

# Multi-250 Modular Spreader Beam

## Instructions For Use

Instructions for use/declaration of the manufacturer must be kept on file for the lifetime of the product.



**NB:** Please ensure that the instructions for use have been fully read and understood before initial use of the Multi-Sec Modular Spreader Beam System. Failure to do so may result in serious injuries and/or material damage and eliminates manufacturers warranty.

**ATTENTION:** Damage, incorrect assembly or improper use may result in serious injuries and/or material damage.

### EC-Declaration of the manufacturer:

According to the Machinery Directive 2006/42/EC. We hereby declare that the design and construction of the equipment detailed within this document adheres to the appropriate level of health and safety of the corresponding EC regulation.

Any un-authorized modification and/or incorrect use of the equipment not adhered to within these instructions for use waives this declaration invalid.

### Designation of the equipment:

Type: **Multi-250**

Product information and other support material can be downloaded from [www.multisec.co.uk](http://www.multisec.co.uk)



## ATTENTION:

Damage, incorrect assembly or improper use may result in serious injuries and/or material damage. Ensure that the instructions for use have been read and fully understood before initial use of the **Multi-Sec Multi-250**. Failure to do so may result in serious injuries and/or material damage and eliminates manufacturers warranty.

Reference should be made to relevant standards and other statutory regulations. Inspection should be carried out by competent personnel only.

### 1. System Specifications

- These user instructions are for the standard **Multi-Sec Multi-250**. The **Multi-250** is rated to a maximum vertical load of 250 Tonnes at a maximum span (or length) of 15.5 meters respectively.

- This system is classified as a modular system; thus it may be assembled/reassembled by trained/approved riggers using different strut combinations (additional struts can be provided on order) to achieve a span range from 1.5 meters to 22.0 meters at a lower capacity.

### 2. Critical Information

- This is a spreader beam and must only be loaded at the two end location through the drop links. Never hang loads from the struts.

- Drop links must hang vertically, towards the load.

- The lower slings must not exceed 5° from vertical during operation.

- STV (sling to vertical) angle must be no more than 45°

- **To ensure that the Multi-250 is suitable for the planned lift, refer to Table 1.**

- No more than 8 struts can be used in an assembly at any given time during the lifting operation.

The WLL (working load limit) of a single drop link is 125 Tonnes (250 Tonnes combined). **Do not exceed this weight at one end of the beam!**

- The **Multi-250** uses M24 x 100 Grade 8.8 hex bolts, nuts and washers. The recommended tightening torque is 605Nm.

- Any personnel using this lifting product must be a trained and competent person and have a clear understanding of safe slinging/lifting procedures.

- The ongoing use of this product must be in accordance with the requirements in LOLER (Lifting Operations and Lifting Equipment Regulations 1998).

- To allow the calculation of the approximate beam weight please use the self weight information for each standard component (refer Table 2).

**NB: Remember to include the weight of any additional rigging equipment that is also being used in the lift.**

### 3. Assembly Instructions

1 Refer to the lift plan and confirm that you are using the correct beam for your lift requirements.

2 Confirm that each component to be used is from the correct range (identifiable from the manufactures data plate) also ensure that all appropriate documentation is present.

3 Ensure that the mating faces of the components are free from debris before installation.

4 Bolt the system together using the fasteners provided and tighten to the torque values specified.

5 Check and confirm that there is a bolt in every hole.

6 Position the drop link inside the jaw of the end unit so that the larger hole on the drop link lines up with the holes on the end unit.

7 Position your top sling within the top shackle and then lower the shackle into place of the end unit. Once all the holes are aligned, lock in place using the shackle pin. Repeat this process at the other end.

8 Attach the other end of the top slings to the crane hook.

9 The lower slings and shackles can now be connected to the drop link.

10 The final assembly of the spreader beam must be thoroughly inspected by a competent person before moving the beam.

11 Attach the bottom slings to the load and check to ensure that the rigging configuration is in accordance to the lift plan.

### 4. Slings and Rigging

- The lower slings must not exceed 6° from vertical during operation.

- Ensure that the end fitting for the sling does not clash with the end unit of the **Multi-250**.

- Recommended use of Shackles (refer Table 2).

# Multi-250 Modular Spreader Beam



## CAPACITY | SPAN | ANGLE

### 45°STV

### 30°STV

| SPAN  | SWL (Tonnes) | Top Sling Minimum Length (Meters) | SWL (Tonnes) | Top Sling Minimum Length (Meters) |
|-------|--------------|-----------------------------------|--------------|-----------------------------------|
| 1.50  | 250          | 1.1                               | 250          | 1.5                               |
| 2.00  | 250          | 1.4                               | 250          | 2.0                               |
| 2.50  | 250          | 1.8                               | 250          | 2.5                               |
| 3.00  | 250          | 2.1                               | 250          | 3.0                               |
| 3.50  | 250          | 2.5                               | 250          | 3.5                               |
| 4.00  | 250          | 2.8                               | 250          | 4.0                               |
| 4.25  | 250          | 3.2                               | 250          | 4.5                               |
| 5.00  | 250          | 3.5                               | 250          | 5.0                               |
| 5.50  | 250          | 3.9                               | 250          | 5.5                               |
| 6.00  | 250          | 4.2                               | 250          | 6.0                               |
| 6.50  | 250          | 4.6                               | 250          | 6.5                               |
| 7.00  | 250          | 4.9                               | 250          | 7.0                               |
| 7.50  | 250          | 5.3                               | 250          | 7.5                               |
| 8.00  | 250          | 5.7                               | 250          | 8.0                               |
| 8.50  | 250          | 6.0                               | 250          | 8.5                               |
| 9.00  | 250          | 6.4                               | 250          | 9.0                               |
| 9.50  | 250          | 6.7                               | 250          | 9.5                               |
| 10.00 | 250          | 7.1                               | 250          | 10.0                              |
| 10.75 | 225          | 7.6                               | 250          | 10.5                              |
| 11.00 | 220          | 7.8                               | 250          | 11.0                              |
| 11.50 | 210          | 8.1                               | 250          | 11.5                              |
| 12.00 | 200          | 8.5                               | 250          | 12.0                              |
| 12.50 | 190          | 8.8                               | 250          | 12.5                              |
| 13.00 | 180          | 9.2                               | 250          | 13.0                              |
| 13.50 | 170          | 9.6                               | 250          | 13.5                              |
| 14.00 | 160          | 9.9                               | 250          | 14.0                              |
| 14.50 | 150          | 10.3                              | 250          | 14.5                              |
| 15.00 | 140          | 10.6                              | 250          | 15.0                              |
| 15.50 | 130          | 11.0                              | 250          | 15.5                              |
| 16.00 | 120          | 11.3                              | 250          | 16.0                              |
| 16.50 | 110          | 11.7                              | 230          | 16.5                              |
| 17.00 | 100          | 12.0                              | 220          | 17.0                              |
| 17.50 | 95           | 12.4                              | 205          | 17.5                              |
| 18.00 | 90           | 12.7                              | 195          | 18.0                              |
| 18.50 | 85           | 13.1                              | 185          | 18.5                              |
| 19.00 | 80           | 13.4                              | 175          | 19.0                              |
| 19.50 | 75           | 13.8                              | 170          | 19.5                              |
| 20.00 | 70           | 14.1                              | 165          | 20.0                              |
| 20.50 | 65           | 14.5                              | 160          | 20.5                              |
| 21.00 | 60           | 14.9                              | 150          | 21.0                              |
| 21.50 | 55           | 15.2                              | 140          | 21.5                              |
| 22.00 | 50           | 15.6                              | 130          | 22.0                              |

Table 1

### ATTENTION:

The sling angle (STV) that has been determined during the rigging of the Multi-250 is critical to the safe use of the system. This angle will affect the weight of the load that can be safely lifted.

If the user is unsure of what sling angle has been determined for your system; or how or why this will affect the use of the multi-beam system, then another competent and trained person MUST be consulted before use.

### COMPONENT SELECTION

| Component  | Size   | Weight (kg) |
|--|--------|-------------|
| Strut  | 0.25m  | 214         |
| Strut  | 0.5m   | 242         |
| Strut  | 0.75m  | 254         |
| Strut  | 1.0m   | 298         |
| Strut  | 2.0m   | 410         |
| Strut  | 4.0m   | 634         |
| Strut  | 6.0m   | 859         |
| End Unit   | 0.75m  | 303         |
| Drop Link  | -      | 114         |
| Shackle (Top)<br>Sling Saver Wide<br>Body Bow    | 200.0t | 190         |
| Shackle (Bottom)<br>Sling Saver Wide<br>Body Bow | 125.0t | 92          |

Table 2





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