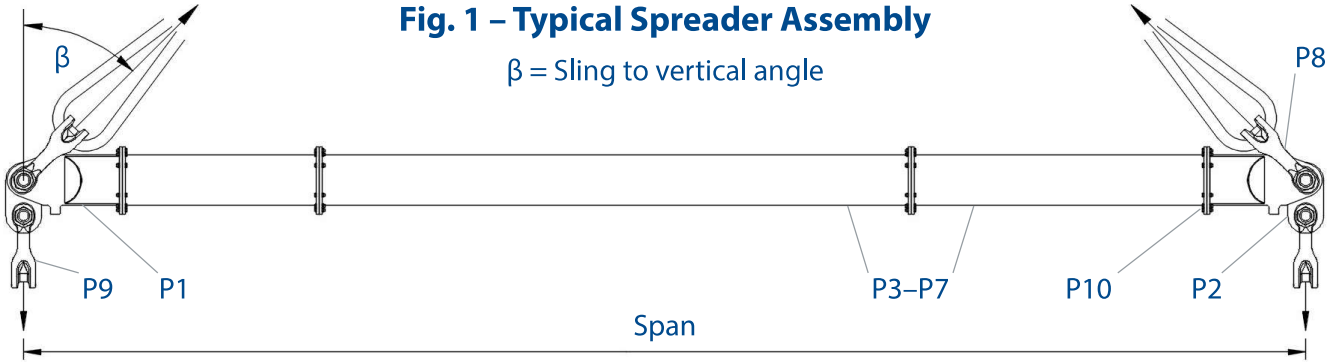
# User Instructions
# MOD 400/600

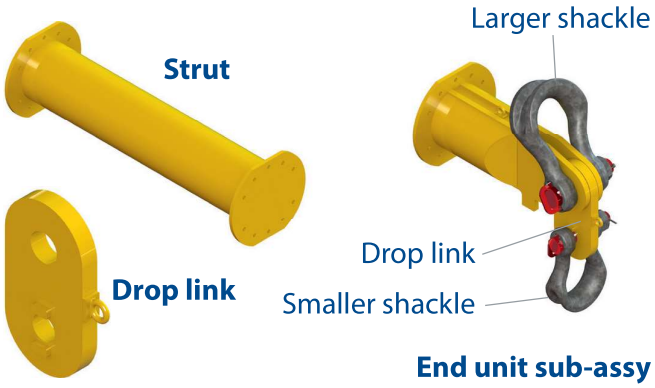
Modulift®
working between the hook and the load

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 400/600 has an assembled span ranging from 2 metres to 24 metres in 0.5m increments.

## Fig. 1 – Typical Spreader Assembly

β = Sling to vertical angle




## Table 1 – Component List

| Part Ref. | Description | Weight/item |
|---|---|---|
| P1 | End Unit WLL 300t | 610kg |
| P2 | Drop Link WLL 300t | 150kg |
| P3 | 6.0m Strut | 1365kg |
| P4 | 3.0m Strut | 785kg |
| P5 | 2.0m Strut | 590kg |
| P6 | 1.0m Strut | 395kg |
| P7 | 0.5m Strut | 286kg |
| P8 | 400t Wide Body Shackle | 580kg |
| P9 | 300t Wide Body Shackle | 360kg |
| P10 | M24 x 90 Grade 8.8 HT Bolts, Nuts & Washers | |

## MOD 400/600 Beam Specification

- Rated at 600 tonnes WLL at 14 metres span (30° STV). See Load Table for WLL at longer spans.
- 'Sling to Vertical' angle, β, 45 degrees or less.
- End Units & Drop Links are rated at 300 tonnes WLL each (600 tonnes combined capacity).
- **Bolt tightening torque: 250Nm**. Spanner size required: 36mm.
- Recommended additional equipment: Torque Wrench, Podger Spanner and Ring Spanner.
- The MOD 400/600 system utilises standard MOD 400 struts.

## ⚠ 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** – 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 WLL 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 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.**

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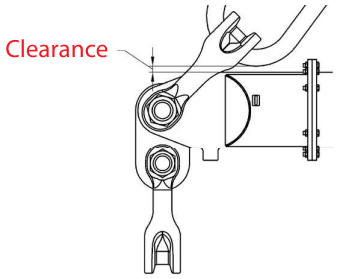
Should you find your equipment is no longer of use, please dispose of in a responsible manner. Please contact Modulift if you need further guidance

## Table 2 – Load v Span

| Span (m) | Sling To Vertical Angle (STV) β 45° WLL (t) | 45° Min.top sling length (m) | 30° WLL (t) | 30° Min.top sling length (m) | 20° WLL (t) | 20° Min.top sling length (m) | Recommended Configuration EU - End Unit (1m) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | To calculate the WLL at intermediate spans utilising the 0.5m strut, round up the span to the next longest span in Table 2, and use the stated WLL. | | | | | | |
| 2 | 559 | 0.8 | 600 | 1.4 | 600 | 2.3 | EU | EU | | | | | |
| 3 | 559 | 1.5 | 600 | 2.4 | 600 | 3.8 | EU | 1 | EU | | | | |
| 4 | 559 | 2.2 | 600 | 3.4 | 600 | 5.2 | EU | 2 | EU | | | | |
| 5 | 559 | 2.9 | 600 | 4.4 | 600 | 6.7 | EU | 3 | EU | | | | |
| 6 | 559 | 3.6 | 600 | 5.4 | 600 | 8.2 | EU | 3 | 1 | EU | | | |
| 7 | 559 | 4.3 | 600 | 6.4 | 600 | 9.6 | EU | 3 | 2 | EU | | | |
| 8 | 559 | 5.1 | 600 | 7.4 | 600 | 11.1 | EU | 6 | EU | | | | |
| 9 | 556 | 5.8 | 600 | 8.4 | 600 | 12.6 | EU | 6 | 1 | EU | | | |
| 10 | 515 | 6.5 | 600 | 9.4 | 600 | 14.0 | EU | 6 | 2 | EU | | | |
| 11 | 473 | 7.2 | 600 | 10.4 | 600 | 15.5 | EU | 6 | 3 | EU | | | |
| 12 | 432 | 7.9 | 600 | 11.4 | 600 | 16.9 | EU | 3 | 6 | 1 | EU | | |
| 13 | 391 | 8.6 | 600 | 12.4 | 600 | 18.4 | EU | 3 | 6 | 2 | EU | | |
| 14 | 349 | 9.3 | 600 | 13.4 | 600 | 19.9 | EU | 6 | 6 | EU | | | |
| 15 | 316 | 10.0 | 551 | 14.4 | 600 | 21.3 | EU | 6 | 6 | 1 | EU | | |
| 16 | 283 | 10.7 | 495 | 15.4 | 600 | 22.8 | EU | 6 | 6 | 2 | EU | | |
| 17 | 253 | 11.4 | 443 | 16.4 | 600 | 24.2 | EU | 6 | 6 | 3 | EU | | |
| 18 | 227 | 12.1 | 397 | 17.4 | 600 | 25.7 | EU | 1 | 6 | 6 | 3 | EU | |
| 19 | 202 | 12.8 | 355 | 18.4 | 566 | 27.2 | EU | 2 | 6 | 6 | 3 | EU | |
| 20 | 180 | 13.5 | 317 | 19.4 | 506 | 28.6 | EU | 6 | 6 | 6 | EU | | |
| 21 | 160 | 14.2 | 281 | 20.4 | 450 | 30.1 | EU | 6 | 6 | 6 | 1 | EU | |
| 22 | 142 | 15.0 | 251 | 21.4 | 401 | 31.6 | EU | 6 | 6 | 6 | 2 | EU | |
| 23 | 126 | 15.7 | 223 | 22.4 | 358 | 33.0 | EU | 6 | 6 | 6 | 3 | EU | |
| 24 | 111 | 16.4 | 198 | 23.4 | 319 | 34.5 | EU | 6 | 6 | 6 | 3 | 1 | EU |

## ⚠ 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: 5.
- Assemble longer struts in the centre of the spreader configuration.
- Sling angle is crucial to safe use of spreader.