

Modulift®



**Working between the
hook and the load**

Product Brochure

Safe lifting solutions

Lifting Equipment

Spreader Beams • Lifting Beams • Lifting Frames

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 design, quality of products and customer satisfaction whilst ensuring a safe lifting environment.

Our Values

- Leadership
- Passion
- Accountability
- Innovation
- Quality
- Integrity

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.

Modulift are there every step of the way to ensure your lift runs smoothly, on time and to budget.

You may know us best for our world renowned Modular Spreader Beams but we have now extended our services to offer you a broader service. Please read through this booklet to find out more about the new products we can provide.



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Modulift Spreader Beams

Modulift offer a wide range of Modular Spreader Beam components, offering a variety of different spans for all your lifting needs.

The sizes range from 2 to 5,000 tonnes with spans available from 0.3m - 100m.

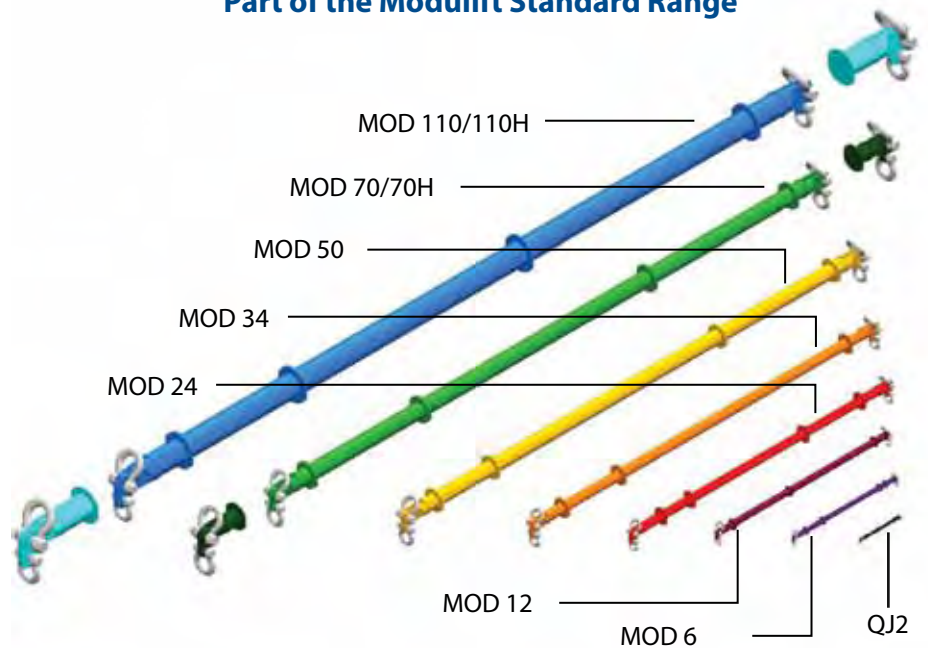
The flexibility of the modular configuration enables our Spreader Beams to be reused time and time again, providing a cost-effective solution.

What Size Beam Do I Need?

Simple! First select the span you require, then select the SWL you need for that span.

The MOD 12, 24 and 34 are part of the PORTABLE RANGE. All components are suitable for manual handling apart from the longer struts from the MOD 24 and MOD 34 which require 2-4 people to lift them. The MOD 50 to MOD 110H are part of the HEAVY RANGE.

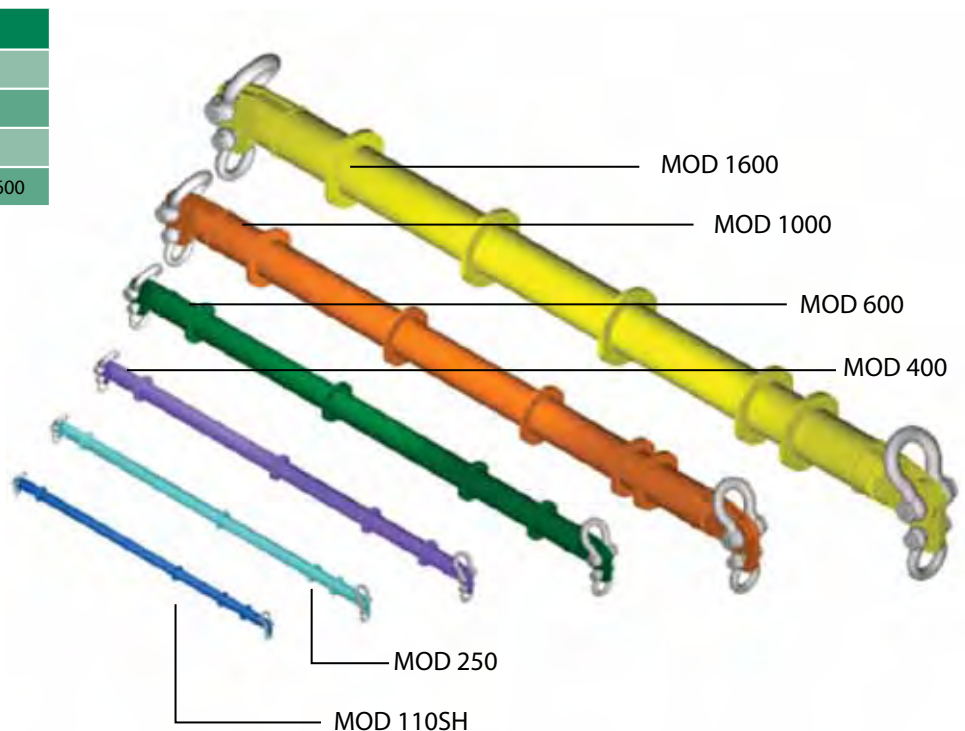
Part of the Modulift Standard Range



Range Classification

Range	Modulift Sizes
Maintenance	2, 6
Portable	12, 24, 34
Heavy	50, 70, 70H, 110, 110H
Superheavy	110SH, 250, 400, 600, 1000, 1600

Part of the Modulift Superheavy Range



The Modular Spreader Beam Product Range

With safety being of paramount importance, lifting equipment is strictly regulated to meet with all safety and design regulations, and each Modulift Spreader Beam has been Proof Load Tested in the Modulift compression test rig. **See page 11** for further information.

Maintenance Range	Portable Range	Heavy Range	Superheavy Range	Lattice Range
<p>QJ2 Up to 2 tonnes at 1.2m.</p> <p>MOD 6 Up to 6 tonnes at 2.5m.</p>	<p>MOD 12 Up to 12 tonnes at 4m.</p> <p>MOD 24 Up to 24 tonnes at 4.5m. Up to 6m at a lower capacity.</p> <p>MOD 34 Up to 34 tonnes at 5m. Up to 8m at a lower capacity.</p>	<p>MOD 50 Up to 50 tonnes at 7.5m. Up to 11m at a lower capacity.</p> <p>MOD 70 Up to 70 tonnes at 9m. Up to 12m at a lower capacity.</p> <p>MOD 70H Up to 100 tonnes at 8m. Up to 12m at a lower capacity.</p> <p>MOD 110 Up to 110 tonnes at 11m. Up to 16m at a lower capacity.</p> <p>MOD 110H Up to 170 tonnes at 8m. Up to 16m at a lower capacity.</p>	<p>MOD 110SH Up to 240 tonnes at 6m. Up to 16m at a lower capacity.</p> <p>MOD 250 Up to 250 tonnes at 13m. Up to 20m at a lower capacity.</p> <p>MOD 400 Up to 400 tonnes at 16m. Up to 23m at a lower capacity.</p> <p>MOD 600 Up to 600 tonnes at 21m. Up to 26m at a lower capacity.</p> <p>MOD 1000 Up to 1000 tonnes at 23m and up to 1400 tonnes at 18m. Up to 30m at a lower capacity.</p> <p>MOD 1600 Up to 1600 tonnes at 27m and up to 2000 tonnes at 23m. Up to 36m at a lower capacity.</p>	<p>Lattice Spreaders Up to 20 tonnes with a span from 6m to 45m.</p> <p>Lattice XL Up to 300 tonnes with a span from 6m to 100m.</p>

Modulift's Maintenance Range - Quick Joint 2

Features

- Up to 2 tonnes at 1.2m
- Fast assembly due to patented QJ design
- Lightweight: less than 8kg
- Handy carry case enables the QJ to be easily moved to a worksite before assembly
- Optional large carry case to enable slings, rigging and small lever hoist to be carried with QJ

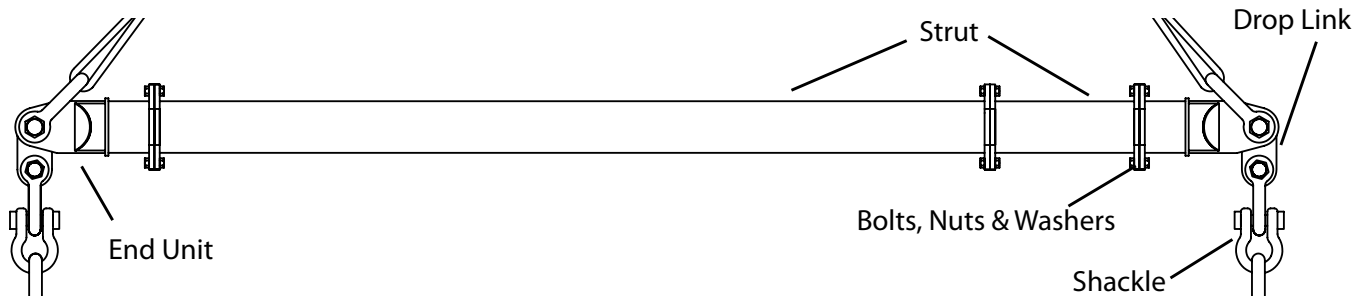
Benefits

- QJ's light weight aids compliance with Manual Handling Regulations and PUWER
- QJ design ensures test assembly on site, making QJ a cost effective tool
- Rapid assembly takes the chore out of correct rigging and slinging and reduces damage from sling compression



Key Features, Advantages and Benefits

Our Modular Spreader Beams bring to you the ultimate in flexibility and value, and are suitable for a variety of jobs. With an imaginative approach you can build and easily store a stock of components to deal with an array of lifts from 0.3m to 100m and from 2 tonnes through to 5000 tonnes!

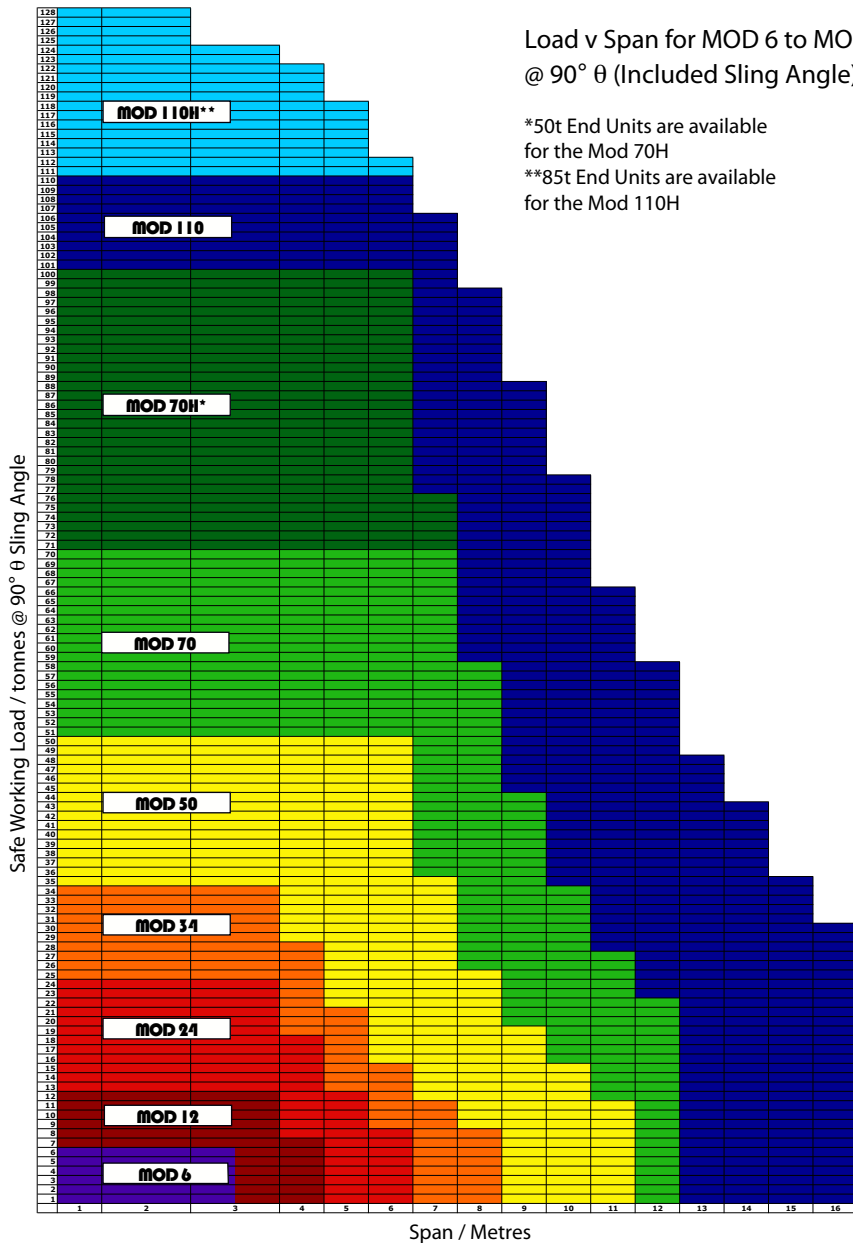


Modulift Spreaders Outperform the Competition!

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 – 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.

Economical Modular Spreaders with Fast Delivery

The Standard Range



Load v Span for MOD 6 to MOD 110H
@ 90° θ (Included Sling Angle) ISA

*50t End Units are available for the Mod 70H
**85t End Units are available for the Mod 110H

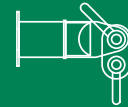
What Size Shackle Do I Need?

MOD 6



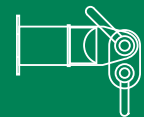
TOP: 4.75t
LOWER: 3.25t

MOD 12



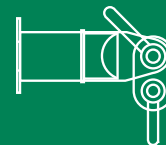
TOP: 8.5t
LOWER: 6.5t

MOD 24



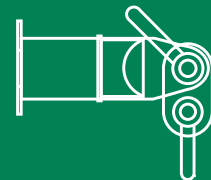
TOP: 17t
LOWER: 12t

MOD 34



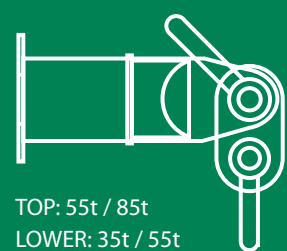
TOP: 25t
LOWER: 17t

MOD 50



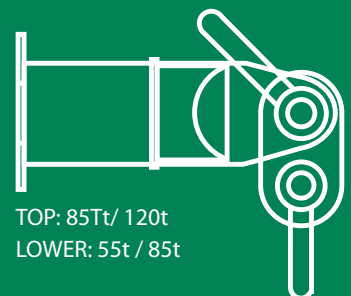
TOP: 35t
LOWER: 25t

MOD 70 / 70H



TOP: 55t / 85t
LOWER: 35t / 55t

MOD 110 / 110H

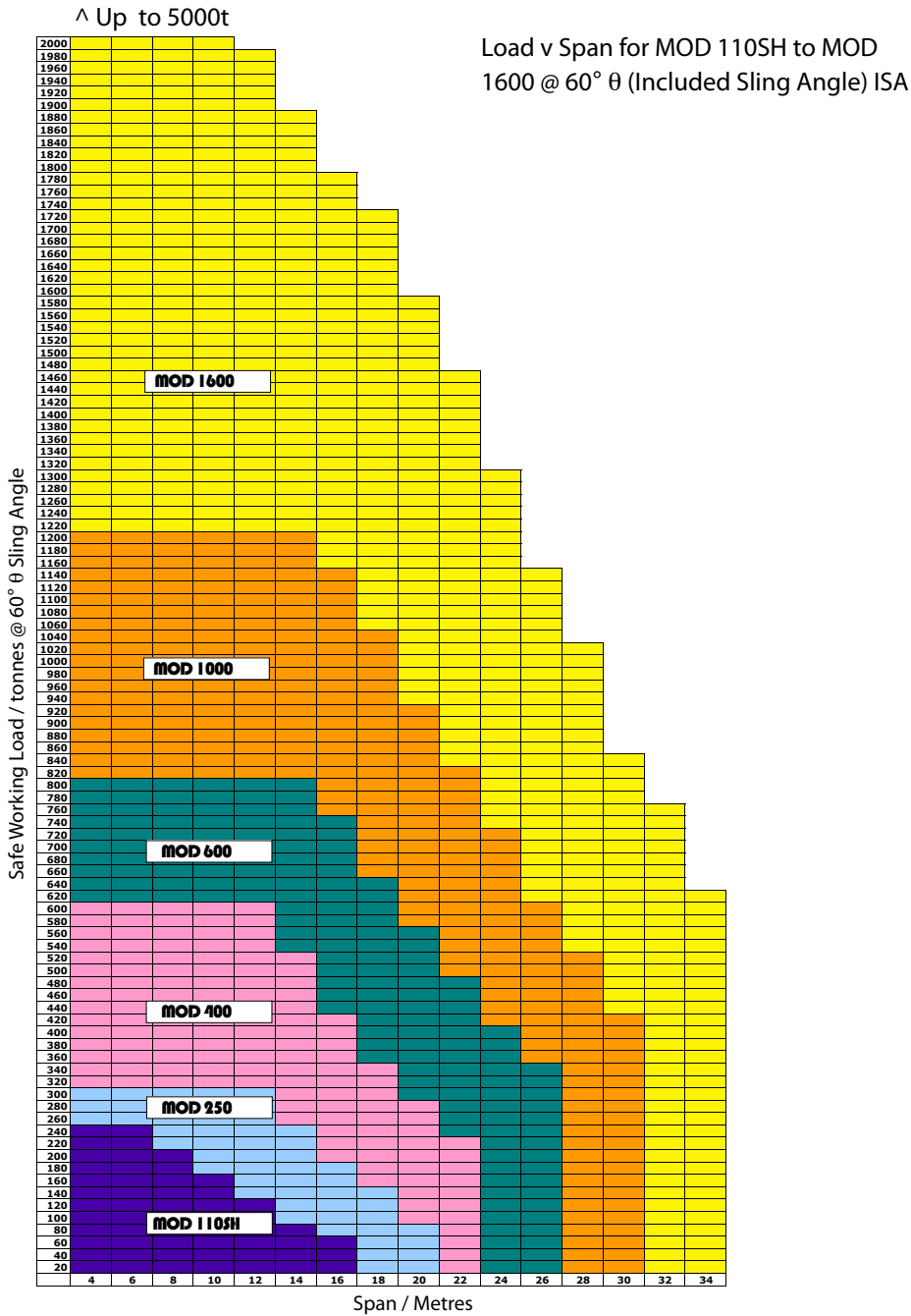


TOP: 85Tt/ 120t
LOWER: 55t / 85t

Components per Set

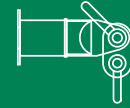
	Maintenance Range	Portable Range				Heavy Range			Super Heavy Range		
ITEM	MOD 6	MOD 12	MOD 24	MOD 34	MOD 50	MOD 70(H)	MOD 110(H)	MOD 110SH	MOD 250	MOD 400	
0.1m	1	-	-	-	-	-	-	-	-	-	
0.2m	1	-	-	-	-	-	-	-	-	-	
0.25m	-	1	-	-	-	-	-	-	-	-	
0.3m	1	-	-	-	-	-	-	-	-	-	
0.5m	-	1	1	1	1	1	-	1	1	-	
0.6m	1	-	-	-	-	-	-	-	-	-	
0.75m	-	1	-	-	-	-	-	-	-	-	
1m	1	1	1	1	1	1	1	1	1	1	
1.5m	-	1	-	-	-	-	-	-	-	-	
2m	-	-	2	3	1	1	1	1	1	1	
3m	-	-	-	-	-	-	-	-	1	1	
4m	-	-	-	-	2	2	3	3	-	-	
6m	-	-	-	-	-	-	-	-	2	3	
End Unit	2	2	2	2	2	2	2	2	2	2	
Drop Link	2	2	2	2	2	2	2	2	2	2	

The Superheavy Range



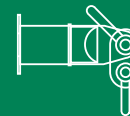
What Size Shackle Do I Need?

MOD 110SH



TOP: 150t
LOWER: 120t

MOD 250



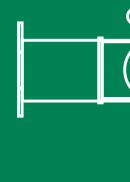
TOP: 200t
LOWER: 125t to 150t

MOD 400



TOP: 250t to 400t
LOWER: 200t to 400t
Depending on capacity

MOD 600



TOP: 300t to 500t
LOWER: 250t to 400t
Depending on capacity

MOD 1000



TOP/LOWER:
Consult Modulift
for Shackle sizes

MOD 1600



TOP/LOWER:
Consult Modulift
for Shackle sizes

Weight per Set (kgs)

Weight	MOD 6	MOD 12	MOD 24	MOD 34	MOD 50	MOD 70	MOD 110/110H
Max Component Weight	8.1	19	41	51	140	240	367
Min Component Weight	0.6	1.5	4	7	11	17	44/55
Weight per Set	28.8	73	121	264	551	908	1547/1567

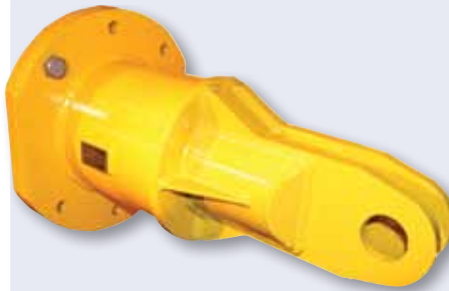
Weight	MOD 110SH	MOD 250	MOD 400	MOD 600	MOD 1000	MOD 1600
Max Component Weight	444	860	1365	1380	3200	TBC
Min Component Weight	76	76	150	200	360	TBC
Weight per Set	2272	3637	7285	7900	13700	TBC

Accessories for the Spreader Beam Range



Logistics Cradles

- Safe storage
- Efficient handling
- Instant component recognition
- Locking security case



Step-Down End Units

- For adapting existing Spreaders for longer span and lighter loads
- Enable versatility for lifts
- Best for smaller Modulift sizes



Drop Link Cradles

- Heavy Spreader accessory
- Drop Link support
- Easy align for Shackle fitting
- Standard for heavier MODs
- Available for MOD 110H upwards



Cone Adaptors

- For adapting existing Spreaders for longer spans and lighter loads
- Enable versatility for lifts
- Best for larger Modulift sizes



Shackles and Slings

- For all Modulift Spreaders
- For all rigging requirements
- All types to suit all lifts



Tool Kits

- Optimized for rapid assembly and disassembly
- Portable storage tool box
- Improved safety and speed of rigging operations

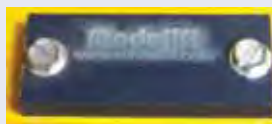
Delta and Clevis Drop Links

A range of alternatives to standard Drop Links are available



RFID Tags

We are now able to offer RFID ready products. We use the Syntag RFID tag, which is manufactured from an engineered composite material that overcomes the radio frequency blocking effects of traditional steel ID tags without compromising the durability required in heavy construction and industrial service. They are compatible with inspection and asset management systems from Crosby Quic-Check, InfoChip Systems, N4 Systems and iTraax.



Semi Spreader - End Units

- End Unit to extend Spreader
- Best for long light loads

One Beam Many Lifts

Interchangeable Components

For Larger Lighter Loads

For longer spans and lighter loads, additional components are available allowing you to optimise the struts from our higher capacity range of Modular Spreader Beams to carry out these lifts. These struts provide the backbone of our Spreader Beams when trying to achieve longer spans. We have two solutions that can make the system more flexible and cheaper for you;

- Step-Down End Units are designed for smaller sizes
- Cone Adaptors accommodate the larger sizes

These additional components allow your existing Spreader Beam to become even more versatile over a number of lifts so you can remain cost-effective with your rigging and crane capacity requirements.

By stepping down the End Units to a more suitable capacity, you can optimise your Shackles and Slings to provide a lighter system overall.

There are a number of ways you can utilise our Modular Spreader Beams, for example;

Need a span of 20m but are only lifting 70 tonnes - we can provide you with a MOD 250/70 giving you Cone Adaptors and MOD 70 End Units to add to MOD 250 struts to achieve the required overall Spreader Beam system.

Need to lift 24 tonnes but at 12 meters - change our standard MOD 70 Spreader Beam End Units to Step Down End Units and decrease the SWL to 24 tonnes allowing you to use smaller Shackles and Slings with the MOD 70 struts.

Need to lift 100 tonnes – by changing the End Units on our MOD 70 Spreader Beam to the MOD 70H End Units you can increase the SWL to 100 tonnes negating the need to buy a completely brand new Spreader Beam.

Using one of our Modular Spreader Beams enables you to be more flexible over a number of lifts without needing to buy a new Spreader Beam every time, minimising the overall weight of the lifting equipment and the costs incurred whilst working between the hook and the load.



Lifting Beams, Lifting & Spreader Frames

Modulift are continually striving to develop new products and to produce innovative designs. To help you solve even more of your lifting problems we have designed a variety of new products. Please ask for further information and details of any of the products you see below and if the product you require is not shown here, please do contact us. Our Lifting Beams come in a variety of shapes and sizes, and can be designed for multi-point lifts, or simple 2-point lifts.

Fixed Lifting Beams

A traditional, cost effective Lifting Beam for single or multiple lifts of the same size. Offered with standard or multi-lifting points. Single or tandem crane application. Lifting capacities up to 2000 tonnes.



Castellated Lifting Beams

A Fixed Beam with variable lifting points, which can be easily adjusted. Useful for work within a factory environment where headroom may be an issue. Lifting capacities up to 50 tonnes.



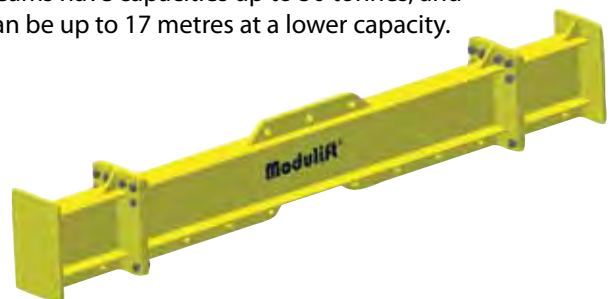
'H' Lifting Frames

Can be used when a four (or more) point lift is required. Used for similar loads to the Spreader Frame, but is ideal for when headroom is an issue. Lifting capacities up to 100 tonnes.



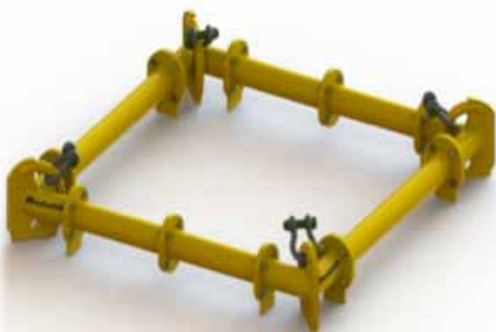
Modular Lifting Beam

A new development in Lifting Beams that follows the concept of the Modulift Spreader Beam but enables use where headroom is a problem. Our Modular Lifting Beams have capacities up to 50 tonnes, and can be up to 17 metres at a lower capacity.



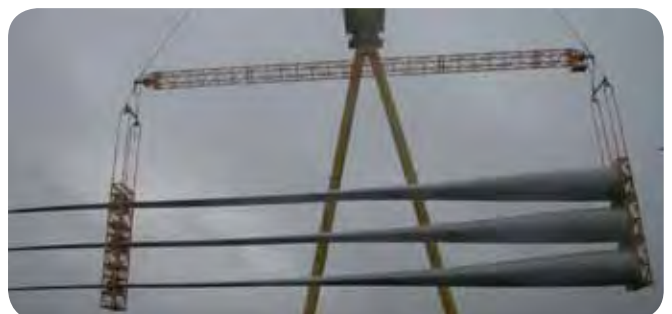
Spreader Frames

The solution to lifting objects with more than two lifting points that are not designed to resist loads within their own structure. Lifting capacities up to 500 tonnes.



Semi-Spreaders

Based on the standard spreader concept, but have extensions outside of the lift points to allow the lifting of longer, lighter loads.



Regulations, Standards & Compliance

Each Modulift Spreader Beam has been Proof Load Tested in the Modulift compression test rig and all products comply with the relevant standards as detailed below:

UK & Europe Compliance

BS2573: Rules for the Design of Cranes: Part 1: Spec. for classification, stress calcs and design criteria for structures.

BS EN 13155 - 2003: Non fixed load lifting attachments Modulift Spreader Beams also conform to DNV Rules for lifting appliances No 2.22 and DNV Rules for planning and execution of Marine Operations.

Australia Compliance

AS 4991 - 2004: Lifting Devices.

USA Compliance

ASME B30.20 - 2010: For below-the-hook lifting devices.

ASME BTH - 1: 2008: Modulift Spreader Beams have a minimum safety factor of 3:1 on yield strength of the material.

DNV Standard for Certification

DNV 2.22: Modulift Spreader Beams 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 recognized DNV Design Approval for all Spreader Beams up to 600 tonnes 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 options for DNV test witnessing.

When a project demands the highest level of certification Modulift are able to offer our customers varying degrees of DNV certification depending upon their individual QA requirements, including:

- Survey Report
- Record of Test
- DNV Certificate of Conformity for Manufacture & Test



Ask Modulift About the Menu of Options Available to Ensure Your Safe Lift

1. Modulift Spreader Beams

Produced to BS573 & BS EN 13155 - 2003. Available CE Marked and supplied with a Certificate of Conformity to the relevant standard.

2. Modulift Proof Load Testing

Modulift offer an individual Proof Load Test service to those requiring a higher level of certification. Please ask for further information.

3. Modulift DNV Certified

The ultimate in certification and quality control for the most demanding project specification; a Modulift Spreader Beam manufactured to a design approved by DNV and witnessed by DNV surveyors throughout the fabrication process and Proof Load Testing. Supplied with a design review report and certificate of conformity for manufacture and testing, issued by DNV.

Engineering Consultancy & Custom Design Services

With over 20 years experience, Modulift's team of Lifting Engineers are able to provide expert advice in all aspects of onshore and offshore lifting. We can also provide a custom designed and engineered lifting solution for all your lifting requirements.

Engineering Consultancy

Whether you require advocacy in safe and effective procedures for the use of heavy lifting equipment or need RFID training to enable you to remotely take complete control over your assets, Modulift are here to help.

Custom Design Services

Not every load fits into a standard lifting mould. Our team of engineers are lifting industry experts capable of coming up with 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, price, weight, flexibility of use, speed of assembly or transportation requirements to name but a few - we can design a solution for you.

Rig Design

When dealing with customers who require lifts that involve more complex rigs and combinations of Modulift Spreader Beams or where the item being lifted does not have a central centre of gravity, our customers can call on our assistance. We will make available our engineering team who will assist by designing the most appropriate solution using the Modulift range of products.

Services Available

- Engineering Design
- Lifting Consultancy
- RFID Project Management
- Engineering Drafting
- Rig Planning Services
- Lifting and Rigging Training
- Contract Lifting Management and Site Supervision



Why Use Modulift?

- All our equipment conforms to the highest engineering standards and meets or exceeds government and industry regulations such as BS573 & BS EN 13155 - 2003, and Lifting Operations and Lifting Equipment Regulations 1998 (LOLER)
- Modulift have ISO 9001: 2008 and are members of LEEA
- Using a specialist engineering company gives you peace of mind for a safe lift with engineers on hand to ensure everything runs smoothly
- We can design a solution specifically designed for your needs minimising potential problems associated with using incorrect equipment
- Reduced costs associated with: over engineering; excessive design times, individual fabrication requirements, testing and liability insurance; and damaged loads

Rig Planning Services

At Modulift we understand that organizing a lift can be a complicated process with many factors that need to be considered. On top of all the other considerations is the rig planning for the lift. With our highly trained specialist Lifting Engineers, Modulift can help you.

It may be a simple configuration or it may be a more complicated rig. Send us details of your lift including load, span, sling length restrictions, load type, centre of gravity (COG), crane type and lifting environment and we can help advise the best solution for you.

With our in-house engineers, we can design and manufacture a custom solution for all your lifting needs!

Your Guide to Some of the Configurations Available to You

1. Simple Single Beam 2 point Lift

A single Spreader Beam is the simplest configuration and is suitable for 2 point lifts. The Spreader Beam absorbs the compression forces to protect the load being lifted.

2. Single Beam 4 Point Lift

This configuration again used a single beam where the load being lifted requires four individual lifting points.

3. 1-Over-2 Rig

We use this configuration when vertical slings are essential. By varying the sling lengths, we can also take into account an offset center of gravity.

4. 1-Over-2 Inline Rig

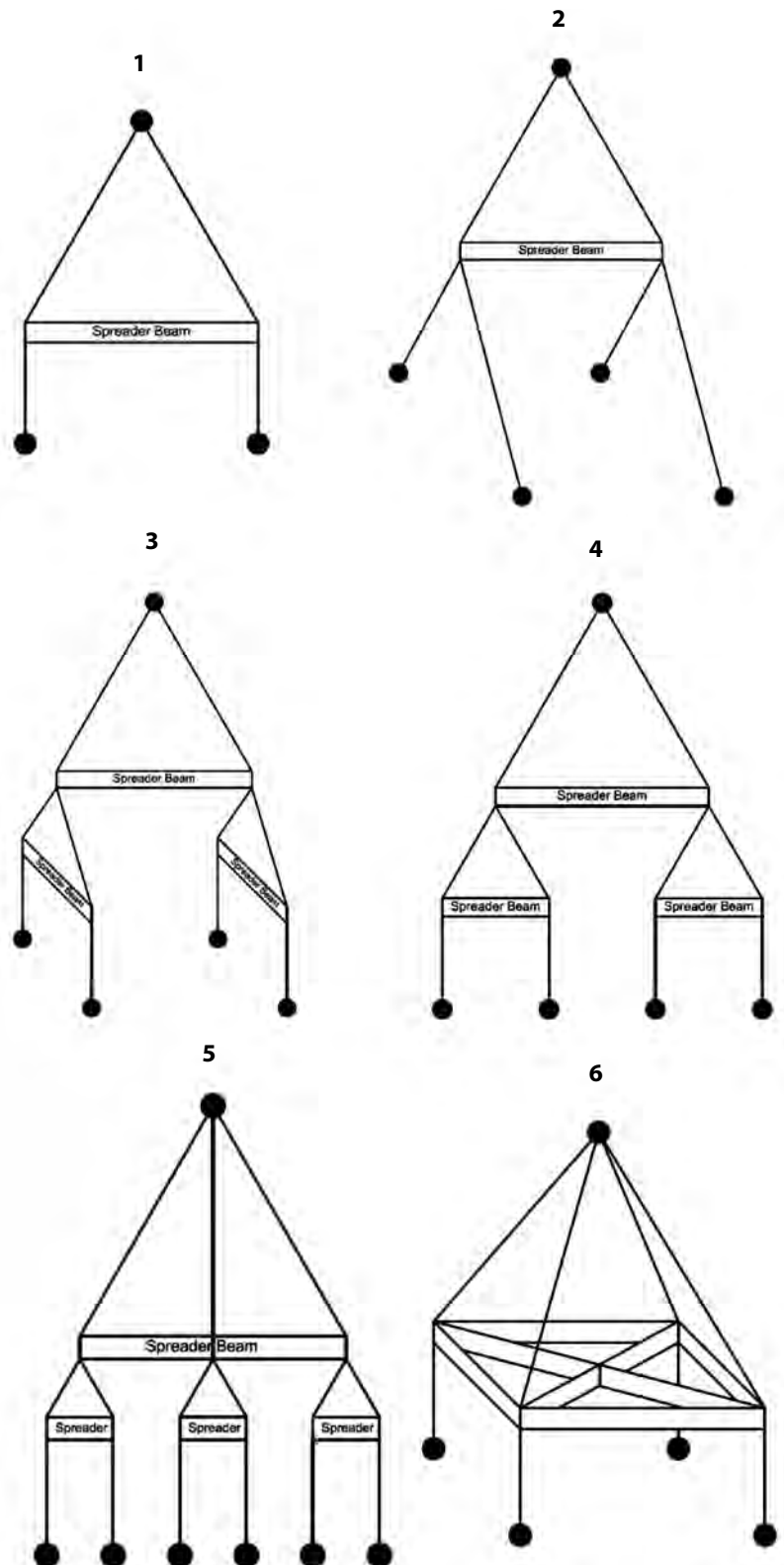
Ideal for those lifts where the span is long and potential bending of the load is a problem.

5. Various Multi Spreader Beam Rigs

With our expert help we can address most lifting issues using a combination of our products to fit the application and the circumstances.

6. Lifting Frame

We will even design custom solutions such as Lifting Frames!



Modulift Custom Design - Case Study

Modulift Provide a Record First Lifting Solution for the Wind Energy Industry and Harland & Wolff

Modulift have designed and manufactured the giant lifting rig used for the fast and efficient lifting and assembly of the Repower's 5MW giant wind turbines at Harland and Wolff in N. Ireland. Responsible for the unloading and assembly of the clean power generators for Vattenfall's Ormonde Offshore Wind Farm Project in the Irish Sea, Harland and Wolff also have to load them back onto the barges when assembled, for installation in the Irish Sea, creating a need for a rig that could multi-task.

Modulift's remit was to design a rig which could not only lift the individual turbines and towers separately and assembled, but also lift three wind turbine blades in one go enabling the blades to stay in their calibrated sets for each turbine, at all times. Using the same principles of their existing standard products, Modulift succeeded in engineering a safe, lightweight, and cost-effective solution allowing Harland and Wolff to continuously store and load from January until the end of July.



To provide a solution which achieved the objectives required, Modulift designed a rig consisting of two elements which could be used in various configurations for the transportation and installation process of the various wind turbine components. The first is a giant 500t Lifting Beam, 16 metres long. Due to the nature of the lift and the need for minimizing the overall weight of the rig itself, Modulift had to be able to design and build the beam to weigh less than 40 tonnes without compromising its capabilities. The Lifting Beam was also designed to include inspection hatches and was built to ensure that these hatches would not compromise the strength of the beam. The beam was

an exciting milestone for Modulift, proving their technical achievements in designing highly engineered lifting equipment to provide the ultimate solution for lifts of this size.

The second was another feat of engineering for Modulift in the design and fabrication of a 48.5m Spreader Beam that weighed no more than 9.6 tonnes to maximise the capacity of the cranes. The beam had to be easy to assemble in situ and capable of lifting the wind turbine blades, which in their set of three weigh 75 tonnes and span 61.5 metres.

"We are proud to be able to say that we designed and manufactured this solution for Harland and Wolff. We spent a lot of time planning the best solution for their requirements and still needed to be able to turn this project around in record time. With the barges already on their way from Germany we had to battle against the weather to get the components finished and transported to Belfast on time to enable the project to stay on schedule, with the first barge arriving in early January. The components were taken by ferry to Belfast on several trucks and with Belfast experiencing its coldest winter in 16 years, snow storms threatened to delay delivery. Luckily the dedication of all parties involved enabled both the Lifting Beam and the Lattice Spreader to be delivered before Christmas, and tested and commissioned in time for its first use in early January", said Sue Caples, Operations Director and Head of Engineering at Modulift.

As demand for heavy lifting is set to increase, with Modulift receiving a record number of orders for its MOD 400 so far in 2011, Harland and Wolff are expecting to use their new 500 tonne Lifting Beam on many projects to come. In addition Modulift are now standardizing their new "giant" Lattice Spreaders for future customers looking to lift very long loads up to 100 tonnes, keeping the same passion, accountability, and quality of their existing products.



modulift®

Spreader Beams • Lifting Beams • Lifting Frames



Lifting equipment specialists in design, manufacture and engineering

- **Spreader Beams** for 2-5000 tonnes and spans up to 100m
- **Lifting Beams** for 2-2000 tonnes and spans up to 17m
- **Custom design** engineering services available
- **Quality assured products**, fully tested and certified designs
- **DNV DESIGN APPROVED**
- **Proof load test** and/or third party witness tests available on request
- Spreader Beams **in stock for fast delivery**



For more information:

UK Sales Office: +44 (0) 1202 621511

US Sales Office: +1 412 638 6688

Email: sales@modulift.com



www.modulift.com

Modulift

Working between the hook and the load

