Modulift®

Spreader Beams • Lifting Beams • Lifting and Spreader Frames

Brochure

2017

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.

MEMBER S&RA

LEEA Full Member

AWRF

TYPE APPROVAL DNV·GL NO. 2.22 LIFTING APPLIANCES Modular Spreader Beams for offshore cranes

MANAGEMENT SYSTEM CERTIFICATION DNV·GL ISO 9001 ISO 14001 OHSAS 18001

CE

Standard Off-the-Shelf Range

QJ2 Up to 2t at 1.2m/4ft	**MOD 34** Up to 34t at 6m/19ft Up to 10m/32ft at a lower capacity.
MOD 6 Up to 6t at 3.6m/148" Up to 4.5m/176" at a lower capacity.	**MOD 50** Up to 50t at 8m/26ft Up to 13m/42ft at a lower capacity.
MOD 12 Up to 12t at 4.75m/15ft Up to 6.5m/21ft at a lower capacity.	**MOD 70** Up to 70t at 10.5m/33ft Up to 14m/45ft at a lower capacity.
MOD 24 Up to 24t at 5m/17ft Up to 8m/26ft at a lower capacity.	**MOD 70H** Up to 100t at 8.5m/28ft Up to 14m/45ft at a lower capacity.

Heavy Off-the-Shelf Range

MOD 110 Up to 110 t at 14m/46ft Up to 18m/59ft at a lower capacity	**MOD 250/300** Up to 300t at 13m/40ft Up to 21m/68ft at a lower capacity.	**MOD 400/600** Up to 600t at 14m/44ft Up to 24m/78ft at a lower capacity.
MOD 110H Up to 170t at 11.5m/37ft Up to 18m/59ft at a lower capacity.	**MOD 250/400** Up to 400t at 11m/36ft Up to 21m/68ft at a lower capacity.	**MOD 600/600** Up to 600t at 21m/70ft Up to 26m/85ft at a lower capacity.
MOD 110SH Up to 240t at 10.5m/34ft Up to 17m/55ft at a lower capacity.	**MOD 400/400** Up to 400t at 17m/58ft Up to 24m/78ft at a lower capacity.	**MOD 600/800** Up to 800t at 18m/60ft Up to 26m/85ft at a lower capacity
MOD 250/250 Up to 250t at 14m/46ft Up to 21m/68ft at a lower capacity.	**MOD 400/500** Up to 500t at 15m/50ft Up to 24m/78ft at a lower capacity.	**MOD 600/1000** Up to 1000t at 15m/51ft and up to 26m/85ft at a lower capacity.

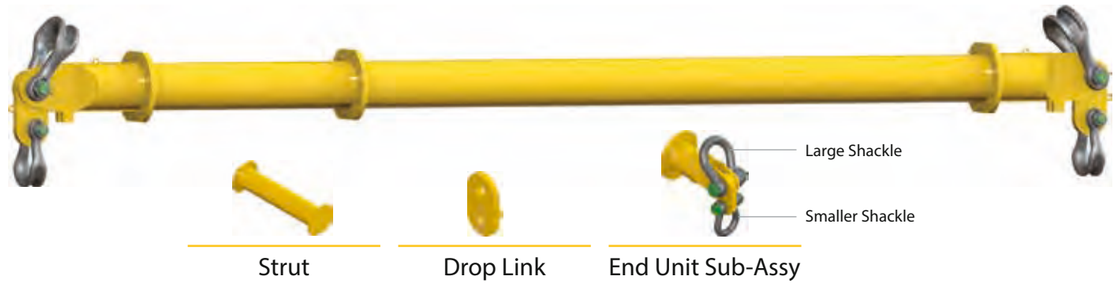
Tel: 011 44 1202 621511 **Fax:** 011 44 1202 632811

Modular Spreader Beams

Modular Spreader Beams provide the ideal solution for most lifting requirements – versatile and cost-effective, the Modulift range has capacity from 2 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 for up to 400t 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.



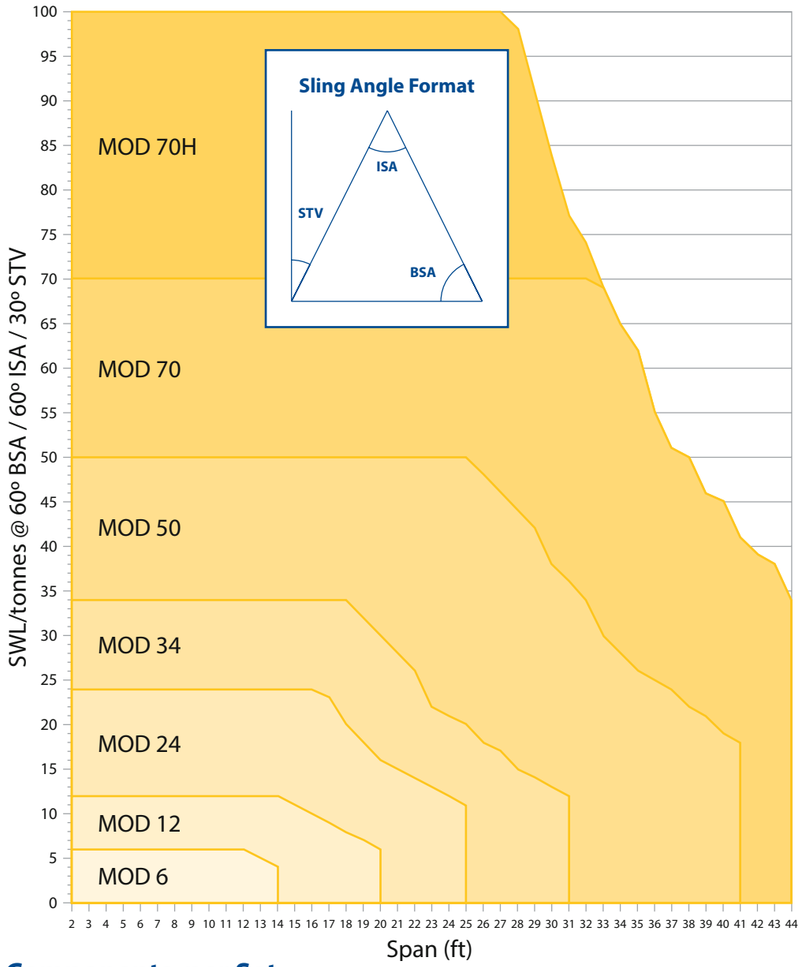
Why is Modulift the leading Spreader Beam on the Market?

Quality Engineering	**Modulift are a team of specialist engineers designing innovative products to optimum specification to ensure a safe lifting environment around the world.**
Interchangeable	**The modular struts allow for multiple lengths to be configured for a variety of lifts. Mix and match End Units with struts when long length, yet light weight lifts are required.**
Economical	**One Modulift Spreader Beam can be used over and over again for years.**
Portable	**Our heaviest and 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!**
Lightweight	**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.**
Easy to Store and Transport	**For improved inventory control, organized components, quick retrieval and mobilization, ask about our storage systems, including logistics cradles and stillages.**
Adaptability	**Drop Links provide plus or minus 6° of rotation to allow for lower sling misalignment.**
Quick Ship	**Call us today – we have most standard sizes in stock and ready to ship!**
Custom Applications	**Have one of our engineers custom design a Spreader Beam for virtually any lift. Please ask a member of our team about this service.**

Email: sales@modulift.com **www.modulift.com**

The Standard Range

Load v Span Chart - Modulift Spreader Beam Standard Range

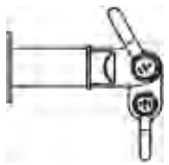


What size shackle do I need?

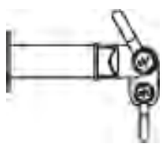
MOD 6
Top: 4.75t
Lower: 3.25t

MOD 12
Top: 8.5t
Lower: 6.5t

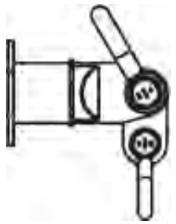
MOD 24
Top: 17t
Lower: 12t



MOD 34
Top: 25t
Lower: 17t



MOD 50
Top: 35t
Lower: 25t



MOD 70/H
Top: 55t/85t
Lower: 35t/55t

Components per Set

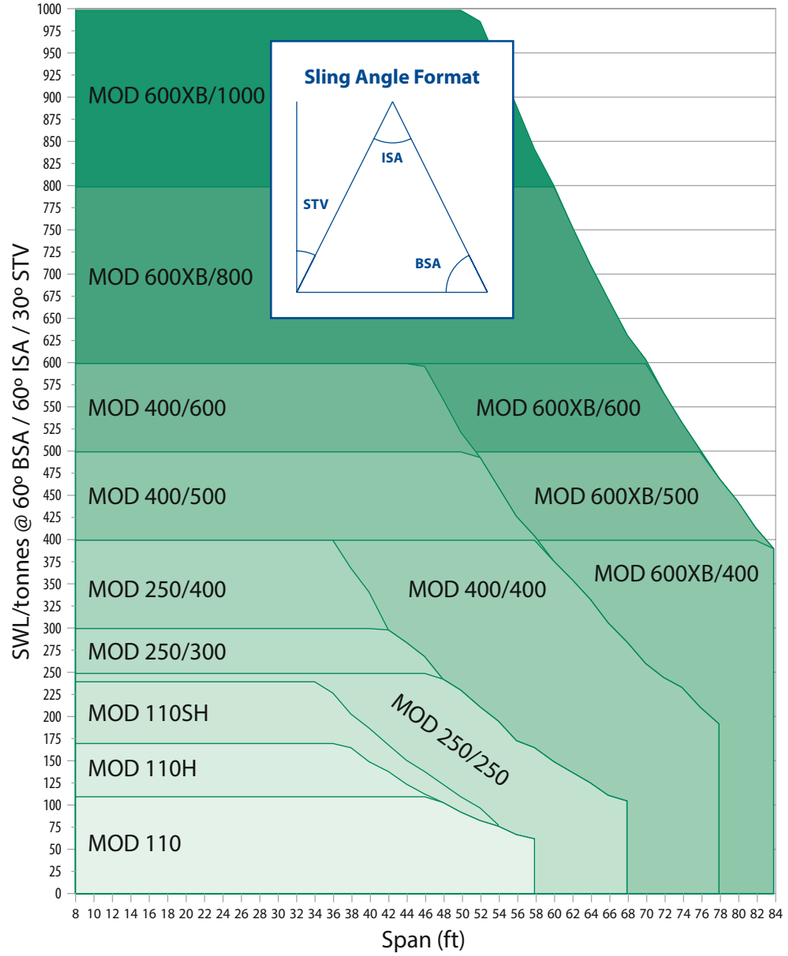
* Please note: Custom length Struts are available on request

Spreader System	Strut 4"	8"	12"	24"	40"	1ft	2ft	3ft	4ft	5ft	6ft	10ft	12ft	20ft	End unit	Drop link
MOD 6	1	1	1	1	3										2	2
MOD 12						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	1			1		3		2	2
MOD 70/70H						1	1		1		1		3		2	2
MOD 110/110H						1	1		1		1		4		2	2
MOD 110SH						1	1		1		2		3		2	2
MOD 250-250 / 250-300 / 250-400						1	1	1		1		2		2	2	2
MOD 400-400 / 400-500 / 400-600						1	1	1		1		1		3	2	2
MOD 600-600 / 600-800 / 600-1000						1	1	1	1	1		1		3	2	2

Tel: 011 44 1202 621511 **Fax:** 011 44 1202 632811

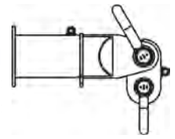
The Heavy Range

Load v Span Chart - Modulift Spreader Beam Heavy Range

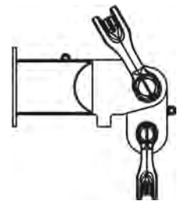


What size shackle do I need?

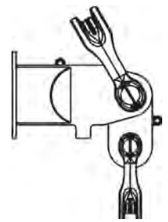
MOD 110 /H/SH
Top: 85t/120t/150t
Lower: 55t/85t/120t



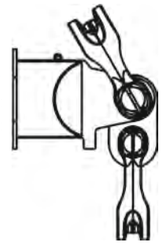
MOD 250
Top: 200t–300t
Lower: 125t–200t



MOD 400
Top: 300t–400t
Lower: 200t–400t



MOD 600+
Top: 300t–600t
Lower: 200t–500t



Weight per Set (lbs)

* 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
Max. Component Weight	18	42	80	103	285	487	1170	1425	1900	3049
Min. Component Weight	1.3	2.7	11	15	24	37/71	99/137	198	258	331
Weight at Max. Span	89	204	416	645	1231	2052/2120	4486	5050	8500	14800

Email: sales@modulift.com **www.modulift.com**

The Active Link Spreader Beam

The Active Link is an innovative end unit system with an integrated load cell, compatible with the existing range of Modulift spreader beams up to 100t.

It will provide 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, presents a myriad of benefits with time, cost and weight savings all attributable to the fact that measurement technology 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. The new drop links are designed to fit standard end units, as well as the standard top and bottom shackles specified for the spreader.

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

Tel: 011 44 1202 621511 **Fax:** 011 44 1202 632811

CMOD Spreader Frames

Modulift Modular Spreader Frames work with existing struts from our Modular Spreader Beam range

Modulift, the market leaders in Spreader Beam design and manufacture, have extended their modular offering, by launching the CMOD Modular Spreader Frame!

A truly adaptable frame that maintains its engineering principles as its configuration adapts. Designed with ease and economy in mind - the CMOD is simple to set up, manoeuvre, and reconfigure to any size frame - allowing for multiple uses and diverse application.

The CMOD is a modular frame utilising Corner Units which are compatible with our existing Spreader Beam Struts and is modular in length and width. Every CMOD Spreader Frame consists of 4 x Corner Units, with intermediate Struts that can be bolted into the assembly to achieve different spans. Existing customers can adapt their Spreader Beam into a frame, by simply bolting on the corresponding Corner Units and any additional Struts required.

Even the largest CMOD can be easily transported as the frame is broken down into modular parts, saving the cost of specialist transportation.

System Benefits

- Cheaper 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
- The corner plate has a bow (like the shackle). This means that a reversed Shackle can contact the plate 'bow to bow' allowing it to easily rotate to suit any angle of sling and setup of frame without de-rating the Shackle

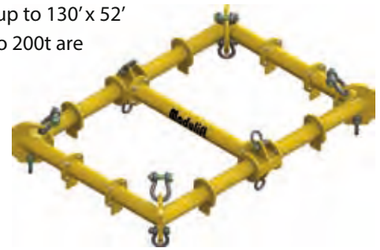
System Specifications

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 16m/52' x 16m/52', 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.

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, adding yet another dimension to your Modulift equipment. Spans of up to 130' x 52' and capacities of up to 200t are available as standard.



Email: sales@modulift.com **www.modulift.com**

CMOD Load Charts

Load vs Span Charts – CMOD 6 to CMOD 24

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

102							8
98						8	8
82					8	8	8
66				8	8	8	8
50			8	8	8	8	7
34		8	8	8	8	6	6
18	8	8	8	7	6	6	6
Span (inches)	18	34	50	66	82	98	102

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

102							6
98						6	6
82					6	6	6
66				6	6	6	6
50			6	6	6	5	5
34		6	6	6	6	4	4
18	6	6	5	4	4	4	4
Span (inches)	18	34	50	66	82	98	102

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

13							16
12						16	16
10					16	16	15
8				16	16	16	14
6			16	16	16	14	13
4		16	16	16	16	14	12
2	16	16	16	16	16	14	12
Span (ft)	2	4	6	8	10	12	13

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

13							9
12						9	9
10					9	9	8
8				9	9	9	8
6			9	9	9	8	7
4		9	9	9	9	8	6
2	9	9	9	9	9	8	6
Span (ft)	2	4	6	8	10	12	13

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

20									23
18								24	21
16							30	24	20
14						30	30	24	19
12					30	30	24	23	18
10				30	30	30	24	22	17
8			30	30	30	30	24	20	17
6		30	30	30	30	28	24	19	16
4	30	30	30	30	30	27	23	19	16
Span (ft)	4	6	8	10	12	14	16	18	20

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

20									13
18								14	12
16							17	14	11
14						17	17	14	11
12					17	17	14	13	10
10				17	17	17	14	12	9
8			17	17	17	17	14	11	9
6		17	17	17	17	16	14	11	9
4	17	17	17	17	17	15	13	11	9
Span (ft)	4	6	8	10	12	14	16	18	20

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

26									24
25								30	23
22							37	28	22
19						40	35	26	21
16					40	40	33	25	19
13				40	40	40	30	23	18
10			40	40	40	37	28	22	17
7		40	40	40	40	35	27	21	17
4	40	40	40	40	40	34	26	20	16
Span (ft)	4	7	10	13	16	19	22	25	26

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

26									13
25								17	13
22							21	16	12
19						23	20	15	12
16					27	23	19	14	11
13				27	27	23	17	13	10
10			27	27	27	21	16	12	9
7		27	27	27	27	20	15	12	9
4	27	27	27	27	27	19	15	11	9
Span (ft)	4	7	10	13	16	19	22	25	26

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

36												32
34											38	31
31										45	36	30
28									54	44	34	29
25								54	53	42	33	27
22							60	53	51	40	32	26
19						60	60	51	47	38	30	25
16					60	60	56	47	45	36	29	25
13				60	60	60	52	45	43	34	28	24
10			60	60	60	60	50	45	42	34	27	23
7		60	60	60	60	60	50	45	41	33	26	23
4	60	60	60	60	60	60	50	45	41	32	26	22
Span (ft)	4	7	10	13	16	19	22	25	28	31	34	36

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

36												18
34											22	18
31										25	21	17
28									31	24	19	16
25								31	30	23	18	15
22							31	30	29	22	18	14
19						40	31	29	27	22	17	14
16					40	40	29	27	25	21	16	13
13				50	40	36	27	25	24	19	15	13
10			50	50	40	36	25	25	23	19	15	12
7		50	50	50	40	36	25	25	22	18	14	12
4	50	50	50	50	40	36	25	25	22	18	14	12
Span (ft)	4	7	10	13	16	19	22	25	28	31	34	36

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

40													65
37												80	62
34											80	70	60
31										80	70	70	57
28									80	80	70	70	55
25								80	80	80	70	60	52
22							80	80	80	70	60	60	51
19						80	80	80	70	60	60	60	49
16					80	80	80	80	70	60	60	60	48
13				80	80	80	80	70	70	60	60	59	47
10			80	80	80	80	80	70	70	60	60	58	46
7		80	80	80	80	80	80	70	70	60	58	57	45
4	80	80	80	80	80	80	80	70	70	60	58	55	45
Span (ft)	4	7	10	13	16	19	22	25	28	31	34	37	40

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

40													37
37												46	35
34											46	40	34
31										46	40	40	32
28									46	46	40	40	31
25								57	46	46	40	34	30
22							60	57	46	40	34	34	29
19						60	60	57	40	34	34	34	28
16					60	60	60	50	40	34	34	34	27
13				60	60	60	60	50	40	34	34	34	27
10			60	60	60	60	60	50	40	34	34	33	26
7		60	60	60	60	60	60	50	40	34	33	32	26
4	60	60	60	60	60	60	60	50	40	34	33	31	26
Span (ft)	4	7	10	13	16	19	22	25	28	31	34	37	40

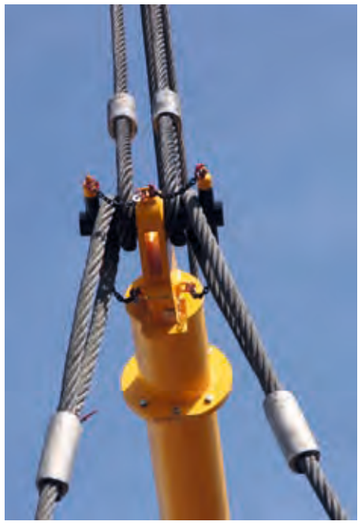
Tel: 011 44 1202 621511 **Fax:** 011 44 1202 632811

Email: sales@modulift.com **www.modulift.com**

The 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.

Tel: 011 44 1202 621511 **Fax:** 011 44 1202 632811

Subsea Spreader Beams

Unlike Modulift's standard Spreader Beams that are manufactured using circular hollow sections, the Subsea range has an open section design, this being suitable for water submersion by eliminating the risks of any cavity or pressure issues. They are finished with a three-coat paint system that is based on a two-pack epoxy paint combination suitable for the marine environment.

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 alternatives.

Complying with DNV-OS-H206 – Loadout, Transport and Installation of Subsea Objects, the Modulift nautical range is designed to safely hold weights from 20–570 tonnes.

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.

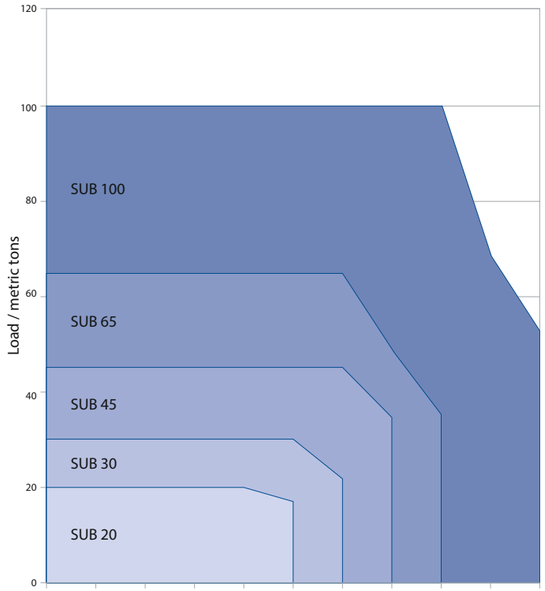
System Benefits

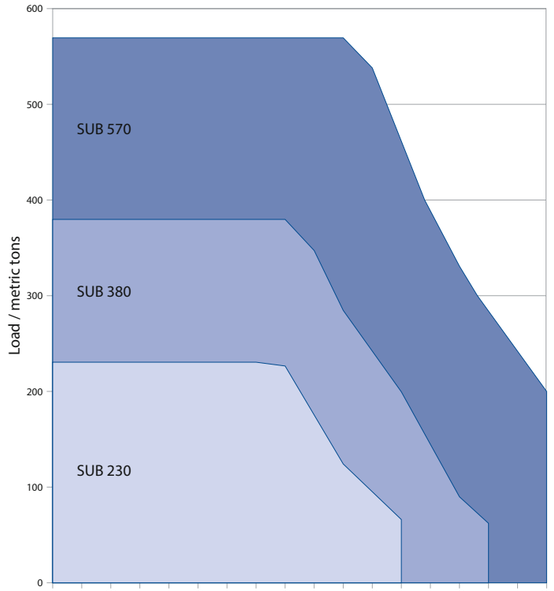
- **DNV compliant**
- **Deep water lifting system**
- **Lightweight design**
- **Modular**

Email: sales@modulift.com **www.modulift.com**

Subsea Spreader Beams

Load v Span Charts - Modulift Subsea Spreader Beam Range





Subsea Spreader Range Load vs Span Chart 30° STV

Span / ft	SUB 20	SUB 30	SUB 45	SUB 65	SUB 100	SUB 230	SUB 380	SUB 570	Min. sling length / ft
	SWL / metric tons								
10	20	30	45	65	100	230	380	570	10
20	17	30	45	65	100	230	380	570	20
30				36	100	228	380	570	30
40						100	239	535	40
50							90	327	50
60								201	60

Tel: 011 44 1202 621511 **Fax:** 011 44 1202 632811

Lattice Spreader Beams

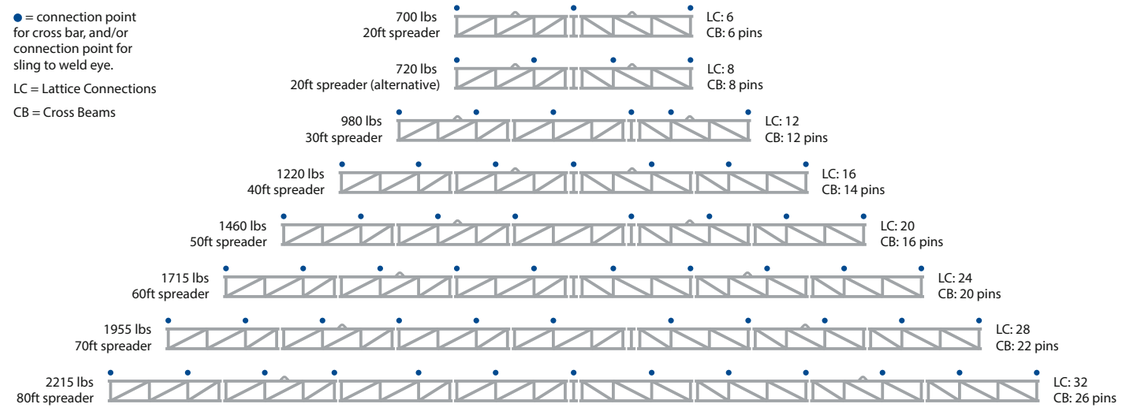
The Modulift Lattice System (MLS) is a light-weight modular spreader suitable for long, light loads, and has been specially developed to suit roofing sheets. Maximum spans from 20ft up to 140ft in 10ft increments are achievable using this system. Lower support slings must be attached to the frames every 2m to ensure a uniformly distributed load.

Lifting Points/Load Connection Points 20–80ft 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
20ft	2	3	2							3 or 4
30ft	2	1	3	2						6
40ft	1	2	3	2	1					7
50ft	1	2	1	3	2	1				8
60ft	1	2	1	3	1	2	1			10
70ft	1	2	1	1	3	1	2	1		11
80ft	1	2	1	1	3	1	1	2	1	13

1=Type 1 Frame
2=Type 2 Frame
3=Type 3 Frame

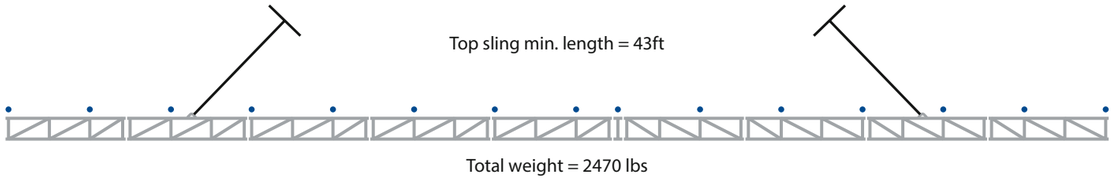
Maximum 3ft overhang of roofing sheet per end

Spreader	Configuration (frame types)										No. of Crossbeams
90ft	1	2	1	1	1	3	1	1	2	1	15

Type 1 Frame x7
Type 2 Frame x2
Type 3 Frame x1

Maximum 3ft overhang of roofing sheet per end

Assembled 90ft Lattice Spreader Beam

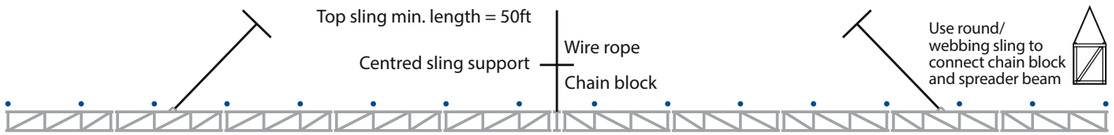


Total weight = 2470 lbs

Email: sales@modulift.com **www.modulift.com**

Lattice Spreader Beams

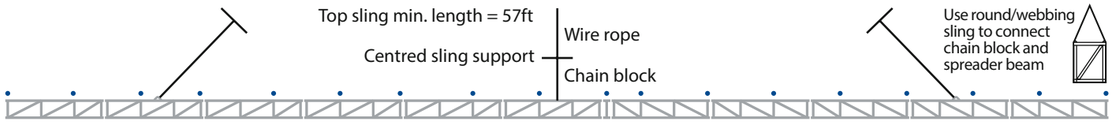
Assembled 100ft Lattice Spreader Beam



Total weight = 2715 lbs

Spreader	Configuration (frame types)											No. of Crossbeams
100ft	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 3ft overhang of roofing sheet per end											

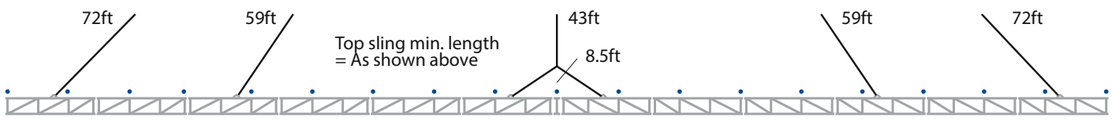
Assembled 110ft Lattice Spreader Beam



Total weight = 2970 lbs

Spreader	Configuration (frame types)											No. of Crossbeams
110ft	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 3ft overhang of roofing sheet per end											

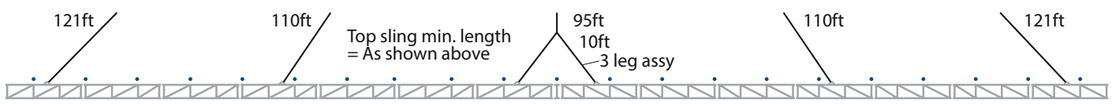
Assembled 120ft Lattice Spreader Beam



Total weight = 3535 lbs

Spreader	Configuration (frame types)												No. of Crossbeams
120ft	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 3ft overhang of roofing sheet per end												

Assembled 140ft Lattice Spreader Beam



Total weight = 4015 lbs

Spreader	Configuration (frame types)													No. of Crossbeams
140ft	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 3ft overhang of roofing sheet per end													

Tel: 011 44 1202 621511 **Fax:** 011 44 1202 632811

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
- Mod 6 up to Mod 800/1000 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.

We now have all our Spreader Beams up to 1000t capacity **DNV Type Approved**

DNV Standard for Certification

DNV 2.22: Modulift Spreader Beams 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 1000t 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)

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

Level 1. Standard Modulift Spreader Beams: In accordance with ASME B30.20. Available 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 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.

Email: sales@modulift.com **www.modulift.com**

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. See our Case Studies to read about the individual requirements for each lifting project.

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

Tel: 011 44 1202 621511 **Fax:** 011 44 1202 632811

Engineered Products High QA

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 Rosyyth 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.

Email: sales@modulift.com **www.modulift.com**

Engineered Products High QA

Sue Caples, Operations Manager and Head Engineer 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."

Tel: 011 44 1202 621511 **Fax:** 011 44 1202 632811

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: $82,670

Bridon International Ltd

Location: Doncaster, UK
Project: Subsea 7 – 400t and 165t spreader systems for offshore reels
Year: 2013
Value: $82,587

Rolls Royce Ltd

Location: Bristol, UK
Project: HMS Queen Elizabeth – MT30 turbine skid lifting system
Year: 2012
Value: $23,905

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: $445,610

Email: sales@modulift.com **www.modulift.com**

Modulift®

working between the hook and the load

GE-US-17