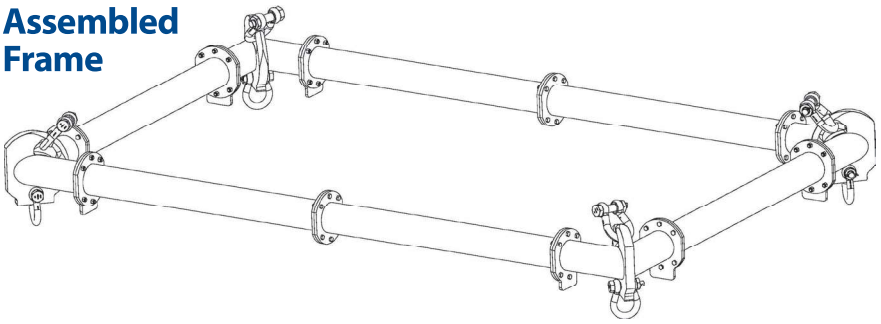
User Instructions CMOD 250 Spreader Frame

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 250 has an assembled span ranging from 2m by 2m to 20m by 20m and all spans inbetween.

Assembled Frame



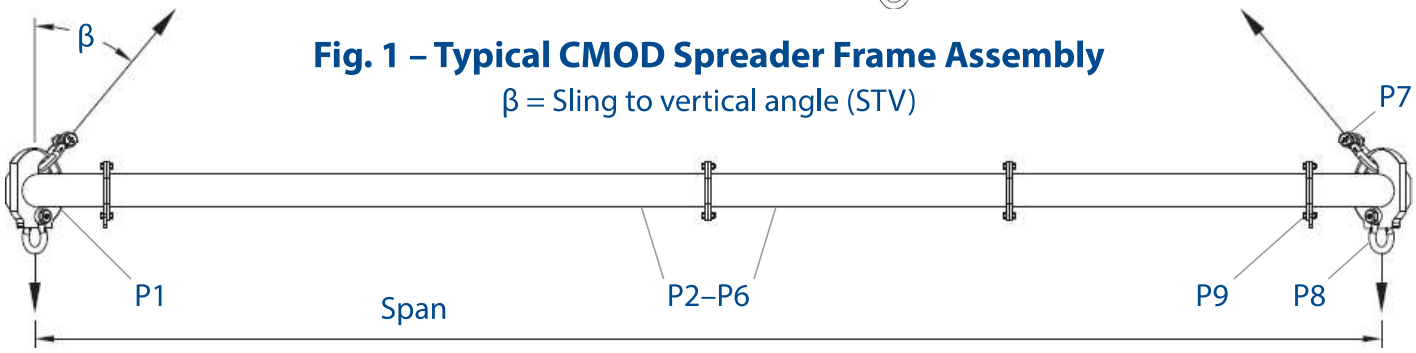


Fig. 1 – Typical CMOD Spreader Frame Assembly

β = Sling to vertical angle (STV)

Strut

Corner Unit

Table 1 – Component List

Part Ref.	Description	Weight/item
P1	Corner Unit (length 1m each)	1190kg
P2	6.0m Strut	860kg
P3	3.0m Strut	495kg
P4	2.0m Strut	375kg
P5	1.0m Strut	255kg
P6	0.5m Strut	192kg
P7	150t Heavy Duty Shackle	160kg
P8	125t Wide Body Shackle	92kg
P9	M24 x 80, Grade 8.8, HT Bolts, Nuts & Washers	

CMOD 250 Frame Specification

- Rated at a maximum of 300 tonnes SWL. Please see **Table 2** for SWL at specific spans.
- 'Sling to Vertical' angle, β, 45 degrees or less.
- Corner Units are rated at 75 tonnes each (300 tonnes combined capacity).
- **Bolt tightening torque: 250Nm**. 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 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 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** – Ensure you refer to the correct table.

ser Instructions CMOD 110 Spreader Frame

⚠ 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 SWL 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 SWL 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 SWL 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 SWL (to ensure no overloads are applied). Please contact Modulift for confirmation on your SWL if required. SWL given in tonnes.

CMOD 250: SWL / tonnes @ 30° STV

Span (m)	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
20																			170
19																		190	165
18																	210	185	160
17																230	205	180	155
16															245	225	200	175	155
15														265	240	215	195	170	150
14													280	255	230	210	190	165	145
13												295	270	245	225	205	185	165	140
12											300	280	260	240	220	200	180	160	140
11										300	295	270	250	230	210	195	175	155	135
10									300	300	280	260	240	225	205	190	170	150	135
9								300	300	290	270	250	235	215	200	185	165	150	130
8							300	300	300	280	260	245	225	210	195	180	165	145	130
7						300	300	300	285	265	250	235	220	205	190	175	160	145	125
6					300	300	300	290	270	255	240	230	215	200	185	170	155	140	125
5				300	300	300	290	275	260	245	235	220	210	195	185	170	155	140	125
4			300	300	300	290	275	265	250	240	230	215	205	195	180	165	155	140	120
3		300	300	300	290	275	250	235	220	210	200	195	190	185	180	165	150	135	120
2	300	300	300	265	235	215	200	195	185	185	180	175	175	170	170	165	150	135	120

CMOD 250: SWL / tonnes @ 45° STV

Span (m)	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
20																			95
19																		105	95
18																	120	105	90
17																130	115	100	85
16															140	125	115	100	85
15														150	135	120	110	95	85
14													160	145	130	120	105	95	80
13												170	155	140	125	115	105	95	80
12											170	160	150	135	125	115	100	90	80
11										170	170	155	140	130	120	110	100	85	75
10									170	170	160	150	135	125	115	105	95	85	75
9								170	170	165	155	140	135	120	115	105	95	85	75
8							170	170	170	160	150	140	125	120	110	100	95	80	75
7						170	170	170	160	150	140	135	125	115	105	100	90	80	70
6					170	170	170	165	155	145	135	130	120	115	105	95	85	80	70
5				170	170	170	165	155	150	140	135	125	120	110	105	95	85	80	70
4			170	170	170	165	155	150	140	135	130	120	115	110	100	95	85	80	65
3		170	170	170	165	155	150	145	140	135	125	120	115	105	100	95	85	75	65
2	170	170	170	160	155	150	145	140	135	130	125	120	115	105	100	95	85	75	65

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