

# USER INSTRUCTIONS MOD 110SH

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

The Modulift Spreader is modular in length. Every spreader consists of 1 pair of End Units & Drop Links, with intermediate struts that can be bolted into the assembly to achieve different spans. The MOD 110SH has an assembled span ranging from 2 metre to 16 metres in 0.5 metre increments.

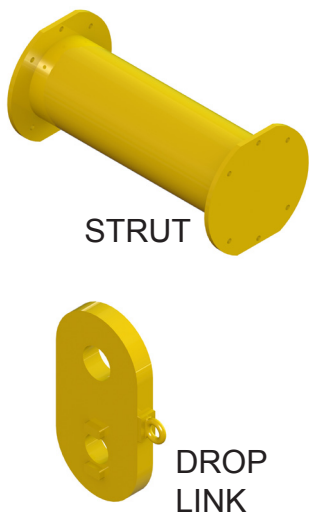
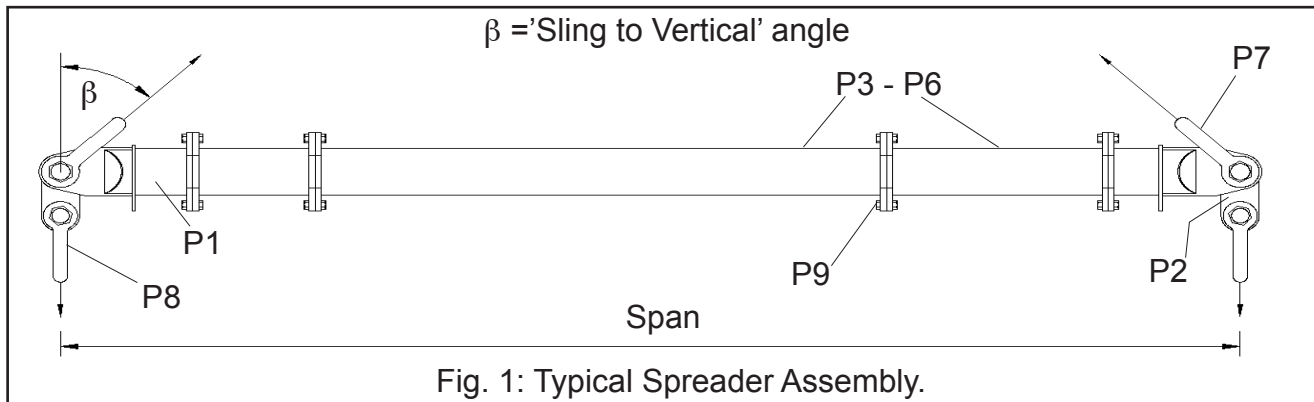
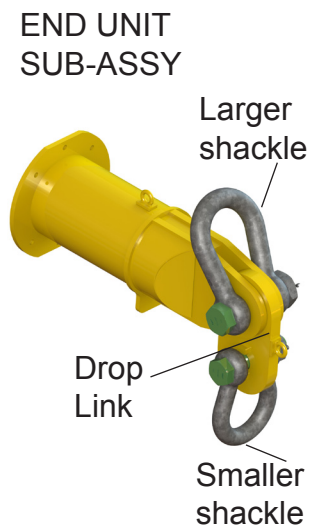


TABLE 1: COMPONENT LIST		
PART REF:	DESCRIPTION	WEIGHT / ITEM
P1	END UNIT	192kg
P2	DROP LINK	68kg
P3	4.0m STRUT	426kg
P4	2.0m STRUT	241kg
P5	1.0m STRUT	149kg
P6	0.5m STRUT	103kg
P7	150t SHACKLE	160kg
P8	120t SHACKLE	110kg
P9	M20x65 Grade 8.8, HT BOLTS, NUTS & WASHERS	



MOD 110SH - Beam specification.

- Rated at 240 tonnes SWL at 6 metres span (30° STV). See load Table for WLL at longer spans.
- 'Sling to vertical' angle,  $\beta$ , 45 degrees or less.
- End Units & Drop Links are rated at 120 tonnes WLL each (240 tonnes combined capacity).
- **Bolt tightening torque: 150Nm.** 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 'Lifting Operations and Lifting Equipment Regulations 1998' (LOLER).
- 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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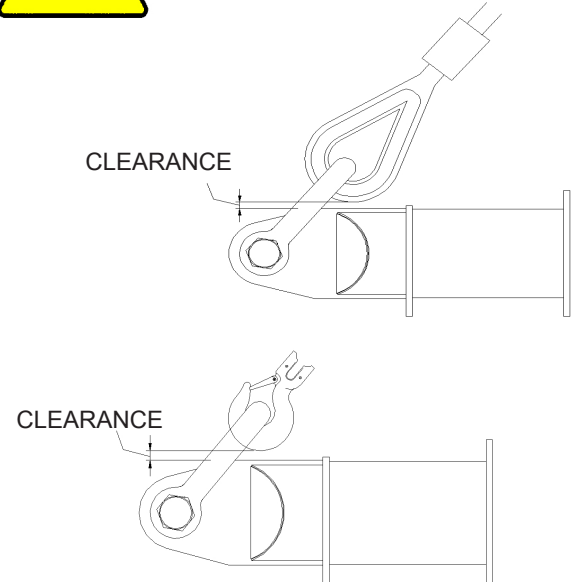
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TABLE 2: Load v Span.

45° STV			Recommended Configuration. EU - End Unit (1m) STV = 'SLING TO VERTICAL' ANGLE, β						30° STV			
Span / m	SWL / t	Min Top Sling Length/m	EU	EU	EU	EU	EU	EU	Span / m	SWL / t	Min Top Sling Length/m	
2	158	1.5	EU	EU					2	240	2.0	
2.5	157	1.8	EU	0.5	EU				2.5	240	2.5	
3	156	2.2	EU	1	EU				3	240	3.0	
3.5	154	2.5	EU	1	0.5	EU			3.5	240	3.5	
4	152	2.9	EU	2	EU				4	240	4.0	
4.5	149	3.2	EU	2	0.5	EU			4.5	240	4.5	
5	146	3.6	EU	2	1	EU			5	240	5.0	
5.5	143	3.9	EU	0.5	2	1	EU		5.5	240	5.5	
6	140	4.3	EU	2	2	EU			6	240	6.0	
6.5	136	4.6	EU	2	2	0.5	EU		6.5	234	6.5	
7	132	5.0	EU	2	2	1	EU		7	228	7.0	
7.5	126	5.3	EU	0.5	2	2	1	EU	7.5	219	7.5	
8	121	5.7	EU	2	2	2	EU		8	210	8.0	
8.5	115	6.0	EU	0.5	2	2	2	EU	8.5	200	8.5	
9	110	6.4	EU	2	2	2	1	EU	9	190	9.0	
9.5	103	6.8	EU	0.5	1	4	2	EU	9.5	180	9.5	
10	96	7.1	EU	4	4	EU			10	170	10.0	
10.5	89	7.5	EU	4	4	0.5	EU		10.5	156	10.5	
11	82	7.8	EU	4	4	1	EU		11	142	11.0	
11.5	75	8.2	EU	1	4	4	0.5	EU	11.5	133	11.5	
12	72	8.5	EU	2	4	4	EU		12	125	12.0	
12.5	66	9.0	EU	2	4	4	0.5	EU	12.5	114	12.5	
13	60	9.5	EU	2	4	4	1	EU	13	104	13.0	
13.5	57	9.75	EU	2	4	4	1	0.5	EU	13.5	98	13.5
14	53	10.0	EU	4	4	4	EU		14	92	14.0	
14.5	48	10.25	EU	0.5	4	4	4	EU	14.5	84	14.5	
15	44	10.5	EU	4	4	4	1	EU	15	76	15.0	
15.5	41	11.0	EU	0.5	4	4	4	1	EU	15.5	71	15.5
16	38	11.5	EU	4	4	4	2	EU	16	66	16.0	



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



- Max number of struts allowed in spreader assembly: 5
- Assemble longer struts in the centre of the spreader configuration
- Sling angle is crucial to safe use of spreader

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 30 degrees or less. 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.

## ASSEMBLY PROCEDURE.

1. Check the ID plates on each Modulift component to ensure the correct size is used.
2. Lay out the Struts and End Units in the correct configuration (see table 2), laid on flats to prevent rolling.
3. Check that all pairs of flanges are clear from debris, sand etc. before connection.
4. Bolt the components together using bolts, nuts & washers provided. Tighten the bolts to a torque as shown overleaf, 6 bolts per connection\*.
5. Place drop link inside the jaw of an end unit, with the larger hole of drop link lined up with the End Unit hole.
6. Place a top sling onto the body of a top shackle, and put jaw of top shackle over the end unit jaw.
7. Put top shackle pin through shackle, end unit jaw and drop link, and repeat for other spreader beam end.
8. Attach free ends of top slings to crane hook.
9. Attach lower slings and shackles to lower holes of drop links, and attach them to the load to be lifted.
10. **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 ensure enough clearance between spreader and the load to prevent the load hitting the spreader. Any collision could cause failure of the spreader.
- Do not undertake a lift without correct use of appropriate top slings.
- 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.
- Do not twist any slings unnecessarily.



\*The number and grade of bolts is critical for the safe use of the spreader particularly at longer spans