

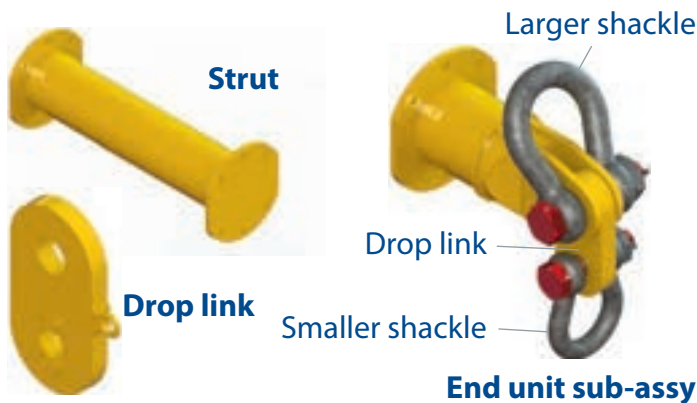
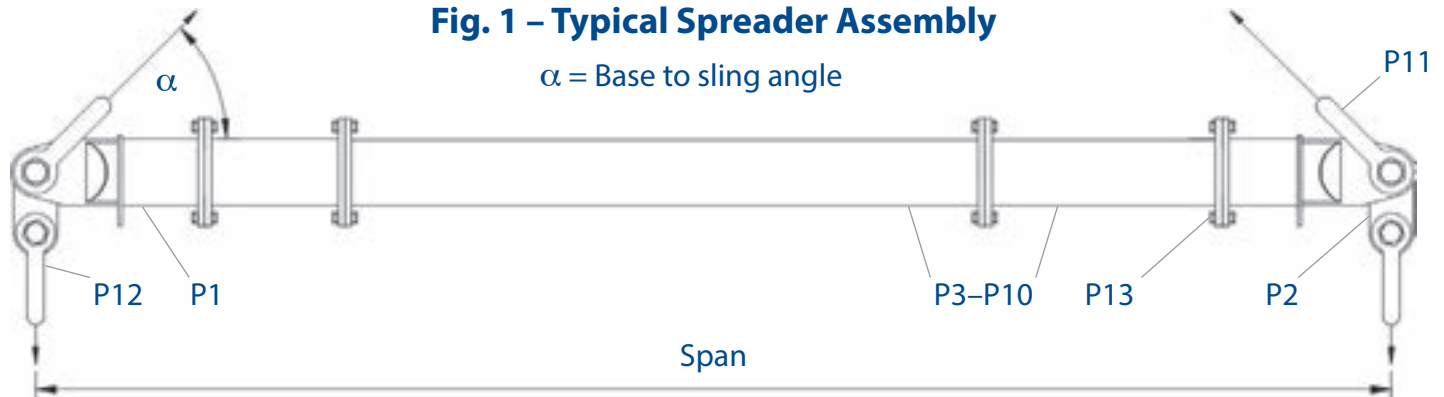
# User Instructions

## MOD 110

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

The Modulift Spreader is modular in length, and every spreader consists of 1 pair of End Units and Drop Links, with intermediate struts that can be bolted into the assembly to achieve different spans. MOD 110 has an assembled span ranging from 6ft to 59ft in 1ft increments..

**Fig. 1 – Typical Spreader Assembly**



**Table 1 – Component List**

Part Ref.	Description	Weight/item
P1	End Unit	379 lbs
P2	Drop Link	99 lbs
P3	20ft Strut	1170 lbs
P4	12ft Strut	750 lbs
P5	10ft Strut	650 lbs
P6	8ft Strut	540 lbs
P7	6ft Strut	440 lbs
P8	4ft Strut	345 lbs
P9	2ft Strut	230 lbs
P10	1ft Strut	185 lbs
P11	85t Shackle	137 lbs
P12	55t Shackle	87 lbs
P13	M20 x 65 Grade 8.8 HT Bolts, Nuts & Washers	

### MOD 110 Beam Specification

- Rated at 110 tonnes SWL at 37ft span (60° BSA). See Load Table for SWL at longer spans.
- 'Base to Sling' angle,  $\alpha$ , 45 degrees or more.
- End Units & Drop Links are rated at 55 tonnes WLL each (110 tonnes combined capacity).
- **Bolt tightening torque: 110 Pound-Foot.** Spanner size required: 30mm.
- Recommended additional equipment: Torque Wrench, Podger Spanner and Ring Spanner.

### **! WARNING!**

- Personnel using this system should be suitably trained, competent and have a clear understanding of Safe Slings procedures.
- The use of Modulift equipment must be in accordance with the procedures laid down in 'ASME B30.20 - 2013'.
- **Never exceed stated SWL** – Adhere to SWL in **Table 2** for particular sling angle used.
- **The top sling length is critical to the safe use of the spreader** – Adhere to **Table 2**.
- Ensure Drop Links hang down, and smaller shackles are connected to bottom hole of Drop Link.
- Do not under any circumstances hang load(s) from the tube or flanges – the spreader is designed for axial compression, not bending.

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## Assembly Procedure

- Check the ID plates on each Modulift component to ensure the correct size is used.
- Lay out the Struts and End Units in the correct configuration (see **Table 2**), laid on flats to prevent rolling.
- Check that all pairs of flanges are clear from debris, sand etc. before connection.
- Bolt the components together using bolts, nuts & washers provided. Tighten the bolts to a torque as shown overleaf, 6 bolts per connection. The number and grade of bolts is critical for the safe use of the spreader particularly at longer spans.
- Place drop link inside the jaw of an end unit, with the larger hole of drop link lined up with the End Unit hole.
- Place a top sling onto the body of a top shackle, and put jaw of top shackle over the end unit jaw.
- Put top shackle pin through shackle, end unit jaw and drop link, and repeat for other spreader beam end.
- Attach free ends of top slings to crane hook.
- Attach lower slings and shackles to lower holes of drop links, and attach them to the load to be lifted.
- The assembled spreader beam and lifting rig must be thoroughly checked by a competent person prior to lifting.

## Do's & Don'ts

- Do ensure to load the spreader through the drop links only. i.e. adhere to **Fig. 1**.
- Do keep the loaded spreader clear of obstacles – any contact could cause beam failure.
- Do ensure correct use of appropriate top slings, do not twist any slings unnecessarily.
- Do not hang any load from the spreader tube or flanges.
- Do not exceed stated SWL for that particular span – adhere to **Table 2**.
- Do not rig the lower slings more than 6 degrees from vertical.
- When moving or positioning long struts or assemblies use tag lines to control movement.
- Individual components can be heavy and extreme care must be taken if manual handling.

## Recommended top sling types:

Textile slings, wire rope slings with soft eyes and chain slings with small end fittings. If thimble eyes are used with wire rope slings, make sure sling angle is 60 degrees or more. Other types exist but not all are suitable due to end fitting size, particularly larger capacity chain hook and thimble eyes.

**Note:** Lengthening the slings can give greater clearance. Refer to Modulift supplier if in doubt.

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Should you find your equipment is no longer of use, please dispose of in a responsible manner. Please contact Modulift if you need further guidance



### Table 2 – Load v Span

Span (ft)	Base to Sling Angle (BSA) α						Recommended Configuration EU - End Unit (3ft)								
	45°		60°		70°		EU		EU		EU				
	SWL metric tons (tonnes)	Min. top sling length (ft.in)	SWL metric tons (tonnes)	Min. top sling length (ft.in)	SWL metric tons (tonnes)	Min. top sling length (ft.in)									
6	110	3' 1"	110	4' 10"	110	7' 7"	EU	EU							
7	110	3' 10"	110	5' 10"	110	9' 1"	EU	1	EU						
8	110	4' 6"	110	6' 10"	110	10' 6"	EU	2	EU						
9	110	5' 2"	110	7' 10"	110	12' 0"	EU	2	1	EU					
10	110	5' 11"	110	8' 10"	110	13' 6"	EU	4	EU						
11	110	6' 7"	110	9' 10"	110	14' 11"	EU	4	1	EU					
12	110	7' 4"	110	10' 10"	110	16' 5"	EU	6	EU						
13	110	8' 0"	110	11' 10"	110	17' 10"	EU	6	1	EU					
14	110	8' 8"	110	12' 10"	110	19' 4"	EU	6	2	EU					
15	110	9' 5"	110	13' 10"	110	20' 10"	EU	2	6	1	EU				
16	110	10' 1"	110	14' 10"	110	22' 2"	EU	6	4	EU					
17	110	10' 11"	110	15' 10"	110	23' 8"	EU	1	6	4	EU				
18	110	11' 7"	110	16' 10"	110	25' 1"	EU	12	EU						
19	110	12' 4"	110	17' 10"	110	26' 7"	EU	12	1	EU					
20	110	13' 0"	110	18' 10"	110	28' 1"	EU	12	2	EU					
21	110	13' 8"	110	19' 10"	110	29' 6"	EU	2	12	1	EU				
22	110	14' 5"	110	20' 10"	110	31' 0"	EU	12	4	EU					
23	110	15' 1"	110	21' 10"	110	32' 6"	EU	4	12	1	EU				
24	110	15' 10"	110	22' 10"	110	33' 11"	EU	12	6	EU					
25	110	16' 6"	110	23' 10"	110	35' 5"	EU	6	12	1	EU				
26	110	17' 2"	110	24' 10"	110	36' 10"	EU	6	12	2	EU				
27	110	17' 11"	110	25' 10"	110	38' 4"	EU	6	12	2	1	EU			
28	110	18' 7"	110	26' 10"	110	39' 10"	EU	6	12	4	EU				
29	108	19' 4"	110	27' 10"	110	41' 2"	EU	6	12	4	1	EU			
30	103	20' 0"	110	28' 10"	110	42' 8"	EU	12	12	EU					
31	96	20' 10"	110	29' 10"	110	44' 2"	EU	12	12	1	EU				
32	91	21' 6"	110	30' 10"	110	45' 7"	EU	12	12	2	EU				
33	84	22' 2"	110	31' 10"	110	47' 1"	EU	2	12	12	1	EU			
34	80	22' 11"	110	32' 10"	110	48' 6"	EU	12	12	4	EU				
35	74	23' 7"	110	33' 10"	110	50' 0"	EU	4	12	12	1	EU			
36	70	24' 4"	110	34' 10"	110	51' 6"	EU	6	12	12	EU				
37	65	25' 0"	110	35' 10"	110	52' 11"	EU	6	12	12	1	EU			
38	60	25' 8"	106	36' 10"	110	54' 5"	EU	6	12	12	2	EU			
39	56	26' 5"	98	37' 10"	110	55' 10"	EU	2	12	12	6	1	EU		
40	52	27' 1"	92	38' 10"	110	57' 4"	EU	6	12	12	4	EU			
41	48	27' 10"	85	39' 10"	110	58' 10"	EU	6	12	12	4	1	EU		
42	46	28' 6"	81	40' 10"	110	60' 2"	EU	12	12	12	EU				
43	43	29' 2"	75	41' 10"	110	61' 8"	EU	12	12	12	1	EU			
44	40	29' 11"	70	42' 10"	110	63' 2"	EU	12	12	12	2	EU			
45	37	30' 8"	65	43' 10"	105	64' 7"	EU	2	12	12	12	1	EU		
46	35	31' 5"	62	44' 10"	99	66' 1"	EU	4	12	12	12	EU			
47	32	32' 1"	57	45' 10"	92	67' 6"	EU	4	12	12	12	1	EU		
48	30	32' 10"	54	46' 10"	87	69' 0"	EU	12	12	12	6	EU			
49	28	33' 6"	50	47' 10"	81	70' 6"	EU	6	12	12	12	1	EU		
50	26	34' 2"	47	48' 10"	76	71' 11"	EU	6	12	12	12	2	EU		
51	24	34' 11"	44	49' 10"	71	73' 5"	EU	6	12	12	12	2	1	EU	
52	23	35' 7"	41	50' 10"	67	74' 11"	EU	6	12	12	12	4	EU		
53	21	36' 4"	38	51' 10"	62	76' 4"	EU	6	12	12	12	4	1	EU	
54	20	37' 0"	37	52' 10"	59	77' 10"	EU	12	12	12	12	EU			
55	19	37' 8"	34	53' 10"	55	79' 2"	EU	12	12	12	12	1	EU		
56	17	38' 5"	32	54' 10"	52	80' 8"	EU	12	12	12	12	2	EU		
57	16	39' 1"	30	55' 10"	48	82' 2"	EU	12	12	12	12	2	1	EU	
58	15	39' 10"	28	56' 10"	46	83' 7"	EU	12	12	12	12	4	EU		
59	14	40' 7"	26	57' 10"	42	85' 1"	EU	12	12	12	12	4	1	EU	

## WARNING!

- The rigger must ensure that there is a clearance between the sling end fitting and the end unit as shown opposite.
- Max number of struts allowed in spreader assembly: 6.
- Assemble longer struts in the centre of the spreader configuration.
- Sling angle is crucial to safe use of spreader.

