

User Instructions

MOD 250/400

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 250/400 has an assembled span ranging from 6ft to 68ft in 1ft increments.

Fig. 1 – Typical Spreader Assembly

α = Base to sling angle

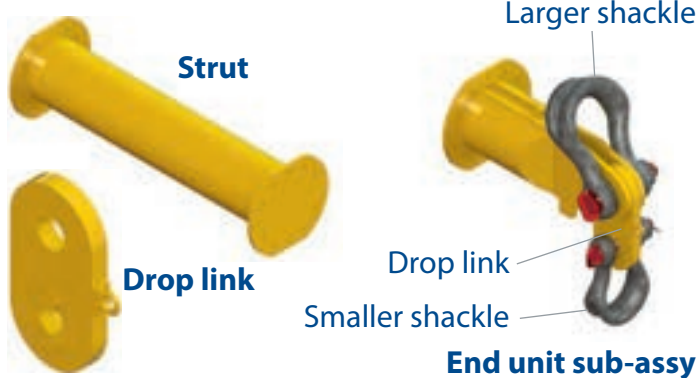
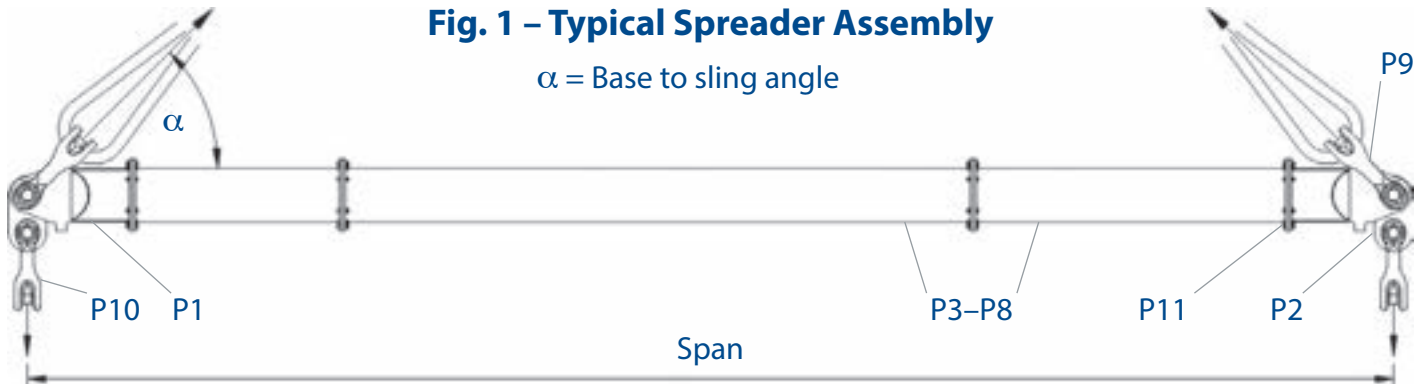


Table 1 – Component List

Part Ref.	Description	Weight/item
P1	End Unit	743 lbs
P2	Drop Link	258 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	300t Wide Body Shackle	452 lbs
P10	200t Wide Body Shackle	309 lbs
P11	M24 x 80 Grade 8.8 HT Bolts, Nuts & Washers	

MOD 250/400 Beam Specification

- Rated at 400 tonnes SWL at 28ft 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 200 tonnes WLL each (400 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)						
	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	272	2'1"	400	3'11"	400	6'7"	EU	EU					
8	272	3'6"	400	5'11"	400	9'7"	EU	2	EU				
10	272	4'11"	400	7'11"	400	12'6"	EU	3	1	EU			
12	272	6'4"	400	9'11"	400	15'5"	EU	5	1	EU			
14	272	7'10"	400	11'11"	400	18'4"	EU	5	3	EU			
16	272	9'2"	400	13'11"	400	21'2"	EU	10	EU				
18	272	10'7"	400	15'11"	400	24'2"	EU	10	2	EU			
20	272	12'0"	400	17'11"	400	27'1"	EU	3	10	1	EU		
22	272	13'5"	400	19'11"	400	30'0"	EU	5	10	1	EU		
24	261	14'10"	400	21'11"	400	32'11"	EU	5	10	3	EU		
26	247	16'2"	400	23'11"	400	35'11"	EU	10	10	EU			
28	235	17'8"	400	25'11"	400	38'10"	EU	20	2	EU			
30	217	19'1"	377	27'11"	400	41'8"	EU	3	20	1	EU		
32	200	20'6"	348	29'11"	400	44'7"	EU	5	20	1	EU		
34	182	21'11"	318	31'11"	400	47'7"	EU	5	20	3	EU		
36	167	23'4"	291	33'11"	400	50'6"	EU	20	10	EU			
38	150	24'8"	262	35'11"	400	53'5"	EU	10	20	2	EU		
40	134	26'1"	234	37'11"	373	56'4"	EU	10	20	3	1	EU	
42	120	27'7"	210	39'11"	336	59'4"	EU	10	20	5	1	EU	
44	107	29'0"	188	41'11"	300	62'2"	EU	10	20	5	3	EU	
46	98	30'5"	171	43'11"	274	65'1"	EU	20	20	EU			
48	86	31'10"	152	45'11"	242	68'0"	EU	20	20	2	EU		
50	76	33'2"	134	47'11"	214	71'0"	EU	3	20	20	1	EU	
52	67	34'7"	119	49'11"	191	73'11"	EU	5	20	20	1	EU	
54	60	36'0"	106	51'11"	170	76'10"	EU	5	20	20	3	EU	
56	54	37'6"	96	53'11"	154	79'8"	EU	20	20	10	EU		
58	47	38'11"	85	55'11"	137	82'7"	EU	10	20	20	2	EU	
60	42	40'4"	75	57'11"	121	85'7"	EU	10	20	20	3	1	EU
62	37	41'8"	67	59'11"	108	88'6"	EU	10	20	20	5	1	EU
64	32	43'1"	59	61'11"	96	91'5"	EU	10	20	20	5	3	EU
66	29	44'6"	53	63'11"	87	94'4"	EU	10	20	20	10	EU	
68	25	45'11"	47	65'11"	77	97'4"	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 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.

