

# Modulift®

working between the hook and the load

Spreader Beams • Lifting Beams • Lifting and Spreader Frames

---



Off-the-shelf Products

# Modulift: Working Between the Hook and the Load

## Our Vision

To be renowned globally as specialist engineers operating in a niche market, concentrating on the provision of custom and complex lifting solutions and exceeding our customers expectations by providing an all round service on the delivery of value for money and quality products.

## Our Mission

To globally deliver our expertise through innovative designs of quality products and customer satisfaction whilst ensuring a safe lifting environment.

## Our Values

- Leadership: Driving the standard of lifting products higher
- Passion: Committed to delivering high quality products and ensuring safety comes first
- Innovation: Inspiring engineering genius
- Quality: We do what we do well

At Modulift, we pride ourselves on being able to offer you a complete lifting engineering service from start to finish. We are here to help you solve your lifting problems, advise on rig planning, design custom lifting equipment, or manufacture quality assured products to the highest specifications.



\*MOD and CMOD are trademarks of Modulift UK Ltd

### Standard Off-the-Shelf Range

### Heavy Off-the-Shelf Range

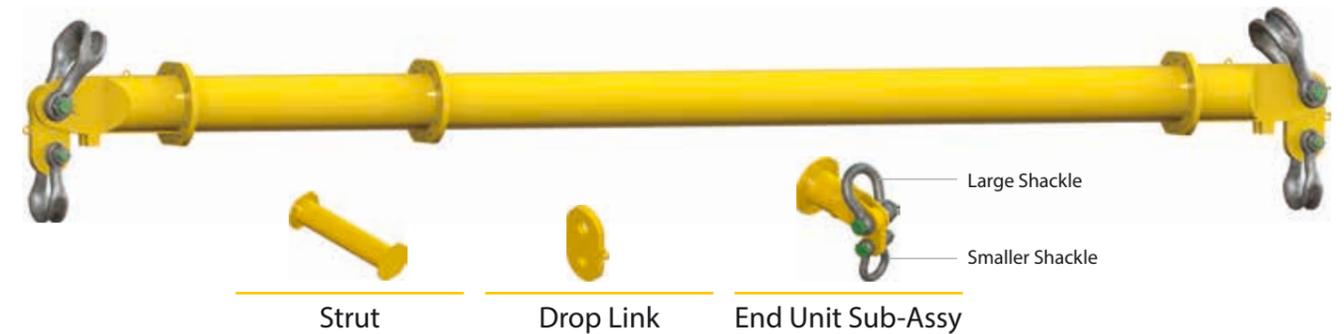
<b>QJ2</b> Up to 2t at 1.2m/4ft	<b>MOD 34</b> Up to 34t at 6m/19ft Up to 10m/32ft at a lower capacity.	<b>MOD 110</b> Up to 110 t at 14m/46ft Up to 18m/59ft at a lower capacity	<b>MOD 250/300</b> Up to 300t at 13m/40ft Up to 21m/68ft at a lower capacity.	<b>MOD 400/600</b> Up to 600t at 14m/46ft Up to 24m/78ft at a lower capacity.
<b>MOD 6</b> Up to 6t at 3.6m/148" Up to 4.5m/176" at a lower capacity.	<b>MOD 50</b> Up to 50t at 8m/26ft Up to 13m/42ft at a lower capacity.	<b>MOD 110H</b> Up to 170t at 11.5m/37ft Up to 18m/59ft at a lower capacity.	<b>MOD 250/400</b> Up to 400t at 11m/36ft Up to 21m/68ft at a lower capacity.	<b>MOD 600/600</b> Up to 600t at 21m/70ft Up to 26m/85ft at a lower capacity.
<b>MOD 12</b> Up to 12t at 4.75m/15ft Up to 6.5m/21ft at a lower capacity	<b>MOD 70</b> Up to 70t at 10.5m/34ft Up to 14m/45ft at a lower capacity.	<b>MOD 110SH</b> Up to 240t at 10.5m/34ft Up to 17m/55ft at a lower capacity.	<b>MOD 400/400</b> Up to 400t at 17m/58ft Up to 24m/78ft at a lower capacity.	<b>MOD 600/800</b> Up to 800t at 18m/60ft Up to 26m/85ft at a lower capacity
<b>MOD 24</b> Up to 24t at 5m/17ft Up to 8m/26ft at a lower capacity.	<b>MOD 70H</b> Up to 100t at 8.5m/28ft Up to 14m/45ft at a lower capacity.	<b>MOD 250/250</b> Up to 250t at 14m/46ft Up to 21m/68ft at a lower capacity.	<b>MOD 400/500</b> Up to 500t at 15m/50ft Up to 24m/78ft at a lower capacity.	<b>MOD 600/1000</b> Up to 1000t at 15m/50ft and up to 26m/85ft at a lower capacity.

# Modular Spreader Beams

Modular Spreader Beams provide the ideal solution for most lifting requirements – versatile and cost-effective, the Modulift range has capacity from 2t to 5000t with spans up to 100m/330'. The modular configuration and interchangeable components enable Modulift Spreaders to be reused over many lifts. Designed by our engineering experts and manufactured in our own specialist facilities; the Modulift range are the leading Modular Spreader Beams on the market.

Spreader Beams up to 600t are in stock and available worldwide for distribution – please contact Modulift for an immediate quote or further details.

Every Modulift Modular Spreader Beam consists of a pair of End Units and a pair of Drop Links, with interchangeable struts that can be bolted into the assembly between the End Units to either lengthen or shorten the beam to suit the requirements of the lift, making them reusable at different spans.

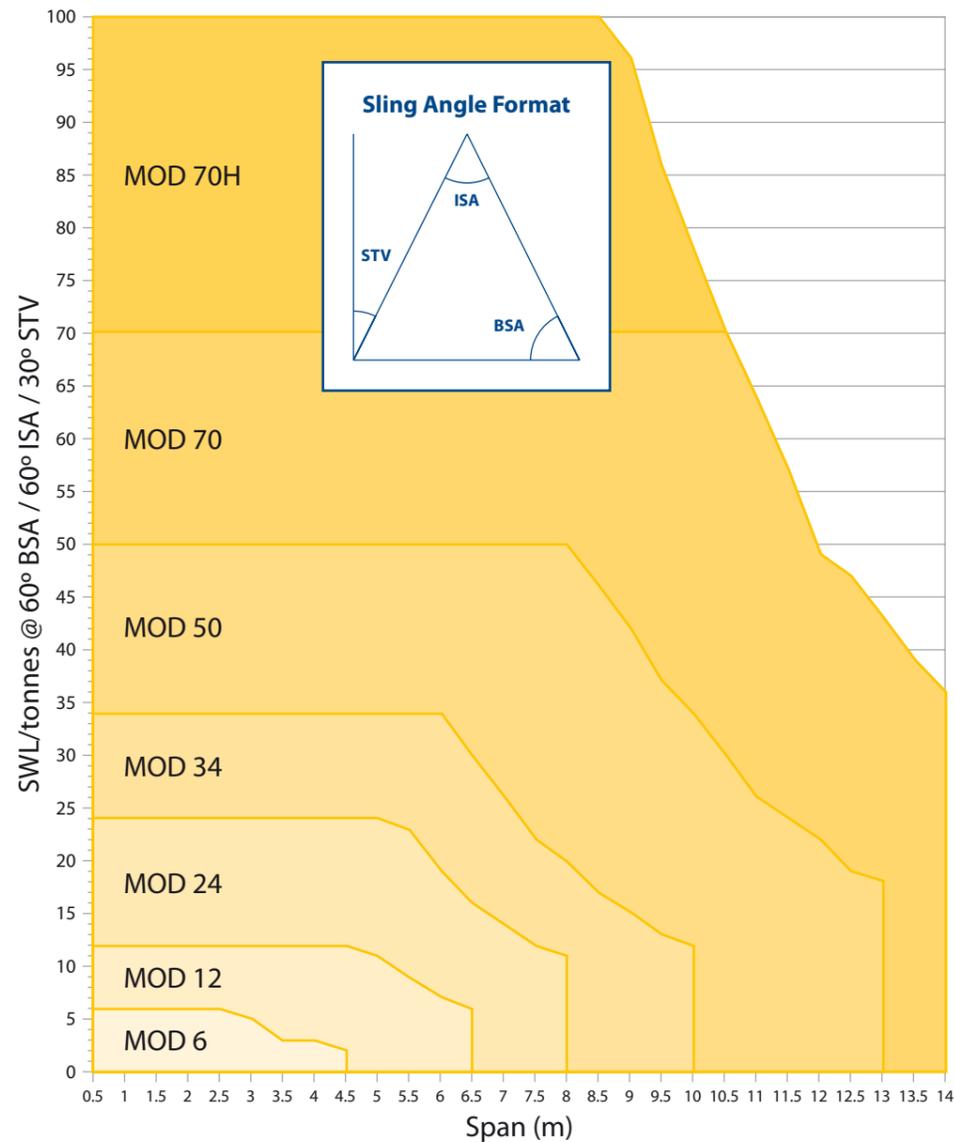


## Why are Modulift the leading global Spreader Beam designer and manufacturer in the Market?

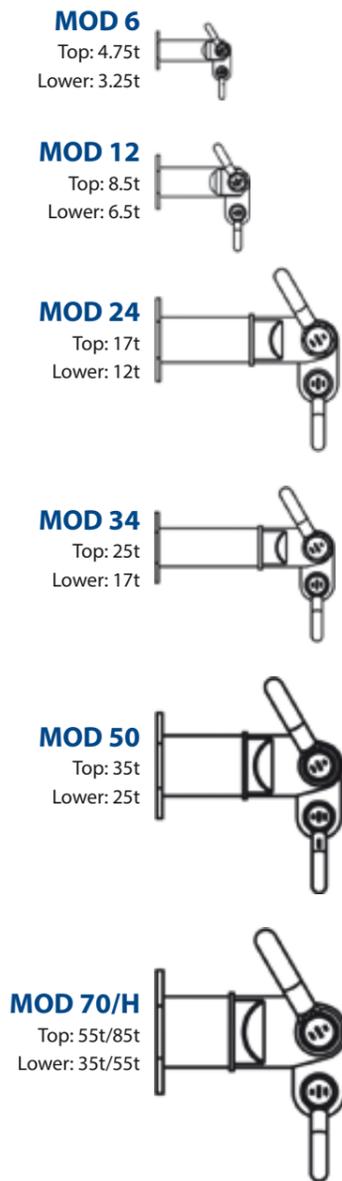
<b>Quality Engineering</b>	Modulift are a team of specialist engineers designing innovative products to optimum specification to ensure a safe lifting environment around the world.
<b>Stock Holding Distributors</b>	Modulift has over 20 stock holding distributors strategically located worldwide allowing you to purchase certified Spreader Beams or components wherever your project is.
<b>Standards and Regulations</b>	Conforming with all international standards, Modulift Spreader Beams are certified wherever you are working.
<b>DNV Type Approval</b>	Modulift Spreader Beams have DNV Type Approval up to 1500t eliminating the need for costly proof load testing.
<b>Interchangeable</b>	The modular design allows for multiple lengths to be configured for a variety of lifts. Mix and match end units with struts when long spans and lightweight lifts are required.
<b>Economical</b>	One Modulift Spreader Beam can be used over and over again for years.
<b>Portable</b>	Our longest strut is only 6m/20' – small enough for the back of a truck! Many of our Spreader Beam components can be handled by one person. Our QJ2 even comes in a handy carrying case complete with Shackles!
<b>Lightweight</b>	Our Spreader Beams are specially designed to provide you with a lightweight solution so your cranes can work at maximum capacity without the weight of heavy lifting gear.
<b>Custom Applications</b>	Have one of our engineers custom design a Spreader Beam for virtually any lift. Please ask a member of our team about this service.

# The Standard Range

Load v Span Chart - Modulift Spreader Beam Standard Range



What size shackle do I need?



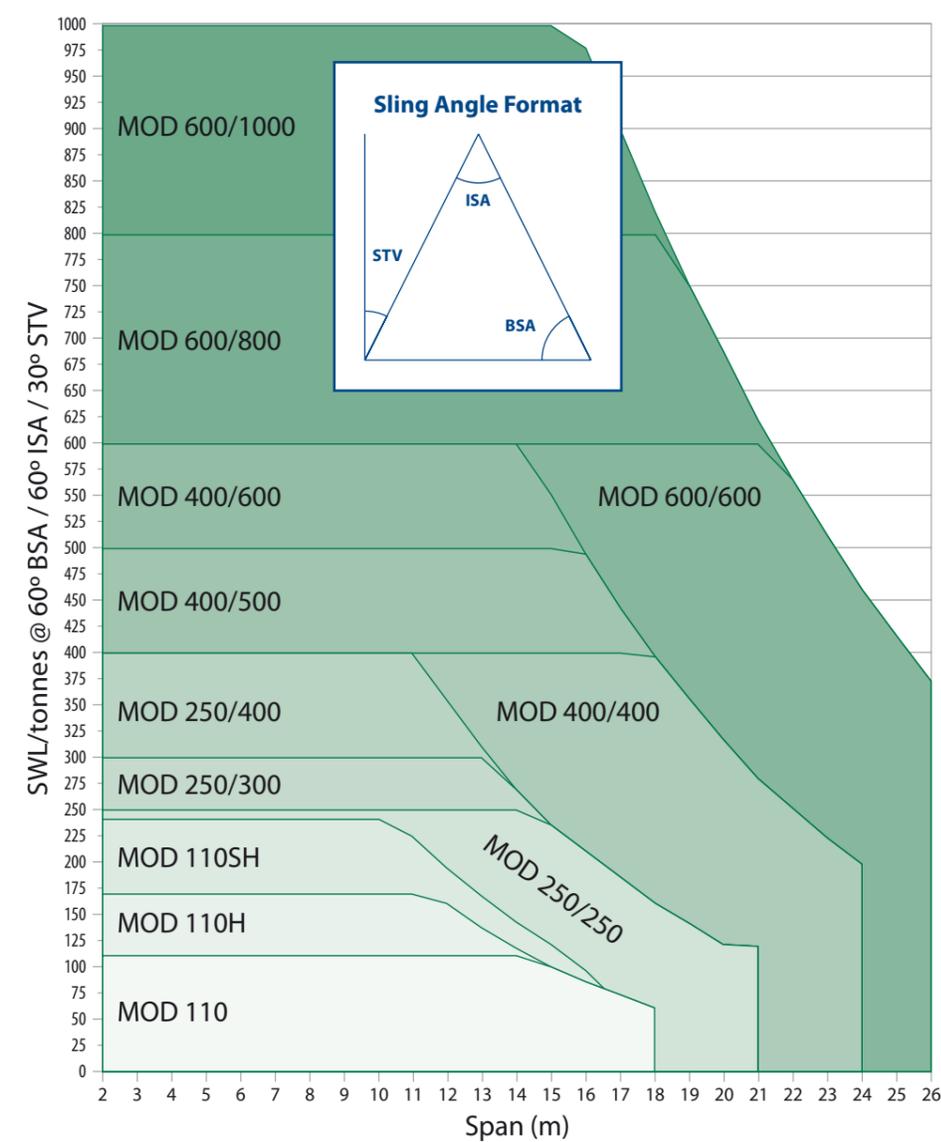
## Components per Set

\* Please note: Custom length Struts are available on request

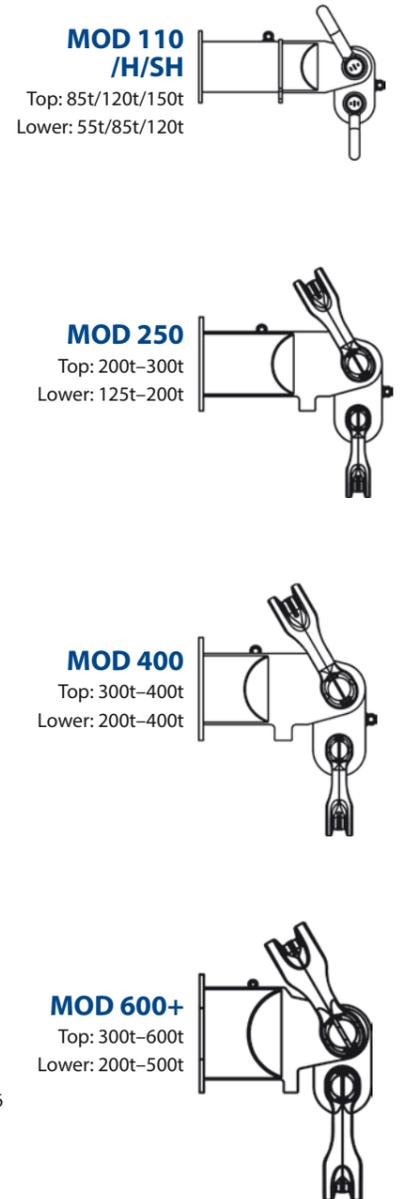
Spreader System	Strut													End unit	Drop link
	0.1m	0.2m	0.25m	0.3m	0.5m	0.6m	0.75m	1.0m	1.5m	2.0m	3.0m	4.0m	6.0m		
MOD 6	1	1	1	1	1	1	4							2	2
MOD 12			1	1	1	1	1	3						2	2
MOD 24				1	1	1	3							2	2
MOD 34				1	1	1	4							2	2
MOD 50				1	1	2	1	2						2	2
MOD 70/70H				1	1	2	2	2						2	2
MOD 110/110H				1	1	2	3							2	2
MOD 110SH				1	1	1	3							2	2
MOD 250-250 / 250-300 / 250-400				1	1	2	1	2						2	2
MOD 400-400 / 400-500 / 400-600				1	1	1	1	3						2	2
MOD 600-600 / 600-800 / 600-1000				1	1	1	1	3						2	2

# The Heavy Range

Load v Span Chart - Modulift Spreader Beam Heavy Range



What size shackle do I need?



## Weight per Set (kgs)

\* Weight based on heaviest spreader in series using configuration recommended in user instructions

Weight	MOD 6	MOD 12	MOD 24	MOD 34	MOD 50	MOD 70, 70H	MOD 110, 110H	MOD 110SH	MOD 250	MOD 400	MOD 600
Max. Component Weight	8.1	19	41	51	140	240	367	444	860	1365	2665
Min. Component Weight	0.6	1.3	5	7	11	17 / 32	44 / 55	63	90	135	135
Weight at Max. Span	32	75	178	290	532	972/1090	1970/2130	2628	4895	8260	17260

# Load Monitoring Spreader Beam

**Modulift has produced the WORLDS FIRST load monitoring Spreader Beam, with an integrated loadcell (Active Link) giving you instant wireless data logging!**

The innovative Active Link provides wireless real time data by measuring the load at either end of the spreader beam and is ideal for both weighing and dynamic load monitoring. Data is transmitted wirelessly to a USB transceiver that must be connected to a Windows computer or tablet with a spare USB port.

The Active Link, which replaces the standard drop link component, offers myriad time, cost and weight advantages. Existing valued customers can purchase the drop link separately and benefit from measurement technology that doesn't have to be sourced as an additional rigging tool. Another standout feature is that the height of rigging is significantly reduced, especially beneficial in low headroom applications.

The Active Link is available in a range of capacities up to 100t based on standard Modulift beam sizes from MOD 12 to MOD 70H; the initial range will be AL 12, AL 24, AL 34, AL 50, AL 70 and AL 70H.



## System Benefits

- Reduce your rigging and the weight
- Simplified integrated load equalisation capability
- No more overloading shackles and slings
- Compatible with existing spreader beams
- Saving you time and money on rigging

### Global Specification: Active Link

Part Number	AL12	AL24	AL34	AL50	AL70	AL70H
Capacity	6te	12te	17te	25te	35te	50te
Resolution	0.001te	0.002te	0.005te	0.005te	0.005te	0.01te
Weight	3kg	6.1kg	8.3kg	10kg	14.4kg	29kg
Safety factor	500%					
Battery type	4 x AA					
Battery life	1200 hours continuous					
Operating temp.	-10 to +50°C					
Accuracy	+/-0.3% of applied load					
Frequency	2.4GHz					
Range	700 metres					
Data rate	3Hz up to 200Hz can be ordered for dynamic load monitoring applications					
Protection	IP67					

# CMOD Spreader Frames

**Modulift's CMOD Spreader Frame works with existing struts from the Spreader Beam Range!**



**Spreader Frames are recommended for loads that have more than two lifting points; they can also be the ideal lifting equipment for when headroom is limited.**

Modulift's most economical option is the CMOD Modular Spreader Frame which is designed to expand the capabilities of our Modular Spreader Beam System. The Struts from the Spreader Beam are combined with 4 Corner Units to complete the Frame. Customers that already have Modulift Struts can re-use these with the Corner Units to achieve 4-Point lifts, making this a versatile solution.



## System Specifications

The CMOD comes in the following sizes: CMOD 6, CMOD 12, CMOD 24, CMOD 34, CMOD 50, CMOD 70, CMOD 110 and CMOD 250. It spans from 0.5m/1'6" x 0.5m/1'6" to 20m/66' x 20m/66', whilst adapting to all rectangular shapes in between. The systems will lift up to 300t\*

\*The system's SWL will de-rate as the shape of the frame becomes 'more rectangular'. Higher capacities and longer spans in development.

## System Benefits

- More cost effective and easier to transport than a fixed system
- Easy to set up, handle and manoeuvre
- Re-configure the frame to any size to allow for multiple uses

## CMOD T-pieces

Elaborating on this popular concept Modulift has now developed a T-Piece to work in conjunction with the CMOD. This allows the frame to become a 6-point lift, (8-point, 10-point and so forth on request) adding yet another dimension to your Modulift equipment. Spans of up to 40m x 16m and capacities of up to 200t are available as standard.



# CMOD Load Charts

## Load vs Span Charts – CMOD 6 to CMOD 24

**CMOD 6: SWL / tonnes @ 60° ISA / 30° STV / 60° BSA**

2.5					8
2				8	8
1.5			8	8	8
1		8	8	8	6
0.5	8	8	8	6	6
Span (m)	0.5	1	1.5	2	2.5

**CMOD 6: SWL / tonnes @ 90° ISA / 45° STV / 45° BSA**

2.5					6
2				6	6
1.5			6	6	6
1		6	6	6	4
0.5	6	6	6	4	4
Span (m)	0.5	1	1.5	2	2.5

**CMOD 12: SWL / tonnes @ 60° ISA / 30° STV / 60° BSA**

4							16	
3.5						16	16	
3					16	16	15	
2.5				16	16	15	14	
2			16	16	16	14	13	
1.5		16	16	16	16	14	12	
1		16	16	16	16	14	12	
0.5	16	16	16	16	16	14	12	
Span (m)	0.5	1	1.5	2	2.5	3	3.5	4

**CMOD 12: SWL / tonnes @ 90° ISA / 45° STV / 45° BSA**

4							9	
3.5						9	9	
3					9	9	8	
2.5				9	9	8	8	
2			9	9	9	8	7	
1.5		9	9	9	9	8	6	
1		9	9	9	9	8	6	
0.5	9	9	9	9	9	8	6	
Span (m)	0.5	1	1.5	2	2.5	3	3.5	4

**CMOD 24: SWL / tonnes @ 60° ISA / 30° STV / 60° BSA**

6						23
5					30	21
4				30	24	19
3			30	30	24	18
2		30	30	30	24	17
1	30	30	30	24	22	16
Span (m)	1	2	3	4	5	6

**CMOD 24: SWL / tonnes @ 90° ISA / 45° STV / 45° BSA**

6						13
5					17	12
4				19	13	10
3			19	19	13	10
2		19	19	17	13	9
1	19	19	19	13	12	9
Span (m)	1	2	3	4	5	6

## Load vs Span Charts – CMOD 34 to CMOD 70\*

\*CMOD 110 and CMOD 250 graphs available on request

**CMOD 34: SWL / tonnes @ 60° ISA / 30° STV / 60° BSA**

8								24
7							32	23
6						40	31	22
5					40	40	28	20
4				40	40	34	26	19
3			40	40	40	34	24	18
2		40	40	40	40	32	23	17
1	40	40	40	40	34	30	22	16
Span (m)	1	2	3	4	5	6	7	8

**CMOD 34: SWL / tonnes @ 90° ISA / 45° STV / 45° BSA**

8								13
7							18	13
6						22	17	12
5					27	22	16	11
4				27	27	19	15	10
3			27	27	25	19	13	10
2		27	27	27	22	18	13	9
1	27	27	27	27	19	17	12	9
Span (m)	1	2	3	4	5	6	7	8

**CMOD 50: SWL / tonnes @ 60° ISA / 30° STV / 60° BSA**

11											32
10										41	31
9									50	39	29
8								50	48	37	28
7							60	50	45	35	27
6						60	60	50	43	33	26
5					60	60	60	50	40	32	25
4				60	60	60	50	49	38	31	24
3			60	60	60	60	50	47	37	30	23
2		60	60	60	60	60	50	45	36	29	23
1	60	60	60	60	60	60	50	44	35	28	22
Span (m)	1	2	3	4	5	6	7	8	9	10	11

**CMOD 50: SWL / tonnes @ 90° ISA / 45° STV / 45° BSA**

11											18
10										23	17
9									28	21	16
8								28	27	20	15
7							34	28	25	19	14
6						40	34	28	24	18	14
5					40	40	34	28	23	17	13
4				50	40	40	28	28	21	17	13
3			50	50	40	40	28	26	21	16	12
2		50	50	50	40	34	28	25	20	16	12
1	50	50	50	50	40	34	28	25	20	15	12
Span (m)	1	2	3	4	5	6	7	8	9	10	11

**CMOD 70: SWL / tonnes @ 60° ISA / 30° STV / 60° BSA**

12												63
11											70	60
10										80	70	58
9									80	80	70	55
8								80	80	80	67	53
7							80	80	80	70	65	51
6						80	80	80	70	60	62	49
5					80	80	80	80	70	60	60	47
4				80	80	80	80	80	70	60	58	46
3			80	80	80	80	80	80	70	60	56	45
2		80	80	80	80	80	80	70	70	60	55	44
1	80	80	80	80	80	80	80	70	70	60	54	44
Span (m)	1	2	3	4	5	6	7	8	9	10	11	12

**CMOD 70: SWL / tonnes @ 90° ISA / 45° STV / 45° BSA**

12												36
11											40	34
10										40	40	33
9									46	40	40	31
8								57	46	40	38	30
7							60	57	46	40	37	29
6						60	60	57	40	34	35	28
5					60	60	60	50	40	34	34	27
4				60	60	60	60	50	40	34	33	26
3			60	60	60	60	60	50	40	34	32	26
2		60	60	60	60	60	60	50	40	34	31	25
1	60	60	60	60	60	60	60	50	40	34	31	24
Span (m)	1	2	3	4	5	6	7	8	9	10	11	12

# Adjustable Lifting/Spreader Beam

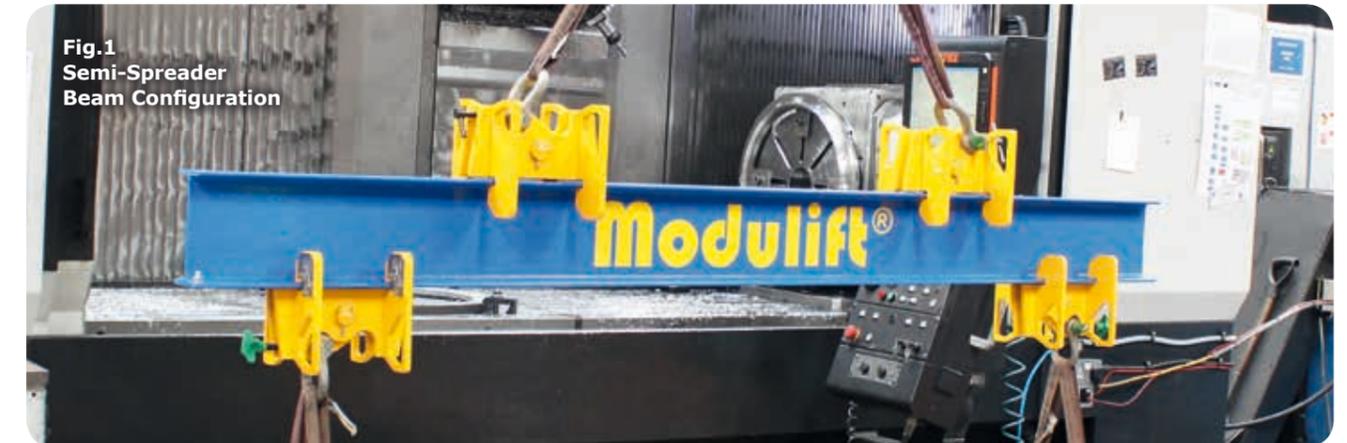
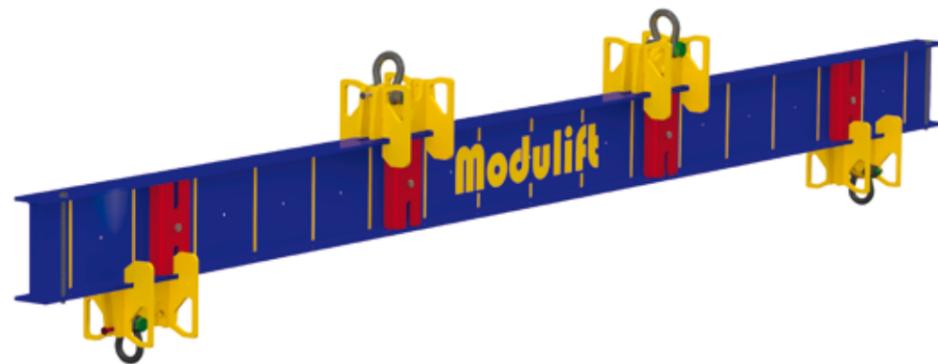
**The Modulift adjustable Lifting Beam/ Spreader Beam utilising a clamp system provides a safe, fast, and adjustable beam, enabling users to lift from multiple points!**

The adjustable lifting/spreader beam (or MOD CLS) is stocked as a boxed product for immediate shipping that eliminates delays incurred waiting for alternative solutions, which often have to be manufactured to order.

The MOD CLS is currently available in one size up to 8.5t capacity, depending on configuration, but offered with four clamps as standard to adjust the lifting points to enable flexibility between a single top lifting point (lifting beam) or double top lifting points (spreader beam).

The clamps are pre-assembled on the beam together with markers to show alignment and the centre of lift. Clamps on the upper/top side of the beam are of a larger rating and size than the two clamps fitted to the bottom/underside of the beam.

The MOD CLS can also be adapted to suit, with up to additional four clamps on the bottom side of the beam allowing users the flexibility of additional lifting points. If more points are needed, the flexible system can also be designed as H-Frame, providing infinite lifting points.



## MOD CLS Specification

- The MOD CLS is rated at 8.5t WLL at 3m span (spreader arrangement). See Load Tables for WLL at other configurations.
- 'Sling to Vertical',  $\beta$ , up to 30 degrees maximum.
- The top Lifting Beam Clamp is rated at 6.5t WLL (vertical) and 4.4t WLL (0–30° STV).
- The bottom Lifting Beam Clamp is rated at 4.75t WLL (vertical).

## WLL v Span Semi-Spreader configuration (2 top lugs, Fig. 1)

If your exact spans are not noted in the table, then please round the spans up or down to the values that will give you the lowest SWL.

WLL (t)		A – Top Clamp Span (m)						
		<0.5	1	2	3	4	5	6
B – Bottom Span (m)	<0.5	8.5	8	7	3.75	2.25	1.25	0.8
	1	8	8.5	8	5.25	2.75	1.5	1
	2	7.5	8	8.5	7.75	4	2.25	1.25
	3	4.25	6.25	8	8.5	6	3	2
	4	2.25	3	4.75	8	8	4.5	2.25
	5	1.25	1.75	2.25	3.75	7	7.5	3.5
6	0.8	1	1.25	2	3	5.25	6.25	

## Lifting Beam configuration (1 top lug, Fig. 2)

B – Bottom Span (m)		≤ 2	≤ 3	≤ 4	≤ 5	≤ 6
WLL (t)		6.2	4.25	2.25	1.25	1

Contact Modulift if you need a specific WLL value for a specific span or arrangement not covered on the tables above.

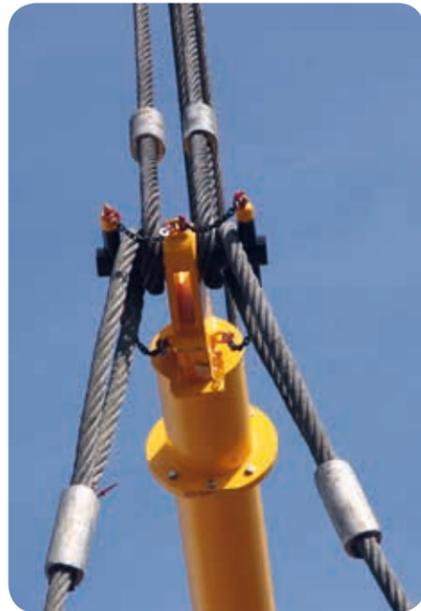
## System Benefits

- Available next day as a boxed off-the-shelf product
- Adjustable lifting points and low headroom capability
- Easy to convert between a Lifting Beam and Spreader Beam
- Spans of up to 6m and capacities of up to 8.5t depending on configuration

# Trunnion Modular Spreader Beam

The Trunnion Spreader Beam provides a shackle free lifting solution that revolutionises the rigging industry by offering an efficient, lightweight and economic below-the-hook solution.

The shackle free lifting solution is a standard modular spreader beam, using the same struts and bolting configurations and is fully compatible with current and legacy equipment. The Trunnion Spreader Beam reduces the cost on the price of rigging by up to 50% and by using this innovative system compared to similar applications the rigging up phase can take up to half the duration therefore saving you time and money.



The trunnion spreader is initially available in three sizes up to 1000t capacity. TRUN MOD250, TRUN MOD400 and TRUN MOD600 – covering a range of capacities from 250t to 1000t.

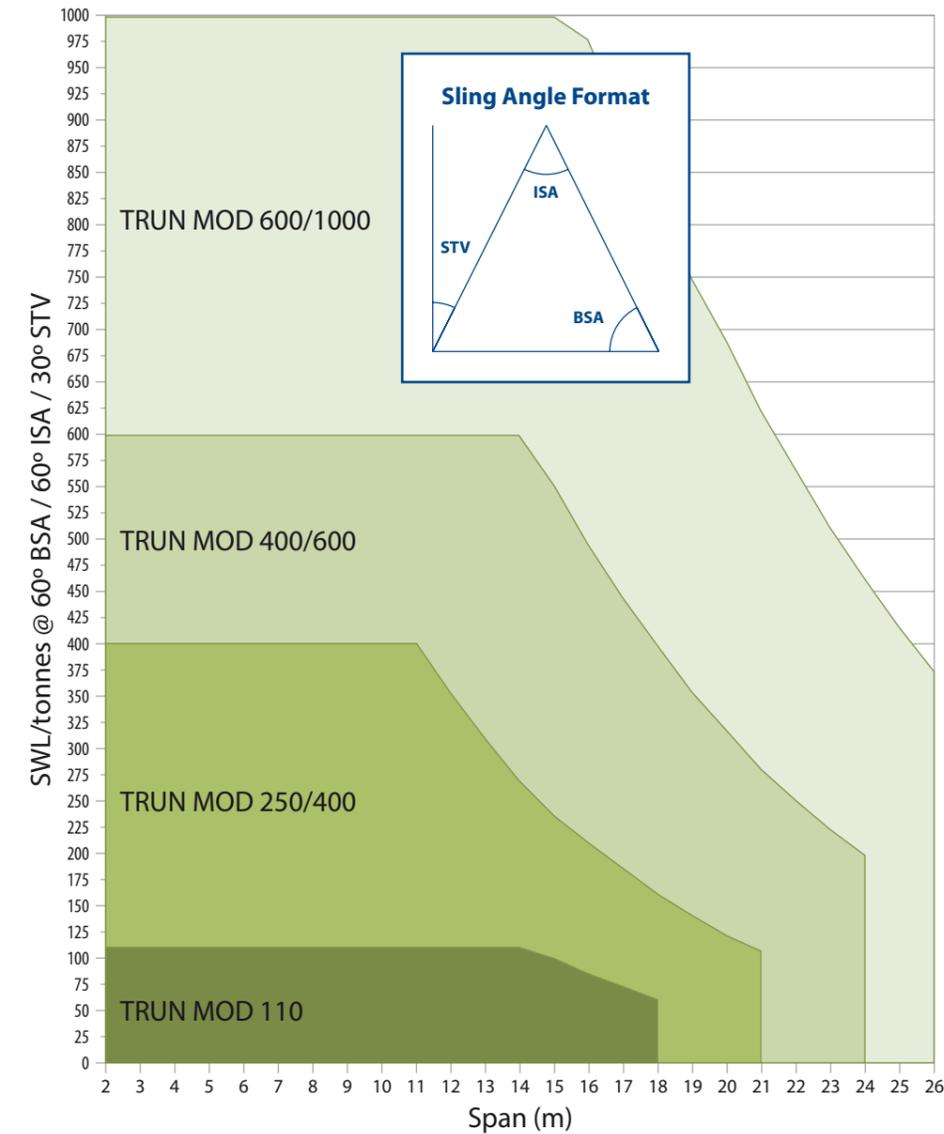
## System Benefits

- Reduce your rigging weight
- Reduce your health and safety concerns
- Save time and money on rigging

The current range has been developed according to BS EN 1993-1, and further sizes can be designed on a custom basis and additions to the range may be manufactured in future if demand is sufficient.



## Load v Span Chart Modulift Trunnion Modular Spreader Beam



## Trunnion Spreader Range Load vs Span Chart 30° STV

		Span / m																								
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
SWL / tonnes	TRUN MOD 600/1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	977	899	821	749	688	623	565	512	461	416	373
	TRUN MOD 400/600	600	600	600	600	600	600	600	600	600	600	600	600	600	551	495	443	397	355	317	281	251	223	198		
	TRUN MOD 250/400	400	400	400	400	400	400	400	400	400	400	355	310	270	235	211	185	160	141	122	106					
	TRUN MOD 110	110	110	110	110	110	110	110	110	110	110	110	110	110	100	85	73	60								

# Subsea Spreader Beams

The Modulift Subsea Spreader Beam has an open section design, therefore being suitable for water submersion by eliminating the risks of any cavity or pressure issues.



The Subsea Spreader Beam series is available for order while for more job specific requirements or high QA lifts, the Modulift engineering team can design custom made lifting alternatives.

Complying with 'DNV-OS-H206 – Loadout, Transport and Installation of Subsea Objects', the Modulift Subsea range is designed to safely lift loads up to up 570t.

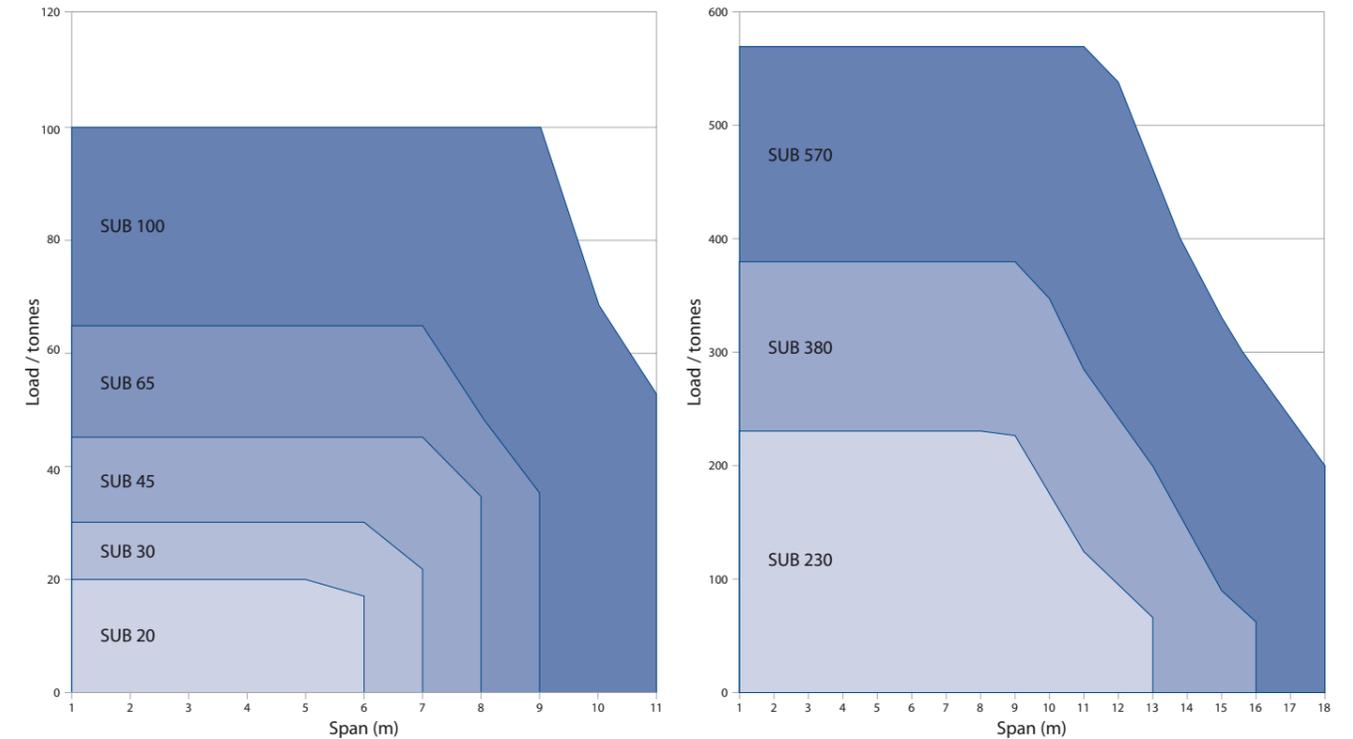
As with regular Spreader Beams they are fully and correctly assembled when combined with the recommended end units, drop links and shackles top and bottom, which also allows for the options to use ROV shackles where necessary too. Their unique modular elements will as with all Modulift products, provide a versatile and efficient option for deep water lifting and offshore lifting.



## System Benefits

- DNV compliant
- Deep water lifting system
- Lightweight design
- Modular

## Load v Span Charts - Modulift Subsea Spreader Beam Range



## Subsea Spreader Range Load vs Span Chart 30° STV

Span / m	SUB 20	SUB 30	SUB 45	SUB 65	SUB 100	SUB 230	SUB 380	SUB 570	Min. sling length / m
	SWL / tonnes								
1	20	30	45	65	100	230	380	570	1
2	20	30	45	65	100	230	380	570	2
3	20	30	45	65	100	230	380	570	3
4	20	30	45	65	100	230	380	570	4
5	20	30	45	65	100	230	380	570	5
6	17	30	45	65	100	230	380	570	6
7		22	45	65	100	230	380	570	7
8			35	49	100	230	380	570	8
9				36	100	228	380	570	9
10					69	183	345	570	10
11					53	128	285	570	11
12						100	239	535	12
13						66	198	455	13
14							140	388	14
15							90	327	15
16							63	282	16
17								238	17
18								201	18

# Lattice Spreader Beams

**Modular Lattice Spreader Beams are ideal for lifting longer, light loads. For example fragile or flexible pipe sections or roof sheet packs that require multiple supporting lift points along the span.**

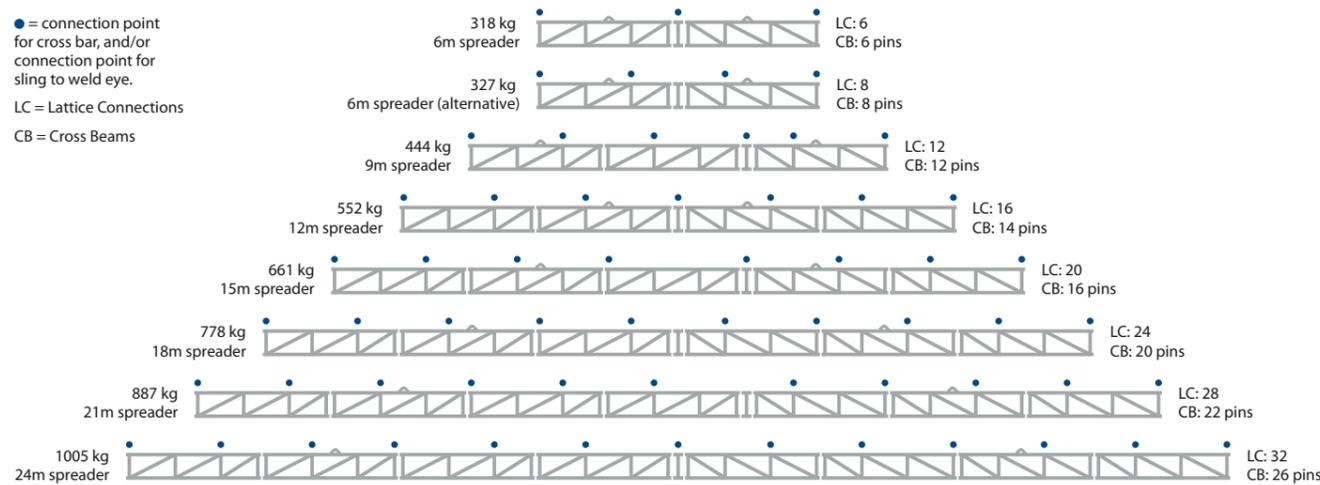
The Lattice Spreader Beam has been designed to be lightweight for easy transportation and storage as well as being a cost-effective piece of lifting equipment.

## Lifting Points/Load Connection Points 6–24m Span

● = connection point for cross bar, and/or connection point for sling to weld eye.

LC = Lattice Connections

CB = Cross Beams

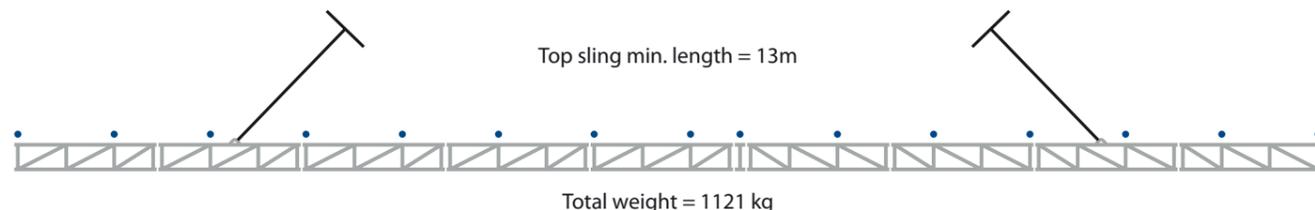


Spreader	Configuration (frame types)									No. of Crossbeams
6m	2	3	2							3 or 4
9m	2	1	3	2						6
12m	1	2	3	2	1					7
15m	1	2	1	3	2	1				8
18m	1	2	1	3	1	2	1			10
21m	1	2	1	1	3	1	2	1		11
24m	1	2	1	1	3	1	1	2	1	13
1=Type 1 Frame 2=Type 2 Frame 3=Type 3 Frame		Maximum 1.5m overhang of roofing sheet per end								

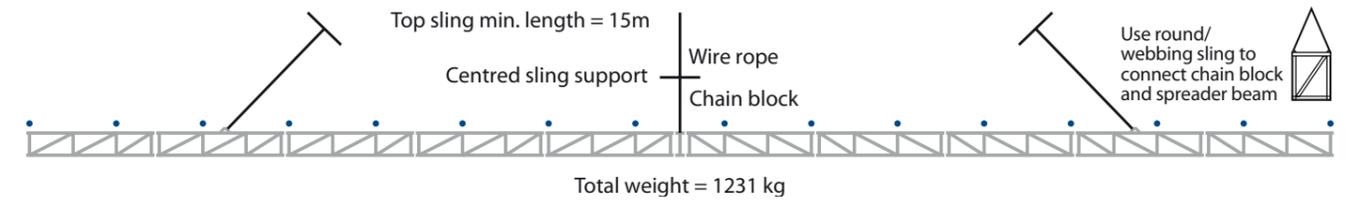


Spreader	Configuration (frame types)									No. of Crossbeams	
27m	1	2	1	1	1	3	1	1	2	1	15
Type 1 Frame x7 Type 2 Frame x2 Type 3 Frame x1		Maximum 1.5m overhang of roofing sheet per end									

## Assembled 27m Lattice Spreader Beam

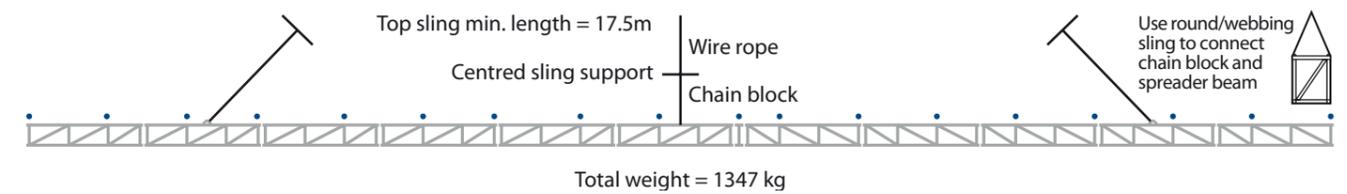


## Assembled 30m Lattice Spreader Beam



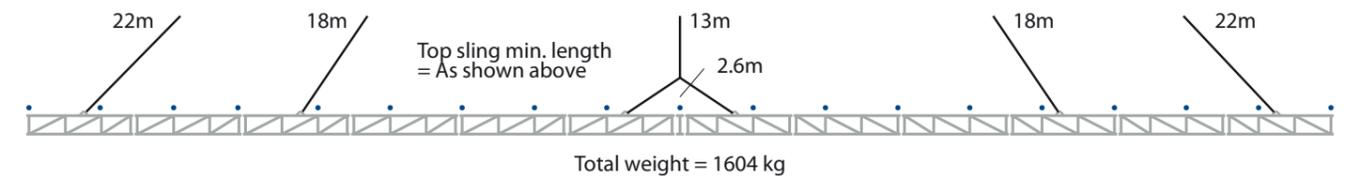
Spreader	Configuration (frame types)										No. of Crossbeams	
30m	1	2	1	1	1	3	1	1	1	2	1	16
Type 1 Frame x8 Type 2 Frame x2 Type 3 Frame x1		Maximum 1.5m overhang of roofing sheet per end										

## Assembled 33m Lattice Spreader Beam



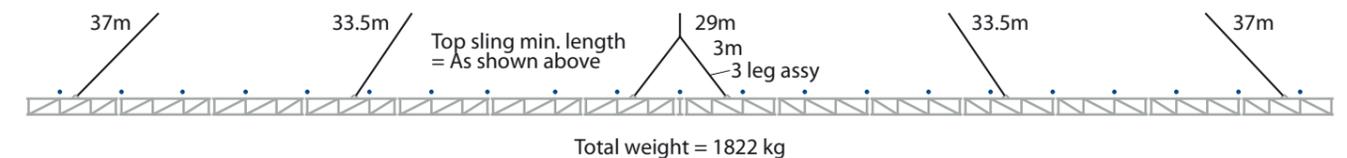
Spreader	Configuration (frame types)										No. of Crossbeams		
33m	1	2	1	1	1	1	3	1	1	1	2	1	18
Type 1 Frame x9 Type 2 Frame x2 Type 3 Frame x1		Maximum 1.5m overhang of roofing sheet per end											

## Assembled 36m Lattice Spreader Beam



Spreader	Configuration (frame types)											No. of Crossbeams		
36m	2	1	2	1	1	2	3	2	1	1	2	1	2	19
Type 1 Frame x6 Type 2 Frame x6 Type 3 Frame x1		Maximum 1.5m overhang of roofing sheet per end												

## Assembled 42m Lattice Spreader Beam



Spreader	Configuration (frame types)													No. of Crossbeams	
42m	2	1	1	2	1	1	2	3	2	1	1	2	1	2	21
Type 1 Frame x8 Type 2 Frame x6 Type 3 Frame x1		Maximum 1.5m overhang of roofing sheet per end													

## Regulations, Standards and Compliance

Each Modulift Spreader Beam Series has been proven by being Proof Load Tested in the Modulift compression test rig, and all products have been designed in accordance with the standards listed below:

### UK & Europe Compliance

- BS EN 13155: 2003+A2:2009: Cranes – Safety – Non-fixed load lifting attachments
- DNV Standard for Certification No. 2.22 Lifting Appliances 2011 & DNVGL-ST-0378
- MOD 6 up to MOD 800/1500 Type Approved by DNV
- LOLER: 1998 (Lifting Operations and Lifting Equipment Regulations)
- PUWER: 1998 (Provision and Use of Work Equipment Regulations)
- EC Machinery Directive 2006/42/EC
- BS EN 1993-1: 2005: Eurocode 3

### USA Compliance

- ASME B30.20 - 2013: For Below-the-Hook Lifting Devices
- ASME BTH-1 2017: Design of Below-the-Hook Lifting Devices

### Australian Compliance

- AS 4991 - 2004: Lifting Devices

### Russian Compliance

- EAC Mark – Eurasian Customs Union Technical Regulations Compliance

### Worldwide Compliance

- ISO 17096 – 2015: Cranes, Safety, Load Lifting Attachments

### DNV Standard for Certification

DNV 2.22: Modulift Spreader Beam designs conform to DNV Standard for Certification No.2.22 Lifting Appliances. Modulift is the first and only Spreader Beam Manufacturer in the world to have the globally recognised DNV Type Approval for all Spreader Beams up to 1500t capacity, in accordance with DNV's standard for Certification No. 2.22 for Lifting Appliances 2011, at no extra cost to the client. For those customers who require a higher level of quality standard, Modulift also provides further options for project specific 3rd party verification. When a project demands the highest level of certification Modulift are able to offer our customers varying degrees of additional DNV certification depending upon their individual QA requirements, including:

- Proof Load Test Survey Report and Record of Test
- DNV Certificate of Conformity for Manufacture & Test (CG3 in accordance with ILO convention 152)

We now have all our Spreader Beams up to 1500t capacity DNV Type Approved



### Ask Modulift about the Level of Options Available to Ensure Your Safe Lift

**Level 1. Standard Modulift Spreader Beams:** In accordance with BS EN 13155 – 2003. Available CE Marked and supplied with a Certificate of Conformity and DNV Type Approval, up to 400t available off-the-shelf.

**Level 2. Individual Proof Load Testing of Modulift Spreader Beams:** Modulift offer an individual Proof Load Test service with or without 3rd party verification to those requiring a higher level of certification. Please ask for further information.

**Level 3. Modulift Spreader Beams with project specific DNV Certification:** Although our range of Spreader Beams are now DNV Type Approved, we can also offer project specific DNV certification of individual Spreader Beams. It is the ultimate in certification and quality control for the most demanding project specification; a Modulift Spreader Beam individually certified by DNV in terms of design, manufacturing and Proof Load testing. Supplied with a design review report and Certificate of Conformity for Manufacture and Test, issued by DNV.

## Engineered Products Custom Design

**We can design and manufacture a Custom Lifting Solution within 4–6 weeks – providing expert engineering, manufacturing excellence and quality assurance.**

Because not every load fits into a standard mould, our engineering team are lifting industry experts who will work with you and your team, to custom design and build the ideal solution for your lifting requirements. With innovative thinking, we can develop the right equipment to meet your needs whether they be height, environment, weight, flexibility of use, speed of assembly, or transportation requirements to name but a few – we can design a custom solution for you.

Modulift have been building and supplying lifting equipment with high level QA requirements across the Oil & Gas, Renewable Energy, Offshore, Maritime, OEM, Aerospace and Heavy Haulage industries worldwide. We have extensive experience in delivering equipment for these critical projects successfully, on time, and to meet the project's individual requirements -we can design and manufacture a Custom Lifting Solution within 4–6 weeks!

Our sample Case Studies describe Custom Projects where we have either designed and manufactured an entirely 'Custom' lifting solution; Or we have adapted our standard designs/products -tailoring and manufacturing them to meet the highest level of QA standards.



**Modulift offer a complete Design & Manufacturing service that incorporates key deliverables such as:**

- ITP / Quality Plan
- Full material traceability – 3.1 or 3.2
- Weld Book: WPQR, WPS, WQTC & Weld Mapping
- Procedures & Reports: NDT, Proof Load Testing, and painting

Our team of welder/fabricators are qualified to BS EN 287-1, with specification & qualification of weld procedures to BS EN ISO 15614-1. Welding can also be carried out in compliance with other international standards.



### International Standards

In addition there are several International Standards that Modulift's Spreader Beams can be designed to comply with, particularly in reference to offshore applications:

- DNV-ST-N001 – Marine Operations and Marine Warranty
- Lloyds Register: Code for Lifting Appliances in a Marine Environment
- API RP 2A-WSD
- OSHA CR 29 1926.251

## Modulift Lifts the Worlds Largest Gas Turbine!



### In January 2013, global spreader beam manufacturer, Modulift, designed and built spreaders to lift the world's most powerful gas turbine

The Rolls-Royce MT30 turbine was installed into the Royal Navy's new aircraft carrier HMS Queen Elizabeth, at Babcocks Rosyth Shipyard in Scotland. Rolls Royce viewed the lifting of the gas turbine as a "significant milestone" in the Queen Elizabeth shipbuilding programme.

Having worked together on a number of heavy lift projects, Rolls-Royce approached lifting experts Modulift to custom design and manufacture the lifting solution for the 50 tonne MT30 turbines. For Modulift, the pinnacle of this project was the successful lift and installation of the steel housed turbine onto the ships structure.

In order to design the rig to lift the 50 tonne MT30 turbines, Modulift took key information that was provided such as the centre of gravity position, and created detailed rig drawings - the aim was to achieve a level lift using 3 spreader beams in a 'one over two' formation, and ensuring that the slings were vertical at each corner. This was achieved by firstly specifying custom length struts so that the Modulift spreader beams were each of an exact length, and secondly by providing unequal length top slings to take into account the CoG position.

Sue Spencer, Technical Director at Modulift said "The Gas Turbine had a 75/25 offset centre of gravity which meant that we had to design a lifting rig that would enable the turbine to be lifted level despite the extreme offset CoG. We achieved this by designing a '1 over 2' Lifting Rig that had different length top slings so that the crane hook would be directly over the centre of gravity during the lift. It is important for loads to be lifted level particularly for installations such as this one, and it was a great success because the load was level within 0.2 degrees from horizontal. We are very pleased to have provided the lifting equipment for such a prestigious project".

### ...Rolls Royce viewed the lifting of the gas turbine as a "significant milestone" in the Queen Elizabeth shipbuilding programme.

Manufacture of the spreader beams was carried out to exacting standards and procedures which captured the need for all aspects of the manufacturing process to be controlled and compliant with order requirements. Prior to painting the spreader beams, Modulift conducted Proof Load Testing using its purpose built Compression Test Rig. All of the spreader beams were individually assembled and loaded one at a time into the compression test rig. The designated proof load was applied, (for this project the proof load factor was SWL + 25%). Testing of all of the spreader beams was successfully completed without any issues and a final post-test MPI examination verified that there were no weld defects after testing. The drop links for the spreader beams were then proof load tested in Modulift's own tensile test rig using the same proof load factor as the spreader beams. Richard Charlton of Rolls-Royce commented "All went to plan with not a single problem. The Babcock shipyard had lots of Modulift beams on site and assembled and rigged the beams very easily. Many thanks for Modulift's hard work."



# Modulift Project Reference List

## Aker Subsea

**Location:** Norway  
**Project:** Angola 15/06 West Hub Development Project – 200t Spreader system for offshore reels  
**Year:** 2013  
**Value:** £64,497



## Atlas Copco USA

**Location:** Houston  
**Project:** AWorley Parsons/Exxon Hebron Project – various spreader systems for skid packages  
**Year:** 2014  
**Value:** £16,287



## Bridon International Ltd

**Location:** Doncaster, UK  
**Project:** Subsea 7 – 400t and 165t spreader systems for offshore reels  
**Year:** 2013  
**Value:** £64,432



## Atlas Copco (Air & Gas Purification)

**Location:** Oosterhout, Netherlands  
**Project:** Ichthys Onshore LNG – various spreader systems for skid packages  
**Year:** 2014  
**Value:** £41,770

## Rolls Royce Ltd

**Location:** Bristol, UK  
**Project:** HMS Queen Elizabeth – MT30 turbine skid lifting system  
**Year:** 2012  
**Value:** £18,650



## National Oilwell Varco

**Location:** Denmark  
**Project:** Statoil SLMP Project – 520t spreader system for offshore reels  
**Year:** 2014  
**Value:** £76,777



## RWE Npower Renewables Ltd

**Location:** Swindon, UK  
**Project:** Gwynt Y Mor Offshore Wind Farm – 1000t and 500t spreaders for monopoles and TPs  
**Year:** 2012  
**Value:** £347,650



## Alderley

**Location:** Gloucester, UK  
**Project:** Prelude FLNG Project – 100t & 70t spreaders for skid packages  
**Year:** 2013  
**Value:** £22,405

**Modulift<sup>®</sup>**  
working between the hook and the load