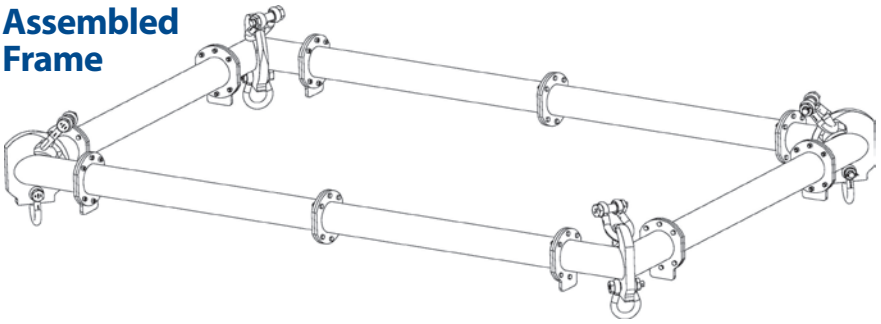
User Instructions CMOD 110 Spreader Frame

The CMOD Spreader Frame is modular in span and every frame consists of 4 Corner Units, with intermediate Struts that can be bolted into the assembly to achieve different spans. CMOD 110 has an assembled span ranging from 2m by 2m to 16m by 16m and all spans inbetween.

Assembled Frame



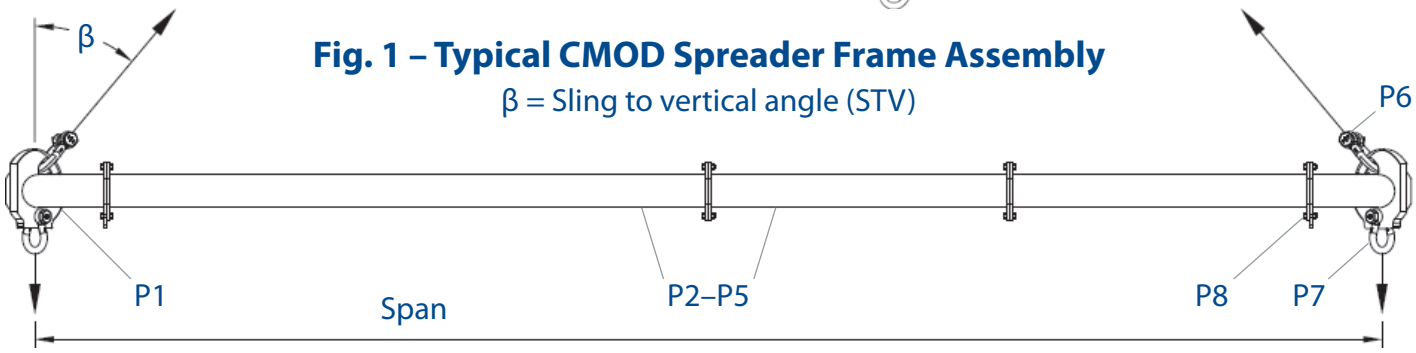


Fig. 1 – Typical CMOD Spreader Frame Assembly

β = Sling to vertical angle (STV)

Strut

Corner Unit

Table 1 – Component List

Part Ref.	Description	Weight/item
P1	Corner Unit (length 1m each)	495kg
P2	4.0m Strut	367kg
P3	2.0m Strut	212kg
P4	1.0m Strut	134kg
P5	0.5m Strut	96kg
P6	85t Shackle	62kg
P7	55t Shackle	40kg
P8	M20 x 65, Grade 8.8, HT Bolts, Nuts & Washers	

CMOD 110 Frame Specification

- Rated at a maximum of 140 tonnes WLL. Please see **Table 2** for WLL at specific spans.
- 'Sling to Vertical' angle, β, 45 degrees or less.
- Corner Units are rated at 35 tonnes each (140 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 Slinging 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 WLL** – Adhere to WLL in **Table 2** for particular sling angle used.
- **The top sling length is critical to the safe use of the spreader** – Ensure you refer to the correct table.

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⚠ WARNING!

- Do not under any circumstances hang load(s) from the tube or flanges – the Spreader Frame is designed for compression – not bending.
- Ensure that the top Shackle contacts the bow of the corner plate 'bow-to-bow'.
- The CMOD system is designed in accordance with BS EN13155: Cranes, Safety, Non- fixed Load Lifting Attachments.
- **Max number of Struts allowed in assembly: 5 per side**
- **Assemble longer Struts in the centre of the configuration**
- **Sling angle is crucial to safe use of frame.**
- **The top sling must be positioned centrally in the Shackle pin to ensure even loading. Contact your Modulift supplier for supply of loose spacers where required.**

Do's & Don'ts

- Do ensure that the frame is only loaded at the Corner Units and they are all equally loaded.
- Do ensure enough clearance between frame and the load to prevent the load hitting the frame. Any collision could cause failure of the frame.
- Do not undertake a lift without the correct use of appropriate top slings.
- Do not hang any loads from the Strut tube or flanges.
- Do not exceed the stated WLL for your span.
- Do not rig the lower slings more than 6° from vertical.

Assembly Procedure

- Check the ID plates on each Modulift component to ensure the correct size is used.
- Lay out the Struts and Corner Units in the correct configuration.
- Check that all flanges are clear from debris, sand etc. before connection.
- Bolt the components together* using bolts, nuts & washers provided. Tighten the bolts to torque as shown overleaf.
- Loop the top Shackles through the bows of the Corner Units so they contact 'bow-to-bow'. The eye of the top slings can then be passed through the jaws of the Shackles and the pins replaced.
- Loop the bottom Shackles through the eyes of the drop slings and connect to the bottom of the Corner Unit with the Shackle pin.
- Attach the lower slings to the load to be lifted.
- The assembled Spreader Frame and lifting rig must be thoroughly checked by a competent person prior to lifting.

*The use of a Podger Spanner will aid in assembly by helping to align the bolt holes by forcing it through.

Table 2 – Load v Span

First pick the span required for your frame (e.g. 2m x 5m) and the Sling Angle (we recommend 30° STV where possible), then check the WLL via the appropriate table. Read the table by locating the lower span on the y axis of the chart and the larger on the x. The cell which you are referred to, will indicate the WLL for your chosen span. If your exact span is not noted in the table, then please round up or down to the values that will give you the lowest WLL (to ensure no overloads are applied). Please contact Modulift for confirmation on your WLL if required. WLL given in tonnes.

CMOD 110: WLL / tonnes @ 30° STV

16														100
15													100	100
14												100	100	95
13											110	100	95	90
12										120	105	95	90	80
11									140	120	100	95	80	80
10								140	140	120	100	90	80	75
9							140	140	140	120	95	85	75	75
8						140	140	140	140	120	90	85	75	75
7					140	140	140	140	140	120	90	80	75	75
6				140	140	140	140	140	140	110	80	75	75	75
5			140	140	140	140	140	140	120	90	80	75	75	75
4		140	140	140	140	140	140	140	120	85	80	75	75	75
3	140	140	140	140	140	140	140	140	120	110	85	80	75	75	70
2	140	140	140	140	140	140	140	130	110	95	85	80	75	70	70
Span (m)	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

CMOD 110: WLL / tonnes @ 45° STV

16														60
15													60	58
14												70	58	55
13											75	70	55	55
12										85	75	65	55	50
11									85	85	70	60	50	50
10								85	85	85	70	60	50	45
9							95	85	85	80	65	55	50	45
8						95	95	85	85	70	60	55	45	45
7					95	95	95	85	80	70	60	50	45	45
6				95	95	95	90	80	80	70	55	50	45	43
5			95	95	95	95	85	80	75	65	55	47	43	43
4		95	95	95	95	95	85	80	75	60	50	45	43	43
3	95	95	95	95	95	95	80	75	65	55	48	45	43	40
2	95	95	95	95	95	95	80	75	60	50	48	45	40	40
Span (m)	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

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