

User Instructions

MOD 250/300

Modulift[®]
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 250/300 has an assembled span ranging from 6ft to 68ft in 1ft increments.

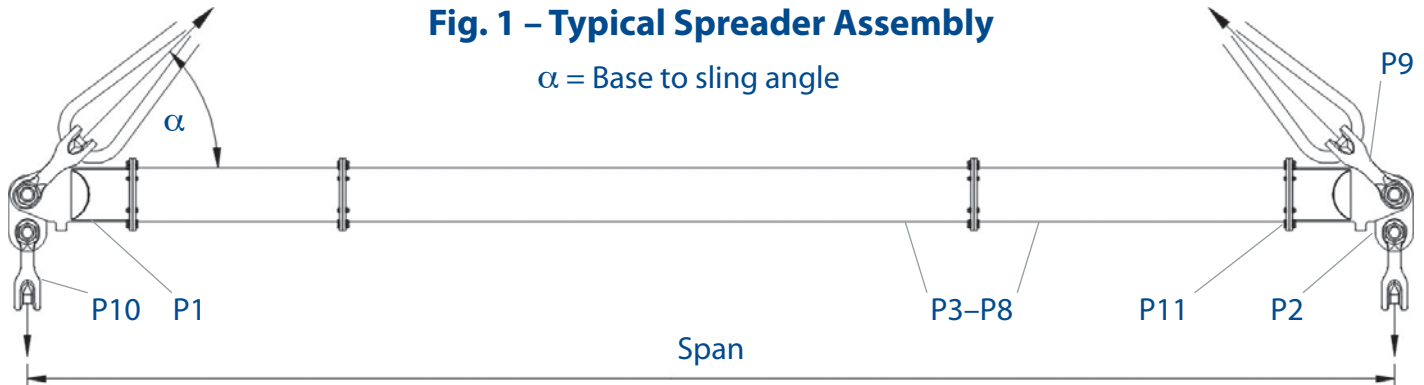


Fig. 1 – Typical Spreader Assembly

α = Base to sling angle

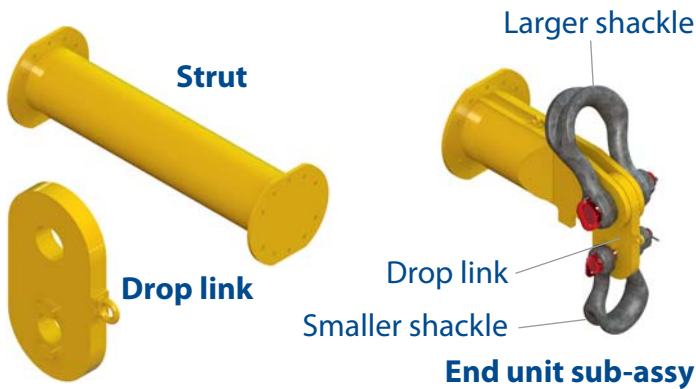


Table 1 – Component List

Part Ref.	Description	Weight/item
P1	End Unit	743 lbs
P2	Drop Link	198 lbs
P3	20ft Strut	1900 lbs
P4	10ft Strut	1087 lbs
P5	5ft Strut	680 lbs
P6	3ft Strut	518 lbs
P7	2ft Strut	436 lbs
P8	1ft Strut	355 lbs
P9	200t Wide Body Shackle	452 lbs
P10	150t Wide Body Shackle	309 lbs
P11	M24 x 80 Grade 8.8 HT Bolts, Nuts & Washers	

MOD 250/300 Beam Specification

- Rated at 300 tonnes SWL at 40ft span (60° BSA). See Load Table for SWL at longer spans.
- 'Base to Sling' angle, α , 45 degrees or more.
- End Units & Drop Links are rated at 150 tonnes WLL each (300 tonnes combined capacity).
- **Bolt tightening torque: 184 Pound-Foot.** Spanner size required: 36mm.
- 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, 10 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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Table 2 – Load v Span

Span (ft)	Base to Sling Angle (BSA) α						Recommended Configuration EU - End Unit (3ft)						
	45°		60°		70°								
	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	279	2' 6"	300	4' 4"	300	7' 1"	EU	EU					
8	279	4' 0"	300	6' 4"	300	10' 0"	EU	2	EU				
10	279	5' 5"	300	8' 4"	300	12' 11"	EU	3	1	EU			
12	279	6' 10"	300	10' 4"	300	15' 10"	EU	5	1	EU			
14	279	8' 2"	300	12' 4"	300	18' 10"	EU	5	3	EU			
16	279	9' 7"	300	14' 4"	300	21' 8"	EU	10	EU				
18	279	11' 0"	300	16' 4"	300	24' 7"	EU	10	2	EU			
20	279	12' 5"	300	18' 4"	300	27' 6"	EU	3	10	1	EU		
22	279	13' 11"	300	20' 4"	300	30' 6"	EU	5	10	1	EU		
24	279	15' 4"	300	22' 4"	300	33' 5"	EU	5	10	3	EU		
26	279	16' 8"	300	24' 4"	300	36' 4"	EU	10	10	EU			
28	279	18' 1"	300	26' 4"	300	39' 2"	EU	20	2	EU			
30	279	19' 6"	300	28' 4"	300	42' 2"	EU	3	20	1	EU		
32	271	20' 11"	300	30' 4"	300	45' 1"	EU	5	20	1	EU		
34	252	22' 4"	300	32' 4"	300	48' 0"	EU	5	20	3	EU		
36	234	23' 10"	300	34' 4"	300	50' 11"	EU	20	10	EU			
38	213	25' 2"	300	36' 4"	300	53' 11"	EU	10	20	2	EU		
40	197	26' 7"	300	38' 4"	300	56' 10"	EU	10	20	3	1	EU	
42	173	28' 0"	299	40' 4"	300	59' 8"	EU	10	20	5	1	EU	
44	164	29' 5"	284	42' 4"	300	62' 7"	EU	10	20	5	3	EU	
46	155	30' 10"	268	44' 4"	300	65' 6"	EU	20	20	EU			
48	141	32' 2"	244	46' 4"	300	68' 6"	EU	20	20	2	EU		
50	133	33' 8"	230	48' 4"	300	71' 5"	EU	3	20	20	1	EU	
52	122	35' 1"	211	50' 4"	300	74' 4"	EU	5	20	20	1	EU	
54	113	36' 6"	195	52' 4"	300	77' 2"	EU	5	20	20	3	EU	
56	101	37' 11"	174	54' 4"	277	80' 2"	EU	20	20	10	EU		
58	96	39' 4"	166	56' 4"	263	83' 1"	EU	10	20	20	2	EU	
60	87	40' 8"	150	58' 4"	239	86' 0"	EU	10	20	20	3	1	EU
62	80	42' 1"	138	60' 4"	219	88' 11"	EU	10	20	20	5	1	EU
64	73	43' 7"	126	62' 4"	200	91' 11"	EU	10	20	20	5	3	EU
66	65	45' 0"	112	64' 4"	185	94' 10"	EU	10	20	20	10	EU	
68	59	46' 5"	106	66' 4"	171	97' 8"	EU	10	20	20	10	2	EU

To calculate the SWL at intermediate spans utilising the 1ft strut, round up the span to the next longest span in Table 2, and use the stated SWL.

WARNING!

- The rigger must ensure that there is a clearance between the sling end fitting and the end unit as shown above.
- 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.

