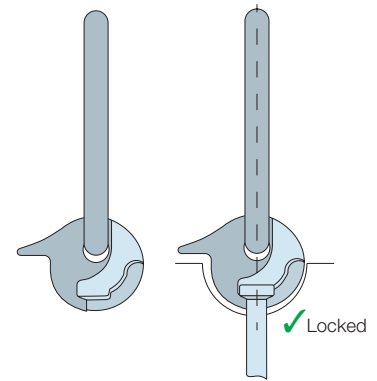


- ✓ Locking Klaw can be connected with the tail towards the load and the tail away from the load preventing unsafe situations caused by mis-engagement.
- ✓ Standard load classes of 1.3, 2.5, 5, 10, 20 and 32 tonnes available.
- ✓ Fast, efficient handling of products in the factory, during transport and on the job-site.
- ✓ Unique, patented design of the Unilift Locking Klaw prevents disconnection between clutch and anchor.
- ✓ Easy to train operators how to use the system with minimal supervision.
- ✓ Components of different load groups are not interchangeable for maximum safety.
- ✓ Unilift Locking Klaws and Anchors conform to WorkSafe NZ Good Practice Guidelines: Safe Work with Precast Concrete (Oct 2018).
- ✓ Anchors are hot-dip galvanised for superior corrosion resistance.

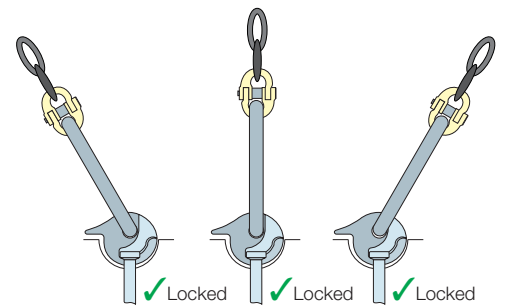
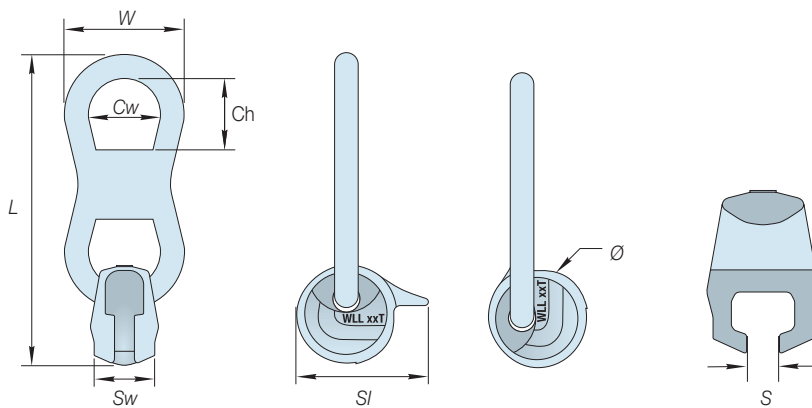
## Unilift Locking Claw

These strong, safe, lightweight clutches suit all spherical head lifting anchors. They protect against dangerous disconnection where there is a risk of fouling, which is a common problem when lowering precast drainage products into confined spaces like trenches.

Unilift Locking Claws are the strongest clutches on the market. Their capacity exceeds the factor of safety of 5.0, as required by the WorkSafe NZ Good Practice Guidelines: Safe Work with Precast Concrete.



Locking Well interlocks with the Anchor Head



Unique design ensures safe engagement for all load directions

### Working Load Limits

WLL	Annual Proof Load kN	Nominal WLL Anchor	Part Code
2	24	1.3	01LK
3	36	2.5	02LK
5	60	5	05LK
10	120	10	10LK
20	240	20	20LK
32	384	32	32LC*

### Part Codes and Nominal Dimensions

Part Code	Dimensions (mm)							
	L	W	Ch	Cw	Sw	SI	Ø	S
01LK	170	66	44	40	33	72	56	11
02LK	215	85	59	52	42	88	68	16
05LK	270	110	62	70	57	113	88	22
10LK	365	145	83	90	73	144	112	31
20LK	515	210	103	130	110	195	152	43
32LC*	680	272	189	172	160	300	180	52

\* Halfen clutches carry a CE mark, more information is available on request.



A 5 tonne remote release Locking Claw is also available which is ideal for tilt-up construction.

### Product Description

5 Tonne Remote Release

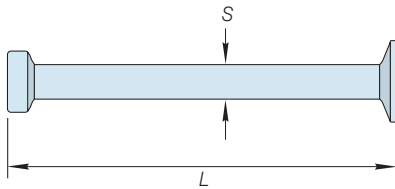
### Part Code

05LKRR

# Unilift Lifting Systems

## Cone Anchors

This classic spherical-headed, forged foot anchors are the first choice for most applications. They are manufactured from hot-dip galvanised, forged, high impact strength construction steel. Genuine Unilift anchors are stamped with a 'U' on the head, as well as load class and length.



### Part Codes, Dimensions and Pack Size

Load Class (Tonnes)	Dimensions (mm)		LK Locking Claw	Part Code	Quantity per Bag
	L	S			
1.3	35	10	01LK	CA01035	200
	45	10	01LK	CA01045	200
	55	10	01LK	CA01055	200
	65	10	01LK	CA01065	200
	85	10	01LK	CA01085	100
	120	10	01LK	CA01120*	100
	240	10	01LK	CA01240	50
2.5	55	14	02LK	CA02055	100
	75	14	02LK	CA02075	100
	85	14	02LK	CA02085*	50
	120	14	02LK	CA02120*	50
	170	14	02LK	CA02170*	25
	280	14	02LK	CA02280	25
	5.0	75	20	05LK	CA05075
95		20	05LK	CA05095	50
120		20	05LK	CA05120*	25
150		20	05LK	CA05150	25
170		20	05LK	CA05170*	25
240		20	05LK	CA05240*	20
340		20	05LK	CA05340	10
10.0	960	20	05LK	CA05960	1
	150	28	10LK	CA10150*	10
	200	28	10LK	CA10200*	10
20.0	340	28	10LK	CA10340*	5
	200	39	20LK	CA20200*	1
	340	39	20LK	CA20340*	1
32.0	500	39	20LK	CA20500	1
	500	50	32LC	CA32500	1
	700	50	32LC	CA32700	1

\* Type 316 stainless steel anchors in stock, other sizes on request.



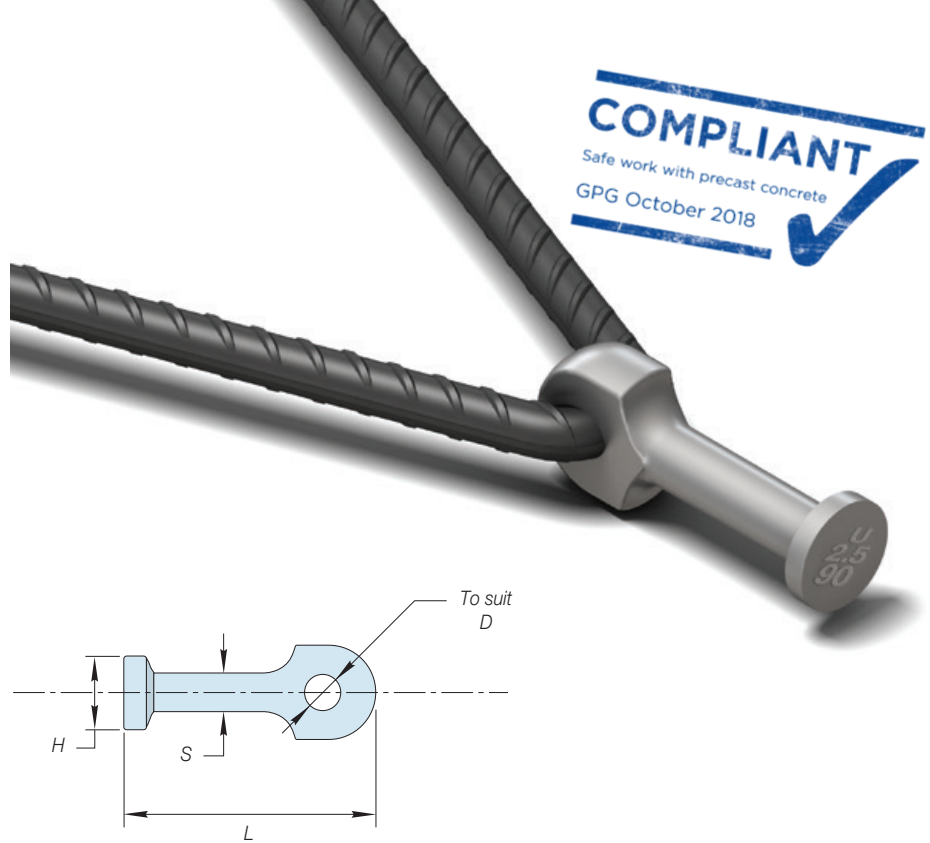


## Unilift RA Reo (Eye) Anchors

Unilift RA Reo Anchors are used with a hanger bar, also known as a tension bar, where the concrete is too weak for a cone anchor. They are ideal for thin panels and other applications where the concrete cone developed by traditional foot anchors is insufficient to provide the working load limit of the anchor.

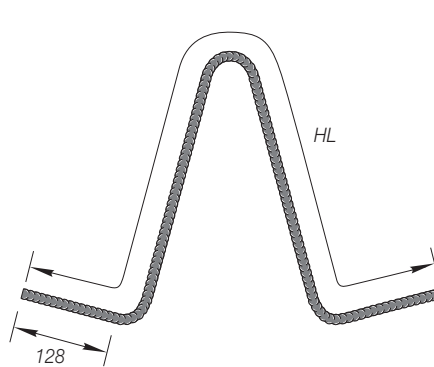
The bar is threaded through the hole in the anchor and embedded deep in the concrete. Like Unilift CA Cone Anchors they are manufactured from hot-dip galvanised, forged, high impact strength construction steel, and are stamped with a Unilift 'U', the load class and length.

The cut lengths for the hanger bar given in the table are suitable for 15MPa concrete to NZS 3101.

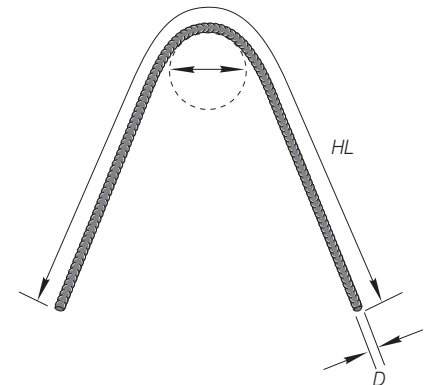


Load Class (Tonnes)	Dimensions (mm)			HL	Part Code	Quantity per Bag
	L	S	D			
1.3	50	10	R8	1350*	RA01050	200
	65	10	R8	1350*	RA01065	200
2.5	65	14	H12	1130	RA02065	100
	90	14	H12	1130	RA02090	100
5.0	120	20	H16	1510	RA05120	25
10.0	180	28	H20	1880	RA10180	10
20.0	250	39	H32	3050	RA20250	1
32.0	300	50	H40	3810	RA32300	1

\*according to NZS 3101 plain bars must be developed through hooks



R8 hanger bar with hooks for 1.3t RA anchors

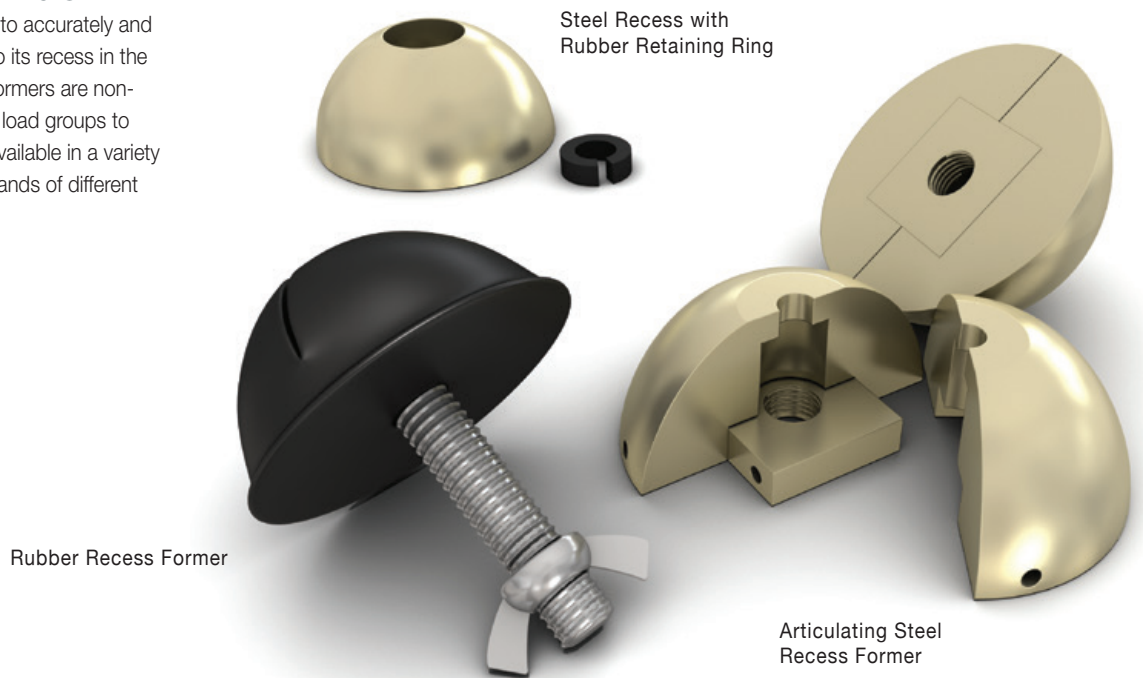


Hanger bar from deformed reinforcement steel

# Unilift Lifting Systems

## Unilift Recess Formers

These products are used to accurately and reliably set the anchor into its recess in the concrete panel. Recess formers are non-interchangeable between load groups to minimise errors and are available in a variety of types to meet the demands of different applications.



### Rubber Recess Former

Our most economical recess former, used for a wide variety of applications. Made from a hard, yet flexible, oil resistant rubber, they are ideal for attachment to steel and timber forms as well as floats for top surface installation. Supplied complete with attachment bolt and wing nut.

Unilift / Anchor WLL (Tonne)	Diameter (mm)	Part Code
1.3	66	RRF01
2.5	80	RRF02
5	100	RRF05
10	128	RRF10
20	170	RRF20
32	236	RRF32

### Steel Recess with Rubber Retaining Ring

Featuring a replaceable rubber retaining ring, these steel recess formers offer a long service life and are an economical alternative to rubber recesses for production precasting.

Unilift / Anchor WLL (Tonne)	Diameter (mm)	Recess Part Code	Ring Part Code
1.3	60	SRF01	RR01
2.5	74	SRF02	RR02
5.0	94	SRF05	RR05
10.0	130	SRF10	RR10

### Articulated Steel Recess Former

These products are similar in action to the semi-spherical rubber recess, but are manufactured from steel, offering a long service life for production precasting.

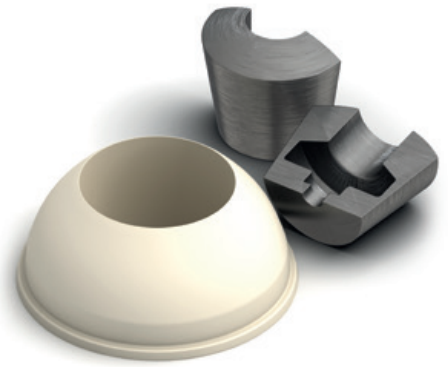
Unilift / Anchor WLL (Tonne)	Diameter (mm)	Part Code
1.3	60	SRF01A
2.5	74	SRF02A
5.0	94	SRF05A
10.0	130	SRF10A



### Plastic Recess Former with Steel Collets

These recess formers are manufactured from a hard, oil resistant plastic, providing a long service life and economical alternative to rubber recesses for production precasting.

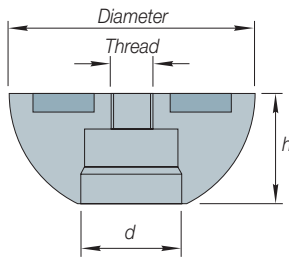
Unilift / Anchor WLL (Tonne)	Diameter (mm)	Part Code
10	130	PRFC10
20	175	PRFC20



Plastic Recess Former with Steel Collets

### Halfen Magnetic Recess Formers

These magnetic recess formers are used in metal formwork when drilling is not an option.



Unilift / Anchor WLL (Tonne)	Part Code	Diameter (mm)	h (mm)	Thread	d (mm)
1.3	SRFM01	60	27.5	M8	20.5
2.5	SRFM02	74	33	M12	30
5.0	SRFM05	94	42	M12	38
10.0	SRFM10	118	53	M12	48



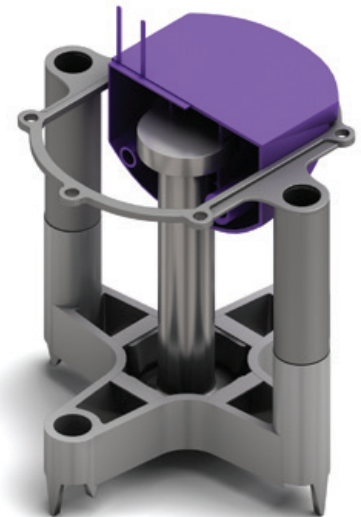
Halfen Magnetic Recess Formers

### Tilt-Up Site Cast Lifting Systems

These systems use the forged steel Unilift 5 tonne anchor and can be used with the remote release 5 tonne QwikTilt Klaw for maximum efficiency on site.

#### QwikTilt Face Lift Anchor Sets

The anchor is housed in a robust plastic chair with four stable legs and several tie-in points on the ring to prevent movement during casting. There is no requirement for a cross bar. They are available from stock, in pre-packed cartons, to suit the most popular panel thickness i.e. 125, 150, 170, 175, 200, 250mm. Units to suit other panel thicknesses are available on request.



Panel Thickness (mm)	Anchor Length (mm)	Embedment Depth $h_{eff}$ (mm)	Part Code	Quantity per Box
100	75	86	FLA05100	40
125	95	106	FLA05125	40
150			FLA05150	40
170	120	131	FLA05170	30
175			FLA05175	30
200			FLA05200	25
250	150	161	FLA05250	-

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