



Grip Factory Munich

YOUR INNOVATIVE PARTNER FOR CAMERA SUPPORT

GF-16 Crane System Instruction Manual

Valid : Jan. 2003

Grip Factory Munich GmbH
Fürholzener Straße 1
85386 Eching bei München
Germany

Tel.: +49 (0) 89 319 0 129-0
Fax: +49 (0) 89 319 0 129-9
e-mail: info@g-f-m.net
<http://www.g-f-m.net>

Instruction Manual

Contents :	Page :
Safety Guidelines	2
Adjustable Mounting Column	3 - 4
Pivot Section	5
General assembly procedure	5 - 6
GF-16 Version 1	7
GF-16 Version 2	8
Rigging System.....	9 - 10
Parallelogram Supports.....	11
GF-16 Versions 3 to 15	11 - 38
Remote Head Mount	39
Balancing the crane	40
Operational conditions	40
Platform accessories weight list	41
Accessories	42
Transport Trolley.....	43

Safety Guidelines :

The set-up instructions must be read and understood before set-up or operation.

The GF-16 Crane may only be set-up or operated by trained and experienced personnel.

The crane may only be set-up in accordance with the manufacturer's instruction manual.

The crane may not be set-up or operated under the influence of alcohol, drugs or any other intoxicating substances.

The manufacturer accepts no liability for damages or injuries for incidents or accidents occurring due to negligence or misuse by the crane operator.

Use of the crane on insert vehicles, camera cars or any motorised vehicle is not allowed. The manufacturer accepts no liability for damages or injuries for incidents or accidents occurring due to use of the crane on insert vehicles, camera cars or any other motorised vehicles.

Only original accessories manufactured by GFM may be used with the crane.

Before assembling the crane ensure that the ground surface is stable and cannot give way. When operating the crane on track, ensure that the track is level, properly laid and constructed. The correct underlay must be used to ensure that the track and underlay are secured against moving, slipping and collapse. Ensure that the underlay provides the specified support and stability.

Whether operating on track or on a solid ground surface it is essential that the track or surface is completely level, stable and free from obstructions.

At maximum working load capacity the ground surface must be stable enough to support at least 2300 kg/m² = 5060 lbs/ sq yard.

Changing weather conditions should be taken into consideration. The crane must be taken out of operation before the operational wind speed reaches 26km/h.

The complete lift and panning range of the GF-16 Crane must be kept clear of obstructions at all times.

The crane may not be used in the direct vicinity of high voltage power cables. 20m / 70feet clearance must be kept at all times.

Personnel on board the crane's platform must use safety belts at all times. No loose objects may be stored or placed on the crane platform.

Before the counterweights are removed from the bucket, ensure that the platform is resting on the ground or alternatively supported by an appropriate stable underlay. Gradually remove the counterweights before personnel leave the platform or before the remote head or camera are dismantled.

The manufacturers technical specifications and limits must be adhered to at all times and in no way exceeded.

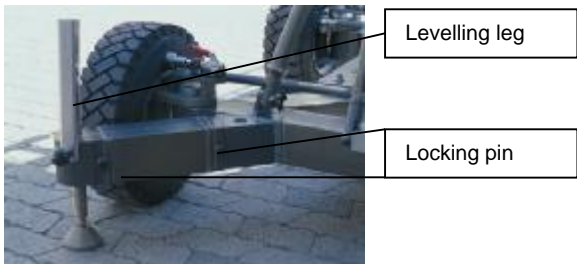
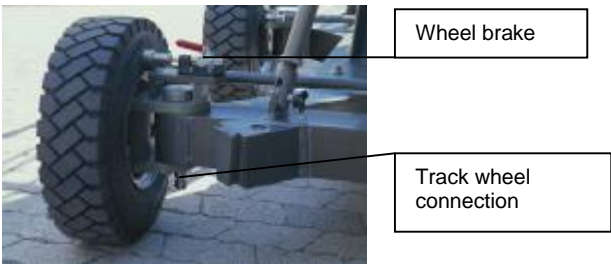
A safety distance clearance of 0.50m / 1' 7" must be observed on all sides of the crane during operation. For crane operational safety reasons abrupt, sudden movement of the crane should be avoided.

Assembly Procedure – GF-16

Before and during assembly observe the Safety Guidelines.

For all versions:

- 1. Secure the base dolly so that it cannot move or roll. Lock all wheel brakes. Move the steering rods towards the centre of the dolly or remove them so that the set-up personnel do not trip over them.



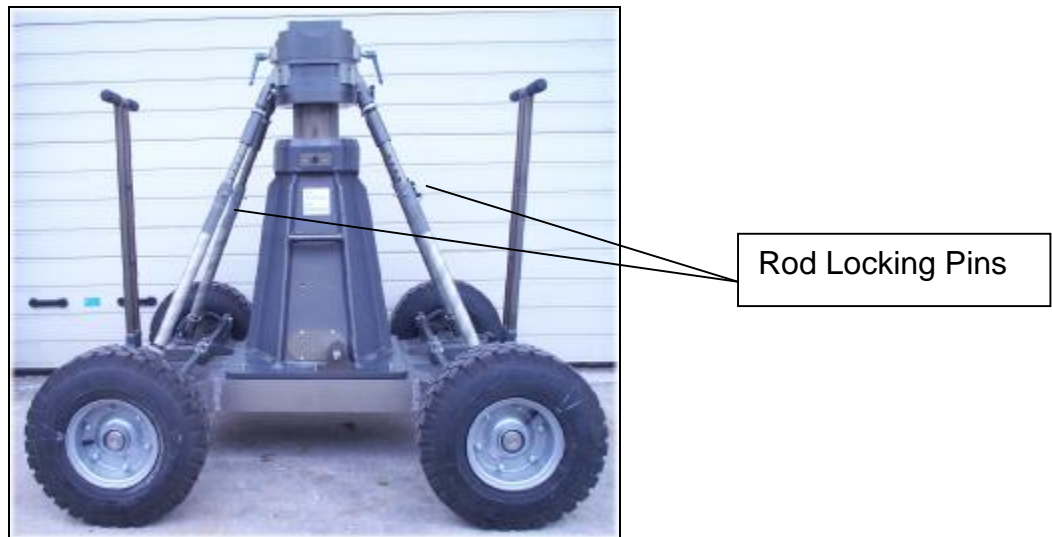
The levelling legs should be used to level the base when stationary.

The GF-16 Adjustable Mounting Column



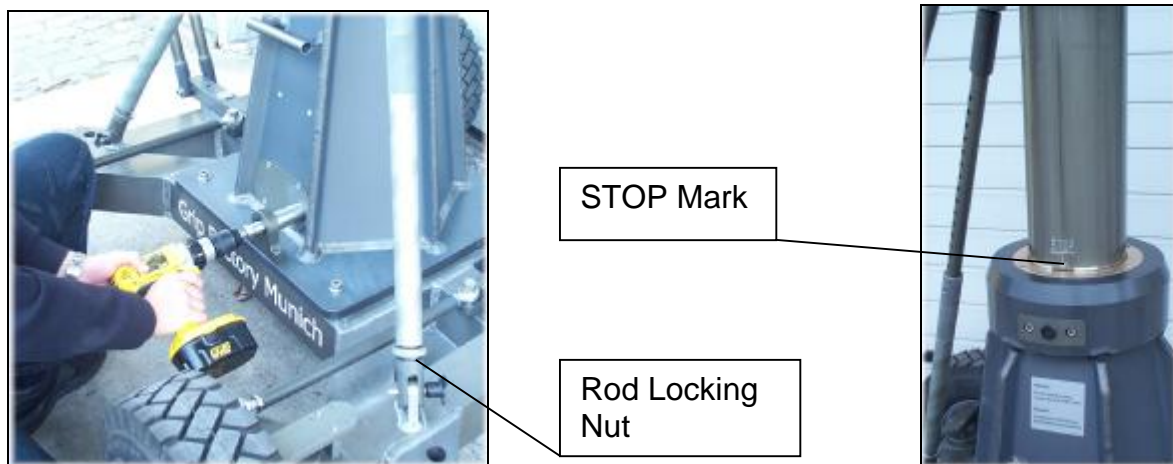
- 2. Bolt the Adjustable Mounting Column to the base dolly. Make sure that the locking bolts are locked securely. (Tip: the carrying handles on the bazooka should point to the left and right of the dolly).

3. Connect the 4 Adjustable Stabilizing Rods between the base and the column by securing each one with a locking pin at the top and bottom of each rod.
Important: When adjusting the height of the column make sure that the 4 Adjustable Stabilizing Rods can move freely and that they are not restricted in travel. The Rod Locking Pin found in the middle of each rod must be removed when adjusting the height and reinserted only when the column is in the required position.



Positioning the Adjustable Mounting Column

1. When the crane is assembled, the Adjustable Mounting Column may be driven to it's full height. The column may either be hand cranked or driven with a 24V battery driven screwdriver. We suggest you drive the screwdriver at speed 1. The connection on the column is a 24mm, male hexagonal head.

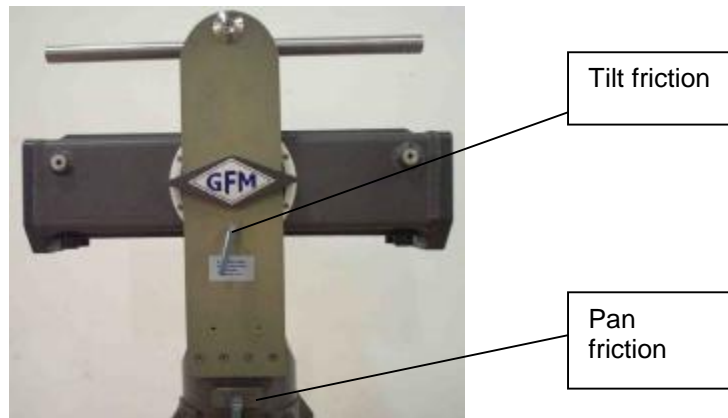


Important: when driving the column upwards, do not go past the “STOP” mark engraved on the column.

2. When the column is in the required position, insert the 4 Rod Locking Pins into the middle of each rod. Adjust the 4 rods until they are stiff, then counter lock with the locking nuts found at end of each stabilizing rod (total of 8).

Pivot Section

4. Located on the middle section are 2 tilt friction locks which may be used to lock the tilt during set-up. Set the pivot arm at 90° to the centre post and lock the friction locks which can be found on the left and right hand side of the middle section.



Middle section

5. Mount the middle section on the mounting column. Lock the locking screw tightly.
Tip: A 12mm Allen key can be found in the mounting column's handle to be used as a lever.

General Assembly

6. Connect extension number 1 to the middle section. Slip the connection flanges into each other and secure with the provided safety pin.

Tip: To avoid the sections jamming or getting stuck make sure that the sections are joined parallel. Using a small amount of lubricant also helps. We suggest rubbing the joints with an oiled rag prior to assembly.

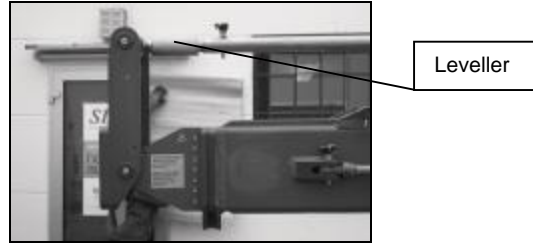
7. Connect the 192cm/6'3" counterweight bucket extension to the middle section. Slip the connection flanges into each other and secure with the provided safety pin.



8. Connect the 192cm / 6'3" parallelogram rod to the parallelogram connection on the middle section and secure it with a safety pin.



Releasing the angle adjuster's safety pin



Angle adjuster connected to parallelogram rod

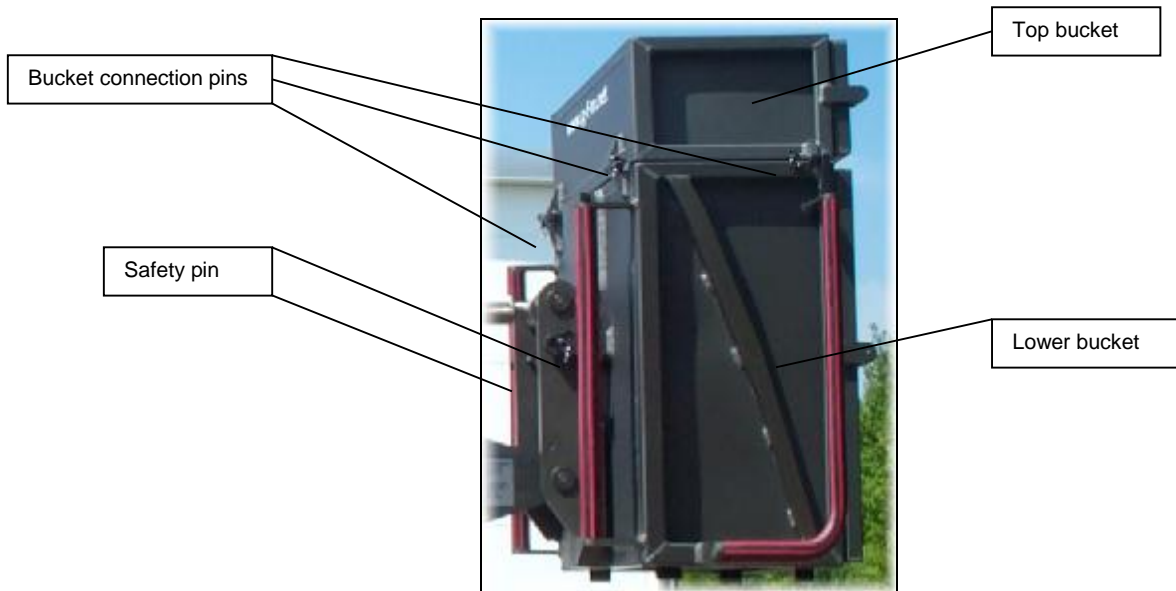
9. Release the angle adjuster located at the end of the 192cm / 6'3" section by removing the safety pin from the side of the angle adjuster.
Attention: Pinch point

10. Connect the parallelogram rod to the rod on the angle adjuster and secure it with the safety pin.

Tip: The angle adjuster has an integrated leveller. By turning it, the vertical plate on the angle adjuster can be set to a perfect right angle. Correct setting of the angle adjuster enhances the crane's balance.

11. Support the mounted counterweight section with a suitable support stand or rostrum.

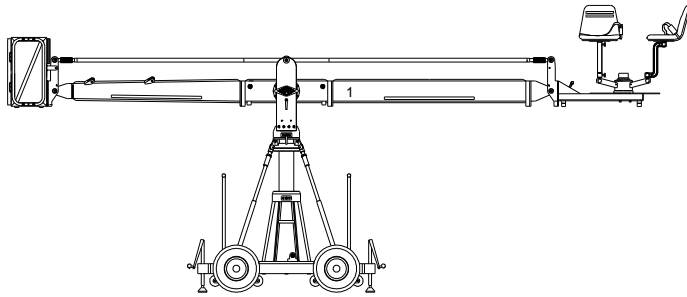
12. Connect the lower section of the 2 part counterweight bucket to the angle adjuster located on the rear of the counterweight bucket extension. Slip the connection flanges into each other and secure with the provided safety pins.
Tip : Do not load weights until the rigging system is mounted (see p. 7 & 8).



The assembly procedure up to this point is the same in all versions.

To assist the set-up procedure and to reduce the risk of accidents it is recommended to use set-up support stands or rostrums to support the crane arm during set-up and breakdown.

Version 1

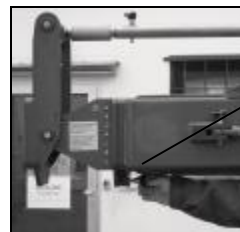


Front extension arms required	1 x 200cm / 6' 6"
Rear extension arm required	1 x 192cm / 6' 3"
Maximum platform height (Euro-adapter)	423cm / 13' 10"
Maximum lift capacity = 2 pers. + accessories	250 kg / 550 lbs
Total lift range	420cm / 13' 9"
Counterweight required for max. load	274 kg / 602 lbs
Counterweight required to balance empty arm	8kg / 17 lbs
Arm reach (pivot to Euro-adapter mount)	336cm / 11'
Length of rear end (pivot to outside of bucket)	278cm / 9' 1"
Max. pivot point height	199cm / 6' 6"
Max. operational height of pivot section	232cm / 7' 7"
Transport weight excluding counterweight	603 kg / 1326 lbs

Continue from page 6



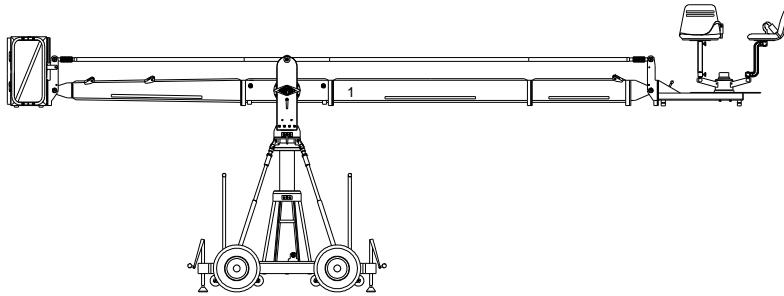
Mounting the angle adjuster



Securing the angle adjuster

13. Connect the angle adjuster to the end of extension number 1. Release the angle adjuster by removing the safety pin from the side of the angle adjuster. See page 4. Secure the angle adjuster to extension number 1 with the provided safety pin.
14. Connect one of the 200cm / 6' parallelogram rods to the rod connection located on the middle section and secure it with a safety pin.
15. Connect the parallelogram rod to the rod connection on the angle adjuster and secure it with the safety pin
Tip: The angle adjuster parallelogram has an integrated leveller. By turning it, the vertical plate on the angle adjuster can be set to a perfect right angle. Correct setting of the angle adjuster enhances the crane's balance.
16. Connect the platform to the angle adjuster and secure with the safety pin. Ensure that the platform is level.

Version 2



Front extension arms required	1 x 200cm / 6' 6" + 1 x 100cm / 3' 3"
Rear extension arm required	1 x 192cm / 6' 3"
Maximum platform height (Euro-adaptor)	501cm / 16' 5"
Maximum lift capacity = 2 pers. + accessories	250 kg / 550 lbs
Total lift range	575cm / 18' 10"
Counterweight required for max. load	424 kg / 932 lbs
Counterweight required to balance empty arm	36 kg / 79 lbs
Arm reach (pivot to camera head mount)	434cm / 14' 2"
Length of rear end (pivot to outside of bucket)	278cm / 9' 1"
Max. pivot point height	199cm / 6' 6"
Max. operational height of pivot section	232cm / 7' 7"
Transport weight excluding counterweight	620 kg / 1364 lbs

Continue from page 6

11. Connect the 100cm / 3' 3" extension to extension number 1. Slip the connection flanges into each other and secure with the provided safety pin.
Note: The 100cm / 3' 3" section must be supported by a suitable support stand or rostrum.
Tip: To avoid the sections jamming or getting stuck make sure that the sections are joined parallel. Using a small amount of lubricant also helps. We suggest rubbing the joints with an oiled rag prior to assembly.
12. Connect a 200cm / 6' 6" parallelogram rod to the parallelogram connection on the middle section and secure it with a safety pin.
13. Connect the 100cm / 3' 3" parallelogram rod to the first parallelogram connection and secure it with a safety pin.
14. Connect the angle adjuster to the end of the 100cm / 3' 3" extension. Release the angle adjuster by removing the safety pin from the side of the angle adjuster. See page 6. Secure the angle adjuster to the extension with the same safety pin.
15. Connect the 100cm / 3' 3" parallelogram rod to the rod on the angle adjuster and secure it with the safety pin.
Tip: The angle adjuster has an integrated leveller. By turning it, the vertical plate on the angle adjuster can be set to a perfect right angle. Correct setting of the angle adjuster enhances the crane's balance.
16. Connect the platform to the angle adjuster and secure with the safety pin.
Tip: The angle adjuster has an integrated leveller. By turning it, the vertical plate on the angle adjuster can be set to a perfect right angle. Correct setting of the angle adjuster enhances the crane's balance.
17. Remove the support stand or rostrum supporting the counterweight bucket section.

Read "Balancing the crane arm" on page 40.

Rigging system:

The rigging system must be used from Version 3 upwards .

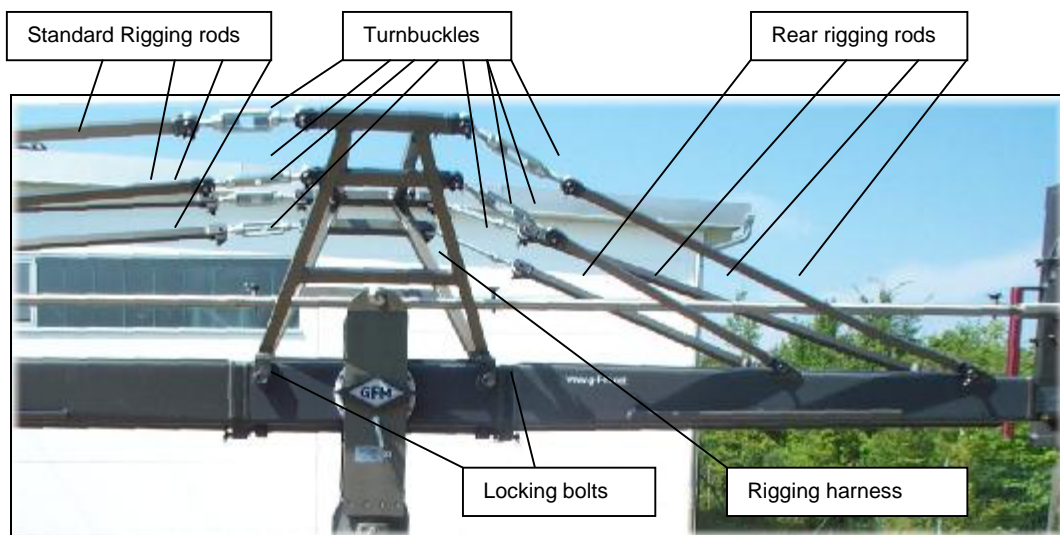
General: For versions using more than 3 x 200cm long sections (versions 7 to 15), a **double rigging system** must be mounted. During assembly, to support the arm and ensure that it does not dip, mount the lower rigging system as soon as crane arm sections 2, or 3 are mounted. When the lower rigging is mounted and adjusted, only then add on section 4, 5 and 6 etc. As soon as the last section is mounted, then assemble the top rigging system.

Tip : Do not load weights until the rigging system is mounted.

Never have 2 more than 2 x 200cm sections mounted without rigging.

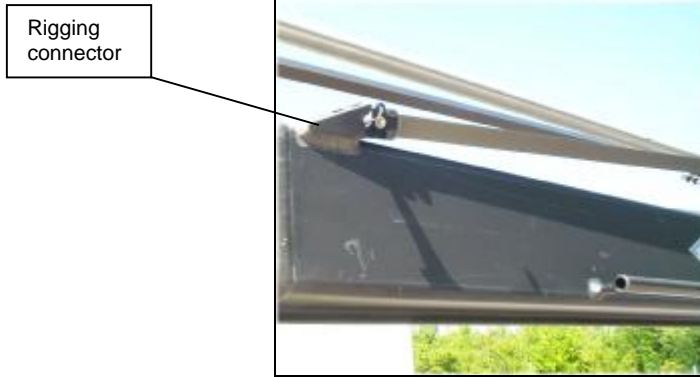
Rigging Harness Assembly

1. Connect the rigging harness to both sides of the middle section and connect with the 2 cross bars. Then ensure that the 4 locking bolts are inserted and tightened fully to the Pivot Section. Ensure that the 4 locking pins securing the 2 cross bars are inserted fully.



2. Connect the turnbuckles to the rear rigging harness and in turn connect the 4 rear rigging rods to the 4 rigging connections on the counterweight bucket arm. Connect the 2 x 90cm rods to the lower turnbuckles and in turn to the inner connections on the rear section. Then connect the 2 x 150cm rods to the top turnbuckles and in turn to the outer connections on the rear section. Ensure that the locking pins are inserted fully. Hand tighten the rods by turning the turnbuckles until the 4 rods are taut.

Note: all rigging support brackets are identical, all rigging rod connectors are identical, all standard rigging rods are identical.



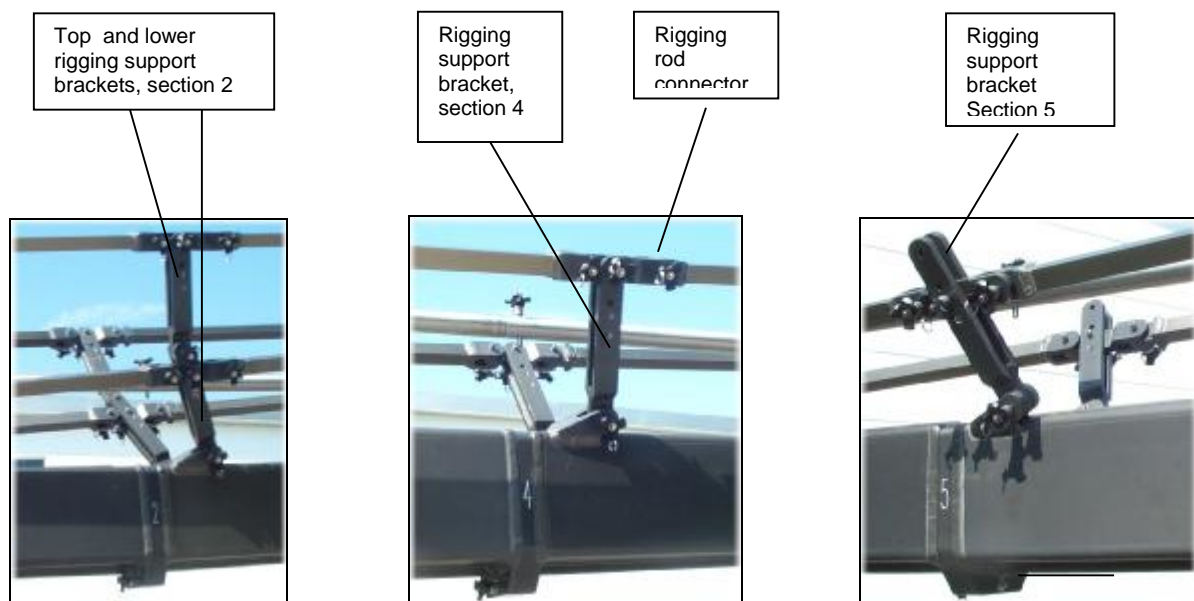
In general ,the length of the rigging system depends on the number of extension arms assembled. For each extension arm, 1 rigging rod length consisting of 2 rods, is required. From Version 7 upwards, i.e. more than 3 extensions a double, rigging system is required i.e. top and bottom.

The top rigging system is assembled in the same manner as the lower but starts off at the top connection on the harness and finishes at the last extension.

The rigging system should be supported in certain positions with the Rigging Support Brackets which connect to sections 2, 3, 4 and 5. The Rigging Support Brackets connect to the Rigging Rod Connectors. Please refer to the individual versions as described on pages 10 to 35.

It is important that the rigging system when taut, should run in a straight line and not bend or dip.

The second, fourth and fifth rigging rods are connected to the following rods via a rigging rod connector.

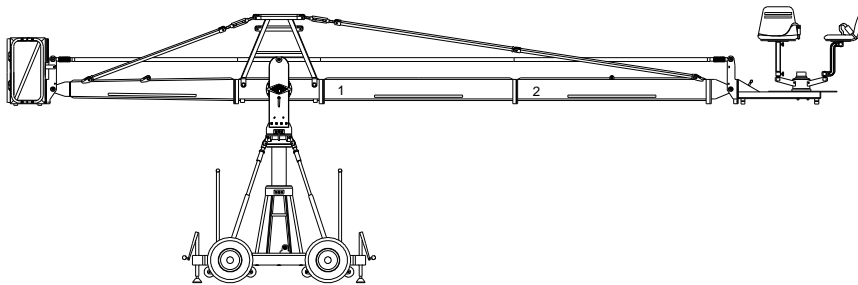


Parallelogram Supports:

By adding extension sections in numerical order plus the respective parallelogram rods, 15 standard versions can be built. When sections number 2, 4 and 6 are used, support the respective parallelogram rods with the integrated parallelogram supports.



Version 3



Front extension arms required	2 x 200cm / 6' 6"
Rear extension arm required	1 x 192cm / 6' 3"
Maximum platform height (Euro-adapter)	581cm / 19'
Maximum lift capacity = 2 pers. + accessories	250 kg / 550 lbs
Total lift range	734cm / 24'
Counterweight required for max. load	554 kg / 1218 lbs
Counterweight required to balance empty arm	56 kg / 123 lbs
Arm reach (pivot to camera head mount)	534cm / 17' 6"
Length of rear end (pivot to outside of bucket)	278cm / 9' 1"
Max. pivot point height	199cm / 6' 6"
Max. operational height of pivot section	232cm / 7' 7"
Max. operational height of rigging harness	276 cm / 9'
Transport weight excluding counterweight	672 kg / 1478 lbs

Continue from page 6

- Connect the 200cm / 6' 6" extension number 2 to extension number 1. Slip the connection flanges into each other and secure with the provided safety pin.
Note: Section 2 must be supported by a suitable support stand or rostrum.
Tip: To avoid the sections jamming or getting stuck make sure that the sections are joined parallel. Using a small amount of lubricant also helps. We suggest rubbing the joints with an oiled rag prior to assembly.

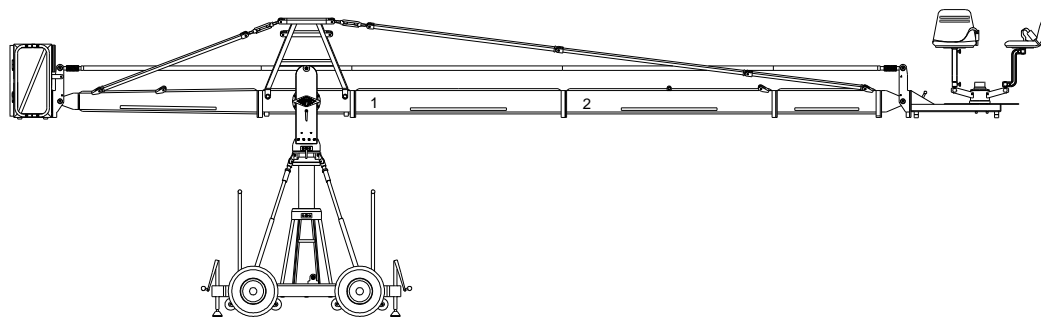
12. Connect a 200cm / 6' 6" parallelogram rod to the parallelogram connection on the middle section and secure it with a safety pin.
13. Connect 200cm / 6' 6" parallelogram rod to the first parallelogram connection and secure it with a safety pin.
Note: Support the second parallelogram rod with the parallelogram support on section 2 and secure with the locking pin as shown on page 9.
14. Connect the angle adjuster to the end of extension number 2. Release the angle adjuster by removing the safety pin from the side of the angle adjuster. See page 6. Secure the angle adjuster to extension number 2 with the same safety pin.
15. Connect the last 200cm / 6' 6" parallelogram rod to the rod on the angle adjuster and secure it with the safety pin.
Tip: The angle adjuster has an integrated leveller. By turning it, the vertical plate on the angle adjuster can be set to a perfect right angle. Correct setting of the angle adjuster enhances the crane's balance.

The "Rigging Harness Assembly" is described on page 7. After reading and following the instructions, please proceed as follows.

16. Connect 2 turnbuckles to the top connection on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
17. Connect 2 standard rigging rods to the turnbuckles on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
18. Connect another 2 standard rigging rods to the first 2 standard rigging rods. Ensure that the locking pins are inserted fully.
19. Connect the last 2 standard rigging rods to the 2 rigging rod connectors on arm extension number 2. Ensure that the locking pins are inserted fully.
20. Hand tighten the rods by turning the turnbuckles until the rods are taut.
21. Remove the support stand or rostrum supporting the counterweight bucket section.
22. Connect the platform to the angle adjuster and secure with the safety pin.
Tip: The angle adjuster has an integrated leveller. By turning it, the vertical plate on the angle adjuster can be set to a perfect right angle. Correct setting of the angle adjuster enhances the crane's balance.

Read "Balancing the crane arm" on page 40.

Version 4



Front extension arms required	2 x 200cm / 6' 6" + 1 x 100cm / 3' 3"
Rear extension arm required	1 x 192cm / 6' 3"
Maximum platform height (Euro-adapter)	658cm / 21' 7"
Maximum lift capacity = 2 pers. + accessories	250 kg / 550 lbs
Total lift range	890cm / 29' 2"
Counterweight required for max. load	718 kg / 1579 lbs
Counterweight required to balance empty arm	112 kg / 246 lbs
Arm reach (pivot to camera head mount)	631cm / 20' 8"
Length of rear end (pivot to outside of bucket)	278cm / 9' 1"
Max. pivot point height	199cm / 6' 6"
Max. operational height of pivot section	232cm / 7' 7"
Max. operational height of rigging harness	276 cm / 9'
Transport weight excluding counterweight	692 kg / 1522 lbs

Continue from page 6

11. Connect the 200cm / 6' 6" extension number 2 to extension number 1. Slip the connection flanges into each other and secure with the provided safety pin.
Note: Section 2 must be supported by a suitable support stand or rostrum.
Tip: To avoid the sections jamming or getting stuck make sure that the sections are joined parallel. Using a small amount of lubricant also helps. We suggest rubbing the joints with an oiled rag prior to assembly.
12. Connect the 100cm / 3' 3" extension to extension number 2. Slip the connection flanges into each other and secure with the provided safety pin.
13. Connect a 200cm / 6' 6" parallelogram rod to the parallelogram connection on the middle section and secure it with a safety pin.
14. Connect a 200cm / 6' 6" parallelogram rod to the first parallelogram connection and secure it with a safety pin.
Note: Support the second parallelogram rod with the parallelogram support and secure with the locking pin as shown on page 9.
15. Connect the 100cm / 3' 3" parallelogram rod to the first parallelogram connection and secure it with a safety pin.
16. Connect the angle adjuster to the end of the 100cm / 3' 3" extension. Release the angle adjuster by removing the safety pin from the side of the angle

adjuster. See page 6. Secure the angle adjuster to the extension with the same safety pin.

17. Connect the 100cm / 3' 3" parallelogram rod to the rod on the angle adjuster and secure it with the safety pin.

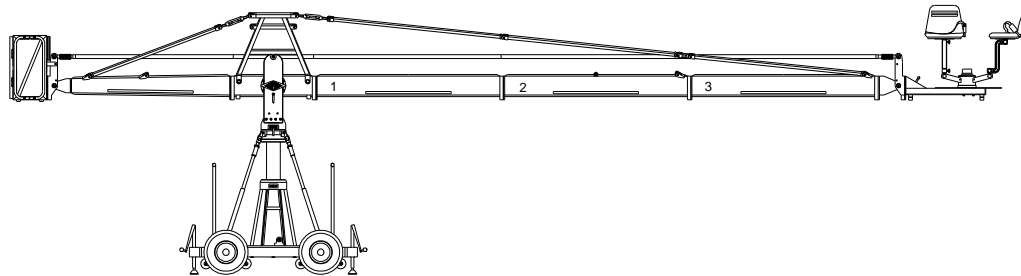
Tip: The angle adjuster has an integrated leveller. By turning it, the vertical plate on the angle adjuster can be set to a perfect right angle. Correct setting of the angle adjuster enhances the crane's balance.

The "Rigging Harness Assembly" is described on page 7. After reading and following the instructions, please proceed as follows.

18. Connect 2 turnbuckles to the top connection on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
19. Connect 2 standard rigging rods to the turnbuckles on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
20. Connect another 2 standard rigging rods to the first 2 standard rigging rods. Ensure that the locking pins are inserted fully.
21. Connect 2 x 100cm / 3' 3" rigging rods to the last 2 rigging rods and in turn to the connectors on 100cm / 3' 3" arm extension. Ensure that the locking pins are inserted fully.
22. Hand tighten the rods by turning the turnbuckles until the rods are taut.
23. Connect the platform to the angle adjuster and secure with the safety pin.
Tip: The angle adjuster has an integrated leveller. By turning it, the vertical plate on the angle adjuster can be set to a perfect right angle. Correct setting of the angle adjuster enhances the crane's balance.

Read "Balancing the crane arm" on page 40.

Version 5



Front extension arms required	3 x 200cm / 6' 6"
Rear extension arm required	1 x 192cm / 6' 3"
Maximum platform height (Euro-adapter)	738cm / 24' 2"
Maximum lift capacity = 2 pers. + accessories	250 kg / 550 lbs
Total lift range	1049cm / 34' 4"
Counterweight required for max. load	896 kg / 1971 lbs
Counterweight required to balance empty arm	182 kg / 400 lbs
Arm reach (pivot to camera head mount)	731cm / 23' 11"
Length of rear end (pivot to outside of bucket)	278cm / 9' 1"
Max. pivot point height	199cm / 6' 6"
Max. operational height of pivot section	232cm / 7' 7"
Max. operational height of rigging harness	276 cm / 9'
Transport weight excluding counterweight	711 kg / 1564 lbs

Continue from page 6

11. Connect the 200cm / 6' 6" extension number 2 to extension number 1. Slip the connection flanges into each other and secure with the provided safety pin.
Note: Section 2 must be supported by a suitable support stand or rostrum.
Tip: To avoid the sections jamming or getting stuck make sure that the sections are joined parallel. Using a small amount of lubricant also helps. We suggest rubbing the joints with an oiled rag prior to assembly.
12. Connect the 200cm / 6' 6" extension number 3 to extension number 2. Slip the connection flanges into each other and secure with the provided safety pin.
Note: Move the support stand or rostrum to support section number 3
13. Connect a 200cm / 6' 6" parallelogram rod to the parallelogram connection on the middle section and secure it with a safety pin.
14. In turn, connect 2 x 200cm / 6' 6" parallelogram rods to the first parallelogram connection and secure it with a safety pin.
15. Connect the angle adjuster to the end of the 200cm / 6' 6" extension. Release the angle adjuster by removing the safety pin from the side of the angle adjuster. See page 6. Secure the angle adjuster to the extension with the same safety pin.
16. Connect the last 200cm / 6' 6" parallelogram rod to the rod on the angle adjuster and secure it with the safety pin.

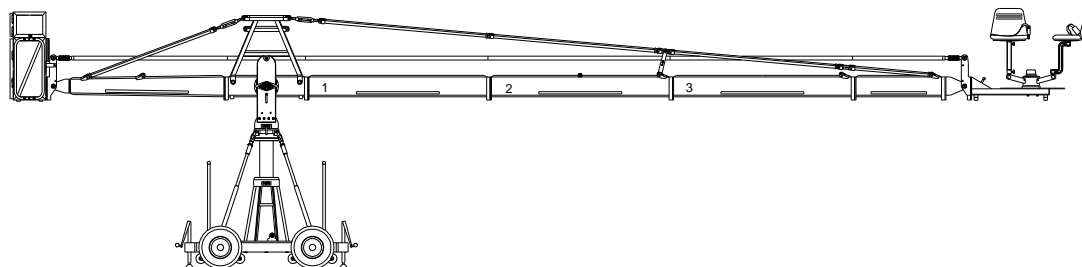
Tip: The angle adjuster has an integrated leveller. By turning it, the vertical plate on the angle adjuster can be set to a perfect right angle. Correct setting of the angle adjuster enhances the crane's balance.

The “Rigging Harness Assembly” is described on page 7. After reading and following the instructions, please proceed as follows.

17. Connect 2 turnbuckles to the top connection on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
18. Connect 2 standard rigging rods to the turnbuckles on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
19. Connect another 2 standard rigging rods to the first 2 standard rigging rods. Ensure that the locking pins are inserted fully.
20. Connect 2 Rigging Support Brackets to the Rigging Rod Connections on section 2. Ensure that the locking pins are inserted fully.
21. Connect a Rigging Rod Connector to each of the second Rigging Rods ensuring that the locking pins are inserted fully. Fit the Rigging Rod Connectors into the Rigging Support Brackets as shown on page 9.
22. Connect 2 standard rigging rods to the Rigging Rod Connectors and in turn to the to the rigging connectors on section 3. Ensure that the locking pins are inserted fully.
23. Hand tighten the rods by turning the turnbuckles until the rods are taut.
24. Remove the support stand or rostrum supporting the counterweight bucket section.
25. Connect the platform to the angle adjuster and secure with the safety pin.
Tip: The angle adjuster has an integrated leveller. By turning it, the vertical plate on the angle adjuster can be set to a perfect right angle. Correct setting of the angle adjuster enhances the crane's balance.

Read “Balancing the crane arm” on page 40.

Version 6



Front extension arms required	3 x 200cm / 6' 6" + 1 x 100cm / 3' 3"
Rear extension arm required	1 x 192cm / 6' 3"
Maximum platform height (Euro-adapter)	816 cm / 26' 9"
Maximum lift capacity = 2 pers. and accessories	250 kg / 550 lbs
Total lift range	1205cm / 39' 6"
Counterweight required for max. load	1078 kg / 2371 lbs
Counterweight required to balance empty arm	266 kg / 585 lbs
Arm reach (pivot to camera head mount)	829 cm / 27' 2"
Length of rear end (pivot to outside of bucket)	278cm / 9' 1"
Max. pivot point height	199cm / 6' 6"
Max. operational height of pivot section	232cm / 7' 7"
Max. operational height of rigging harness	276 cm / 9'
Transport weight excluding counterweight	748 kg / 1645 lbs

Continue from page 6

11. Connect the 200cm / 6' 6" extension number 2 to extension number 1. Slip the connection flanges into each other and secure with the provided safety pin.
Note: Section 2 must be supported by a suitable support stand or rostrum.
Tip: To avoid the sections jamming or getting stuck make sure that the sections are joined parallel. Using a small amount of lubricant also helps. We suggest rubbing the joints with an oiled rag prior to assembly.
12. Connect the 200cm / 6' 6" extension number 3 to extension number 2. Slip the connection flanges into each other and secure with the provided safety pin.
Note: Move the support stand or rostrum to support section 3
13. Connect the 100cm / 3' 3" extension to extension number 3. Slip the connection flanges into each other and secure with the provided safety pin.
14. Connect a 200cm / 6' 6" parallelogram rod to the parallelogram connection on the middle section and secure it with a safety pin.
15. In turn, connect 2 x 200cm / 6' 6" parallelogram rods to the first parallelogram connection and secure it with a safety pin.
Note: Support the second parallelogram rod with the parallelogram support and secure with the locking pin.

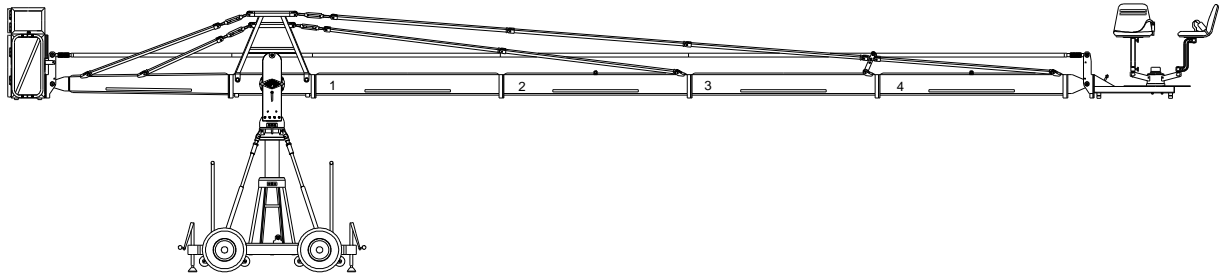
16. Connect the 100cm / 3' 3" parallelogram rod to the last parallelogram connection and secure it with a safety pin.
17. Connect the angle adjuster to the end of the 100cm / 3' 3" extension. Release the angle adjuster by removing the safety pin from the side of the angle adjuster. See page 6. Secure the angle adjuster to the extension with the same safety pin.
18. Connect the 100cm / 3' 3" parallelogram rod to the rod on the angle adjuster and secure it with the safety pin.
Tip: The angle adjuster has an integrated leveller. By turning it, the vertical plate on the angle adjuster can be set to a perfect right angle. Correct setting of the angle adjuster enhances the crane's balance.

The "Rigging Harness Assembly" is described on page 7. After reading and following the instructions, please proceed as follows.

19. Connect 2 turnbuckles to the top connection on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
20. Connect 2 standard rigging rods to the turnbuckles on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
21. Connect another 2 standard rigging rods to the first 2 standard rigging rods. Ensure that the locking pins are inserted fully.
22. Connect 2 Rigging Support Brackets to the Rigging Connections on section 2. Ensure that the locking pins are inserted fully.
23. Connect a Rigging Rod Connector to each of the Rigging Rods ensuring that the locking pins are inserted fully. Fit the Rigging Rod Connectors into the Rigging Support Brackets as shown on page 9.
24. Connect 2 standard rigging rods to the Rigging Rod Connectors. Ensure that the locking pins are inserted fully.
25. Connect 2, 100cm / 3' 3" rigging rods to the Rigging Rods and in turn to the connectors on the 100cm / 3' 3" extension arm. Ensure that the locking pins are inserted fully.
26. Hand tighten the rods by turning the turnbuckles until the rods are taut.
27. When the Rigging Rods are taut and running in a straight line, insert the locking pin connecting the Rigging Rod Connectors into the Rigging Support Brackets located on section 2 as shown on page 9.
28. Remove the support stand or rostrum supporting the counterweight bucket section.
29. Connect the platform to the angle adjuster and secure with the safety pin.
Tip: The angle adjuster has an integrated leveller. By turning it, the vertical plate on the angle adjuster can be set to a perfect right angle. Correct setting of the angle adjuster enhances the crane's balance.

Read "Balancing the crane arm" on page 40.

Version 7



Front extension arms required	4 x 200cm / 6' 6"
Rear extension arm required	1 x 192cm / 6' 3"
Maximum platform height (Euro-adapter)	895 cm / 29' 4"
Maximum lift capacity = 2 pers. and accessories	250 kg / 550 lbs
Total lift range	1364cm / 44' 9"
Counterweight required for max. load	1274 kg / 2802 lbs
Counterweight required to balance empty arm	372 kg / 818lbs
Arm reach (pivot to camera head mount)	929 cm / 30' 5"
Length of rear end (pivot to outside of bucket)	278cm / 9' 1"
Max. pivot point height	199cm / 6' 6"
Max. operational height of pivot section	232cm / 7' 7"
Max. operational height of rigging harness	276 cm / 9'
Transport weight excluding counterweight	783 kg / 1722 lbs

Continue from page 6

11. Connect the 200cm / 6' 6" extension number 2 to extension number 1. Slip the connection flanges into each other and secure with the provided safety pin.
Note: Section 2 must be supported by a suitable support stand or rostrum.
Tip: To avoid the sections jamming or getting stuck make sure that the sections are joined parallel. Using a small amount of lubricant also helps. We suggest rubbing the joints with an oiled rag prior to assembly.

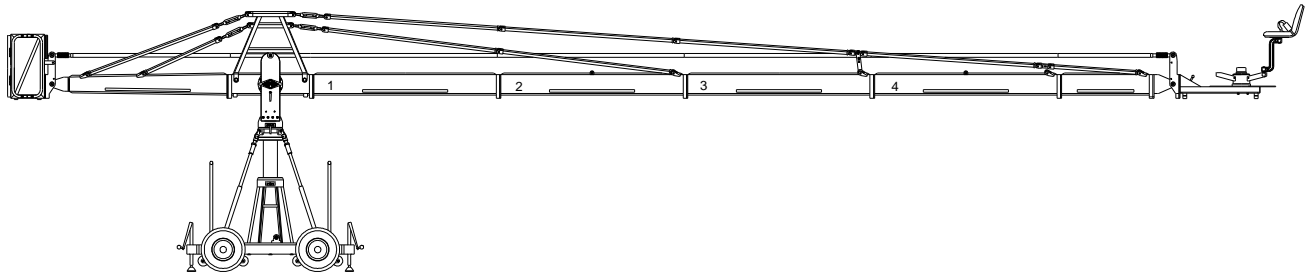
The "Rigging Harness Assembly" is described on page 7. After reading and following the instructions, please proceed as follows.

18. Connect 2 turnbuckles to the bottom connection on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
19. Connect 2 standard rigging rods to the turnbuckles on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
20. Connect another 2 standard rigging rods to the first 2 standard rigging rods and in turn to the rigging connectors on section 2. Ensure that the locking pins are inserted fully.
21. Hand tighten the rods by turning the turnbuckles until the rods are taut.
22. Connect the 200cm / 6' 6" extension number 3 to extension number 2. Slip the connection flanges into each other and secure with the provided safety pin.
Note: Move the support stand or rostrum to support section 3
23. Connect the 200cm / 6' 6" extension number 4 to extension number 3. Slip the connection flanges into each other and secure with the provided safety pin.
24. Connect a 200cm / 6' 6" parallelogram rod to the parallelogram connection on the middle section and secure it with a safety pin.

25. In turn, connect 3 x 200cm / 6' 6" parallelogram rods to the first parallelogram connection and secure it with a safety pin.
Note: Support the second and fourth parallelogram rod with the parallelogram supports located on sections 2 and 4 and secure with the locking pin as shown on page 9.
26. Connect the angle adjuster to the end of the 200cm / 3' 3" extension number 4. Release the angle adjuster by removing the safety pin from the side of the angle adjuster. See page 6. Secure the angle adjuster to the extension with the same safety pin.
27. Connect the last 200cm / 6' 6" parallelogram rod to the rod on the angle adjuster and secure it with the safety pin.
Tip: The angle adjuster has an integrated leveller. By turning it, the vertical plate on the angle adjuster can be set to a perfect right angle. Correct setting of the angle adjuster enhances the crane's balance.
28. Connect 2 turnbuckles to the top connection on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
29. Connect 2 standard rigging rods to the turnbuckles on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
30. Connect another 2 standard rigging rods to the first 2 standard rigging rods. Ensure that the locking pins are inserted fully.
31. Connect another 2 standard rigging rods to the second 2 standard rigging rods. Ensure that the locking pins are inserted fully.
32. Connect 2 Rigging Support Brackets to the Rigging Rod Connections on section 3. Ensure that the locking pins are inserted fully.
33. Connect a Rigging Rod Connector to each of the third Rigging Rods ensuring that the locking pins are inserted fully. Fit the Rigging Rod Connectors into the Rigging Support Brackets as shown on page 9.
34. Connect 2 standard rigging rods to the Rigging Rod Connectors and in turn to the to the rigging connectors on section 4.. Ensure that the locking pins are inserted fully.
35. Hand tighten the rods by turning the turnbuckles until the rods are taut.
36. When the Rigging Rods are taut and running in a straight line, insert the locking pin connecting the Rigging Rod Connectors into the Rigging Support Brackets on section 3 as shown on page 9.
37. Remove the support stand or rostrum supporting the counterweight bucket section.
38. Connect the platform to the angle adjuster and secure with the safety pin.
Tip: The angle adjuster has an integrated leveller. By turning it, the vertical plate on the angle adjuster can be set to a perfect right angle. Correct setting of the angle adjuster enhances the crane's balance.

Read "Balancing the crane arm" on page 40.

Version 8



Front extension arms required	4 x 200cm / 6' 6" + 1 x 100cm / 3' 3"
Rear extension arm required	1 x 192cm / 6' 3"
Maximum platform height (Euro-adapter)	973 cm / 31' 11"
Maximum lift capacity = 1 pers. and accessories	140 kg / 308 lbs
Total lift range	1519cm / 49' 10"
Counterweight required for max. load	1022 kg / 2248 lbs
Counterweight required to balance empty arm	448 kg / 985 lbs
Arm reach (pivot to camera head mount)	1027 cm / 33' 8"
Length of rear end (pivot to outside of bucket)	278cm / 9' 1"
Max. pivot point height	199cm / 6' 6"
Max. operational height of pivot section	232cm / 7' 7"
Max. operational height of rigging harness	276 cm / 9'
Transport weight excluding counterweight	787 kg / 1731 lbs

Continue from page 6

11. Connect the 200cm / 6' 6" extension number 2 to extension number 1. Slip the connection flanges into each other and secure with the provided safety pin.
Note: Section 2 must be supported by a suitable support stand or rostrum.
Tip: To avoid the sections jamming or getting stuck make sure that the sections are joined parallel. Using a small amount of lubricant also helps. We suggest rubbing the joints with an oiled rag prior to assembly.

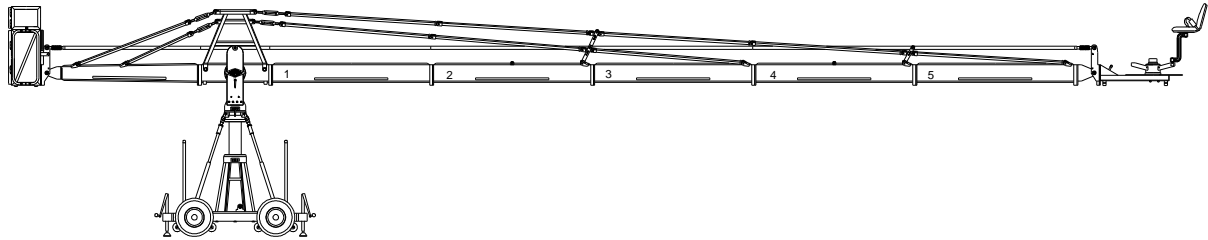
The "Rigging Harness Assembly" is described on page 7. After reading and following the instructions, please proceed as follows.

12. Connect 2 turnbuckles to the bottom connection on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
13. Connect 2 standard rigging rods to the turnbuckles on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
14. Connect another 2 standard rigging rods to the first 2 standard rigging rods and in turn to the rigging connectors on section 2. Ensure that the locking pins are inserted fully.
15. Hand tighten the rods by turning the turnbuckles until the rods are taut.
16. Connect the 200cm / 6' 6" extension number 3 to extension number 2. Slip the connection flanges into each other and secure with the provided safety pin.
Note: Move the support stand or rostrum to support section 3
17. Connect the 200cm / 6' 6" extension number 4 to extension number 3. Slip the connection flanges into each other and secure with the provided safety pin.
18. Connect the 100cm / 3' 3" extension to extension number 4. Slip the connection flanges into each other and secure with the provided safety pin.

19. Remove the support stand or rostrum supporting the counterweight bucket section and place it under the end of extension number 4.
20. Connect a 200cm / 6' 6" parallelogram rod to the parallelogram connection on the middle section and secure it with a safety pin.
21. In turn, connect 3 x 200cm / 6' 6" parallelogram rods to the first parallelogram connection and secure it with a safety pin.
Note: Support the second and fourth parallelogram rod with the parallelogram supports found on sections 2 and 4 and secure with the locking pin as shown on page 9.
22. Connect the 100cm / 3' 3" parallelogram rod to the last parallelogram connection and secure it with a safety pin.
23. Connect the angle adjuster to the end of the 100cm / 3' 3" extension. Release the angle adjuster by removing the safety pin from the side of the angle adjuster. See page 6. Secure the angle adjuster to the extension with the same safety pin.
24. Connect the 100cm / 3' 3" parallelogram rod to the rod on the angle adjuster and secure it with the safety pin.
Tip: The angle adjuster has an integrated leveller. By turning it, the vertical plate on the angle adjuster can be set to a perfect right angle. Correct setting of the angle adjuster enhances the crane's balance.
25. Connect 2 turnbuckles to the top connection on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
26. Connect 2 standard rigging rods to the turnbuckles on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
27. Connect another 2 standard rigging rods to the first 2 standard rigging rods. Ensure that the locking pins are inserted fully.
28. Connect another 2 standard rigging rods to the second 2 standard rigging rods. Ensure that the locking pins are inserted fully.
29. Connect 2 Rigging Support Brackets to the Rigging Rod Connections on section 3. Ensure that the locking pins are inserted fully.
30. Connect a Rigging Rod Connector to each of the third Rigging Rods ensuring that the locking pins are inserted fully. Fit the Rigging Rod Connectors into the Rigging Support Brackets as shown on page 9.
31. Connect 2 standard rigging rods to the Rigging Rod Connectors and in turn to the to the rigging connectors on section 4. Ensure that the locking pins are inserted fully.
32. Connect 2 Rigging Rod Connectors to the fourth rigging rods. Ensure that the locking pins are inserted fully.
33. Connect 2 100cm / 3' 3" rigging rods to the Rigging Rod Connectors on the fourth rigging rods and in turn to the to the rigging connectors on the 100cm / 3' 3" section. Ensure that the locking pins are inserted fully.
34. Hand tighten the rods by turning the turnbuckles until the rods are taut.
35. When the Rigging Rods are taut and running in a straight line, insert the locking pin connecting the Rigging Rod Connectors into the Rigging Support Brackets on section 3 as shown on page 9.
36. Connect the platform to the angle adjuster and secure with the safety pin.
Tip: The angle adjuster has an integrated leveller. By turning it, the vertical plate on the angle adjuster can be set to a perfect right angle. Correct setting of the angle adjuster enhances the crane's balance.

Read "Balancing the crane arm" on page 40.

Version 9



Front extension arms required	5 x 200cm / 6' 6"
Rear extension arm required	1 x 192cm / 6' 3"
Maximum platform height (Euro-adapter)	1053 cm / 34' 6"
Maximum lift capacity = 1 pers. and camera	140 kg / 308 lbs
Total lift range	1678cm / 55'
Counterweight required for max. load	1148 kg / 2525 lbs
Counterweight required to balance empty arm	554 kg / 1218 lbs
Arm reach (pivot to camera head mount)	1127 cm / 36' 11"
Length of rear end (pivot to outside of bucket)	278cm / 9' 1"
Max. pivot point height	199cm / 6' 6"
Max. operational height of pivot section	232cm / 7' 7"
Max. operational height of rigging harness	276 cm / 9'
Transport weight excluding counterweight	818 kg / 1799 lbs

Continue from page 6

11. Connect the 200cm / 6' 6" extension number 2 to extension number 1. Slip the connection flanges into each other and secure with the provided safety pin.
Note: Section 2 must be supported by a suitable support stand or rostrum.
Tip: To avoid the sections jamming or getting stuck make sure that the sections are joined parallel. Using a small amount of lubricant also helps. We suggest rubbing the joints with an oiled rag prior to assembly.
12. Connect the 200cm / 6' 6" extension number 3 to extension number 2. Slip the connection flanges into each other and secure with the provided safety pin.
Note: Move the support stand or rostrum to support section 3

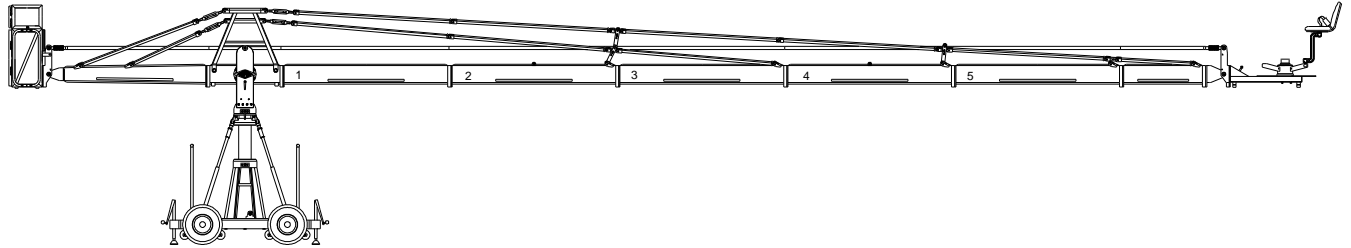
The "Rigging Harness Assembly" is described on page 7. After reading and following the instructions, please proceed as follows.

13. Connect 2 turnbuckles to the bottom connection on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
14. Connect 2 standard rigging rods to the turnbuckles on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
15. Connect 2 Rigging Support Brackets to the Rigging Rod Connections on section 2. Ensure that the locking pins are inserted fully.
16. Connect a Rigging Rod Connector to each of the second Rigging Rods ensuring that the locking pins are inserted fully. Fit the Rigging Rod Connectors into the Rigging Support Brackets as shown on page 9.
17. Connect 2 standard rigging rods to the Rigging Rod Connectors and in turn to the to the rigging connectors on section 3. Ensure that the locking pins are inserted fully.
18. Hand tighten the rods by turning the turnbuckles until the rods are taut.
19. When the Rigging Rods are taut and running in a straight line, insert the locking pin connecting the Rigging Rod Connectors into the Rigging Support Brackets on section 3 as shown on page 9.
20. Connect the 200cm / 6' 6" extension number 4 to extension number 3. Slip the connection flanges into each other and secure with the provided safety pin.

21. Connect the 200cm / 6' 6" extension number 5 to extension number 4. Slip the connection flanges into each other and secure with the provided safety pin.
22. Remove the support stand or rostrum supporting the counterweight bucket section and place it under the end of extension number 5.
23. Connect a 200cm / 6' 6" parallelogram rod to the parallelogram connection on the middle section and secure it with a safety pin.
24. In turn, connect 4 x 200cm / 6' 6" parallelogram rods to the first parallelogram connection and secure it with a safety pin.
Note: Support the second and fourth parallelogram rod with the parallelogram support located on sections 2 and 4 and secure with the locking pin as shown on page 9.
25. Connect the angle adjuster to the end of the 200cm / 6' 6" extension number 5. Release the angle adjuster by removing the safety pin from the side of the angle adjuster. See page 6. Secure the angle adjuster to the extension with the same safety pin.
26. Connect the last 200cm / 6' 6" parallelogram rod to the rod on the angle adjuster and secure it with the safety pin.
Tip: The angle adjuster has an integrated leveller. By turning it, the vertical plate on the angle adjuster can be set to a perfect right angle. Correct setting of the angle adjuster enhances the crane's balance.
27. Connect 2 turnbuckles to the top connection on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
28. Connect 2 standard rigging rods to the turnbuckles on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
29. Connect another 2 standard rigging rods to the first 2 standard rigging rods. Ensure that the locking pins are inserted fully.
30. Connect 2 Rigging Support Brackets to the Rigging Support Brackets on section 2. Ensure that the locking pins are inserted fully.
31. Connect a Rigging Rod Connector to each of the second Rigging Rods ensuring that the locking pins are inserted fully. Fit the Rigging Rod Connectors into the Rigging Support Brackets as shown on page 9.
32. Connect another 2 standard rigging rods to the Rigging Rod Connectors on the second 2 standard rigging rods. Ensure that the locking pins are inserted fully.
33. Connect another 2 standard rigging rods to the third 2 standard rigging rods. Ensure that the locking pins are inserted fully.
34. Connect 2 Rigging Support Brackets to the Rigging Rod Connections on section 4. Ensure that the locking pins are inserted fully.
35. Connect a Rigging Rod Connector to each of the fourth Rigging Rods ensuring that the locking pins are inserted fully. Fit the Rigging Rod Connectors into the Rigging Support Brackets on section 4 as shown on page 9.
36. Connect 2 standard rigging rods to the Rigging Rod Connectors and in turn to the rigging connectors on section 5. Ensure that the locking pins are inserted fully.
37. Hand tighten the rods by turning the turnbuckles until the rods are taut.
38. When the Rigging Rods are taut and running in a straight line, insert the locking pin connecting the Rigging Rod Connectors into the Top Rigging Support Brackets on section 2 and section 4 as shown on page 9.
39. Connect the platform to the angle adjuster and secure with the safety pin.
Tip: The angle adjuster has an integrated leveller. By turning it, the vertical plate on the angle adjuster can be set to a perfect right angle. Correct setting of the angle adjuster enhances the crane's balance.

Read "Balancing the crane arm" on page 40.

Version 10



Front extension arms required	5 x 200cm / 6' 6" + 1 x 100cm / 3' 3"
Rear extension arm required	1 x 192cm / 6' 3"
Maximum remote bracket height (Mitchell plate)	1130 cm / 37'
Maximum lift capacity = remote head and camera	130 kg / 286 lbs
Total lift range	1834cm / 60' 2"
Counterweight required for max. load	1330 kg / 2926 lbs
Counterweight required to balance empty arm	658 kg / 1447 lbs
Arm reach (pivot to camera head mount)	1225 cm / 40' 2"
Length of rear end (pivot to outside of bucket)	278cm / 9' 1"
Max. pivot point height	199cm / 6' 6"
Max. operational height of pivot section	232cm / 7' 7"
Max. operational height of rigging harness	276 cm / 9'
Transport weight excluding counterweight	838 kg / 1843 lbs

Continue from page 6

11. Connect the 200cm / 6' 6" extension number 2 to extension number 1. Slip the connection flanges into each other and secure with the provided safety pin.
Note: Section 2 must be supported by a suitable support stand or rostrum.
Tip: To avoid the sections jamming or getting stuck make sure that the sections are joined parallel. Using a small amount of lubricant also helps. We suggest rubbing the joints with an oiled rag prior to assembly.
12. Connect the 200cm / 6' 6" extension number 3 to extension number 2. Slip the connection flanges into each other and secure with the provided safety pin.
Note: Move the support stand or rostrum to support section 3

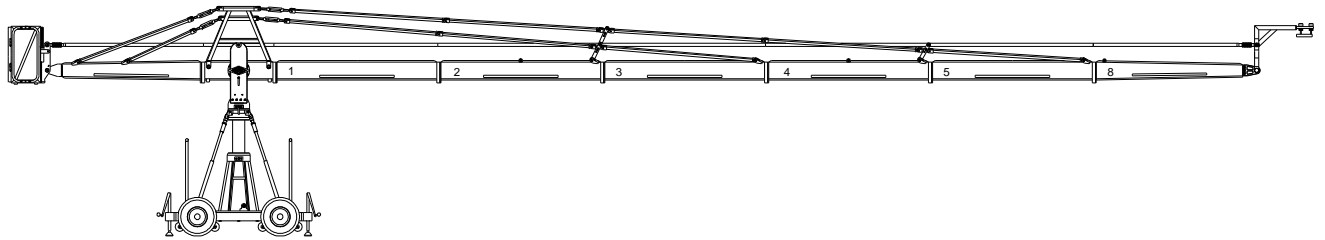
The "Rigging Harness Assembly" is described on page 7. After reading and following the instructions, please proceed as follows.

13. Connect 2 turnbuckles to the bottom connection on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
14. Connect 2 standard rigging rods to the turnbuckles on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
15. Connect 2 Rigging Support Brackets to the Rigging Rod Connections on section 2. Ensure that the locking pins are inserted fully.
16. Connect a Rigging Rod Connector to each of the second Rigging Rods ensuring that the locking pins are inserted fully. Fit the Rigging Rod Connectors into the Rigging Support Brackets as shown on page 9.
17. Connect 2 standard rigging rods to the Rigging Rod Connectors and in turn to the to the rigging connectors on section 3. Ensure that the locking pins are inserted fully.
18. Hand tighten the rods by turning the turnbuckles until the rods are taut.
19. When the Rigging Rods are taut and running in a straight line, insert the locking pin connecting the Rigging Rod Connectors into the Rigging Support Brackets on section 3 as shown on page 9.
20. Connect the 200cm / 6' 6" extension number 4 to extension number 3. Slip the connection flanges into each other and secure with the provided safety pin.

21. Connect the 200cm / 6' 6" extension number 5 to extension number 4. Slip the connection flanges into each other and secure with the provided safety pin.
22. Remove the support stand or rostrum supporting the counterweight bucket section and place it under the end of extension number 5.
23. Connect the 100cm / 3' 3" extension to extension number 5. Slip the connection flanges into each other and secure with the provided safety pin.
24. Connect a 200cm / 6' 6" parallelogram rod to the parallelogram connection on the middle section and secure it with a safety pin.
25. In turn, connect 4 x 200cm / 6' 6" parallelogram rods to the first parallelogram connection and secure it with a safety pin.
Note: Support the second and fourth parallelogram rod with the parallelogram support located on sections 2 and 4 and secure with the locking pin as shown on page 9.
26. Connect the 100cm / 3' 3" parallelogram rod to the last parallelogram connection and secure it with a safety pin.
27. Connect the angle adjuster to the end of the 100cm / 3' 3" extension. Release the angle adjuster by removing the safety pin from the side of the angle adjuster. See page 6. Secure the angle adjuster to the extension with the same safety pin.
28. Connect the 100cm / 3' 3" parallelogram rod to the rod on the angle adjuster and secure it with the safety pin.
Tip: The angle adjuster has an integrated leveller. By turning it, the vertical plate on the angle adjuster can be set to a perfect right angle. Correct setting of the angle adjuster enhances the crane's balance.
29. Connect 2 turnbuckles to the top connection on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
30. Connect 2 standard rigging rods to the turnbuckles on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
31. Connect another 2 standard rigging rods to the first 2 standard rigging rods. Ensure that the locking pins are inserted fully.
32. Connect 2 Rigging Support Brackets to the Rigging Support Brackets on section 2. Ensure that the locking pins are inserted fully.
33. Connect a Rigging Rod Connector to each of the second Rigging Rods ensuring that the locking pins are inserted fully. Fit the Rigging Rod Connectors into the Top Rigging Support Brackets as shown on page 9.
34. Connect another 2 standard rigging rods to the Rigging Rod Connectors on the second 2 standard rigging rods. Ensure that the locking pins are inserted fully.
35. Connect another 2 standard rigging rods to the third 2 standard rigging rods. Ensure that the locking pins are inserted fully.
36. Connect 2 Rigging Support Brackets to the Rigging Rod Connections on section 4. Ensure that the locking pins are inserted fully.
37. Connect a Rigging Rod Connector to each of the fourth Rigging Rods ensuring that the locking pins are inserted fully. Fit the Rigging Rod Connectors into the Rigging Support Brackets on section 4 as shown on page 9.
38. Connect 2 standard rigging rods to the Rigging Rod Connectors. Ensure that the locking pins are inserted fully.
39. Connect 2 100cm / 3' 3" rigging rods to the Rigging Rod Connectors and in turn to the rigging connectors on the 100cm / 3' 3" section. Ensure that the locking pins are inserted fully.
40. Hand tighten the rods by turning the turnbuckles until the rods are taut.
41. When the Rigging Rods are taut and running in a straight line, insert the locking pin connecting the Rigging Rod Connectors into the Rigging Support Brackets on sections 2 and section 4 as shown on page 9.
42. Connect the platform to the angle adjuster and secure with the safety pin.
Tip: The angle adjuster has an integrated leveller. By turning it, the vertical plate on the angle adjuster can be set to a perfect right angle. Correct setting of the angle adjuster enhances the crane's balance.

Read "Balancing the crane arm" on page 40.

Version 11



Front extension arms required	6 x 200cm / 6' 6"
Rear extension arm required	1 x 192cm / 6' 3"
Maximum remote bracket height (Mitchell plate)	1217 cm / 39' 11"
Maximum lift capacity = remote head and camera	85 kg / 187 lbs
Total lift range	1954cm / 64' 1"
Counterweight required for max. load	974 kg / 2142 lbs
Counterweight required to balance empty arm	518 kg / 1139 lbs
Arm reach (pivot to camera head mount)	1286 cm / 42' 2"
Length of rear end (pivot to outside of bucket)	278cm / 9' 1"
Max. pivot point height	199cm / 6' 6"
Max. operational height of pivot section	232cm / 7' 7"
Max. operational height of rigging harness	276 cm / 9'
Transport weight excluding counterweight	788 kg / 1733 lbs

Continue from page 6

11. Connect the 200cm / 6' 6" extension number 2 to extension number 1. Slip the connection flanges into each other and secure with the provided safety pin.
Note: Section 2 must be supported by a suitable support stand or rostrum.
Tip: To avoid the sections jamming or getting stuck make sure that the sections are joined parallel. Using a small amount of lubricant also helps. We suggest rubbing the joints with an oiled rag prior to assembly.
12. Connect the 200cm / 6' 6" extension number 3 to extension number 2. Slip the connection flanges into each other and secure with the provided safety pin.
Note: Move the support stand or rostrum to support section 3

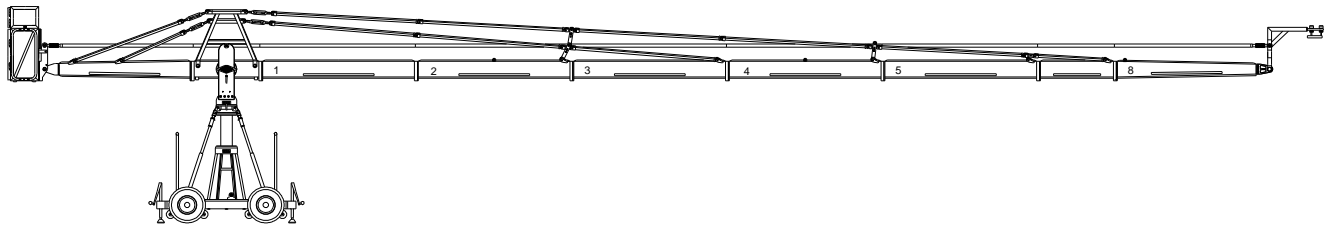
The "Rigging Harness Assembly" is described on page 7. After reading and following the instructions, please proceed as follows.

13. Connect 2 turnbuckles to the bottom connection on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
14. Connect 2 standard rigging rods to the turnbuckles on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
15. Connect 2 standard rigging rods to the first 2 rigging rods. Ensure that the locking pins are inserted fully.
16. Connect 2 Rigging Support Brackets to the Rigging Rod Connections on section 2. Ensure that the locking pins are inserted fully.
17. Connect a Rigging Rod Connector to each of the second Rigging Rods ensuring that the locking pins are inserted fully. Fit the Rigging Rod Connectors into the Rigging Support Brackets as shown on page 9.
18. Connect 2 standard rigging rods to the Rigging Rod Connectors and in turn to the to the rigging connectors on section 3. Ensure that the locking pins are inserted fully.
19. Hand tighten the rods by turning the turnbuckles until the rods are taut.
20. When the Rigging Rods are taut and running in a straight line, insert the locking pin connecting the Rigging Rod Connectors into the Rigging Support Brackets on section 2 as shown on page 9.

21. Connect the 200cm / 6' 6" extension number 4 to extension number 3. Slip the connection flanges into each other and secure with the provided safety pin.
22. Connect the 200cm / 6' 6" extension number 5 to extension number 4. Slip the connection flanges into each other and secure with the provided safety pin.
23. Remove the support stand or rostrum supporting the counterweight bucket section and place it under the end of extension number 5.
24. Connect the Remote Extension to 100cm / 3' 3" extension number 5. Slip the connection flanges into each other and secure with the provided safety pin.
25. Connect a 200cm / 6' 6" parallelogram rod to the parallelogram connection on the middle section and secure it with a safety pin.
26. In turn, connect 4 x 200cm / 6' 6" parallelogram rods to the first parallelogram connection and secure it with a safety pin.
Note: Support the second and fourth parallelogram rod with the parallelogram support located on sections 2 and 4 and secure with the locking pin as shown on page 9.
27. Connect the Remote Extension parallelogram rod to the last parallelogram connection and secure it with a safety pin.
28. Support the Remote Extension parallelogram rod with the parallelogram support located on the Remote Extension and secure with the locking pin as shown on page 9.
29. Connect the Remote Bracket as described on pages 10 to 11.
Tip: The Remote Bracket has an integrated leveller. By turning it, the Remote Bracket can be set to a perfect right angle. Correct setting of the angle adjuster enhances the crane's balance.
30. Connect 2 turnbuckles to the top connection on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
31. Connect 2 standard rigging rods to the turnbuckles on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
32. Connect another 2 standard rigging rods to the first 2 standard rigging rods. Ensure that the locking pins are inserted fully.
33. Connect 2 Rigging Support Brackets to the Rigging Support Brackets on section 2. Ensure that the locking pins are inserted fully.
34. Connect a Rigging Rod Connector to each of the second Rigging Rods ensuring that the locking pins are inserted fully. Fit the Rigging Rod Connectors into the Rigging Support Brackets as shown on page 9.
35. Connect another 2 standard rigging rods to the Rigging Rod Connectors on the second 2 standard rigging rods. Ensure that the locking pins are inserted fully.
36. Connect another 2 standard rigging rods to the third 2 standard rigging rods. Ensure that the locking pins are inserted fully.
37. Connect 2 Rigging Support Brackets to the Rigging Rod Connections on section 4. Ensure that the locking pins are inserted fully.
38. Connect a Rigging Rod Connector to each of the fourth Rigging Rods ensuring that the locking pins are inserted fully. Fit the Rigging Rod Connectors into the Rigging Support Brackets on section 4 as shown on page 9.
39. Connect 2 standard rigging rods to the Rigging Rod Connectors and in turn to the rigging connectors on section 5. Ensure that the locking pins are inserted fully.
40. Hand tighten the rods by turning the turnbuckles until the rods are taut.
41. When the Rigging Rods are taut and running in a straight line, insert the locking pin connecting the Rigging Rod Connectors into the Rigging Support Brackets on section 3 and section 4 as shown on page 9.

Read "Balancing the crane arm" on page 40.

Version 12



Front extension arms required	6 x 200cm / 6' 6" + 1 x 100cm / 3' 3"
Rear extension arm required	1 x 192cm / 6' 3"
Maximum remote bracket height (Mitchell plate)	1294 cm / 42' 5"
Maximum lift capacity = remote head and camera	85 kg / 187 lbs
Total lift range	2110cm / 69' 2"
Counterweight required for max. load	1134 kg / 2494 lbs
Counterweight required to balance empty arm	700 kg / 1540 lbs
Arm reach (pivot to camera head mount)	1383 cm / 45' 4"
Length of rear end (pivot to outside of bucket)	278cm / 9' 1"
Max. pivot point height	199cm / 6' 6"
Max. operational height of pivot section	232cm / 7' 7"
Max. operational height of rigging harness	276 cm / 9'
Transport weight excluding counterweight	824 kg / 1812 lbs

Continue from page 6

11. Connect the 200cm / 6' 6" extension number 2 to extension number 1. Slip the connection flanges into each other and secure with the provided safety pin.
Note: Section 2 must be supported by a suitable support stand or rostrum.
Tip: To avoid the sections jamming or getting stuck make sure that the sections are joined parallel. Using a small amount of lubricant also helps. We suggest rubbing the joints with an oiled rag prior to assembly.
12. Connect the 200cm / 6' 6" extension number 3 to extension number 2. Slip the connection flanges into each other and secure with the provided safety pin.
Note: Move the support stand or rostrum to support section 3

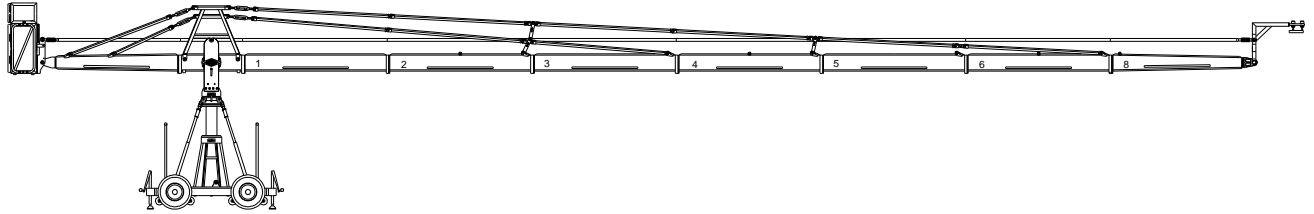
The "Rigging Harness Assembly" is described on page 7. After reading and following the instructions, please proceed as follows.

13. Connect 2 turnbuckles to the bottom connection on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
14. Connect 2 standard rigging rods to the turnbuckles on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
15. Connect 2 Rigging Support Brackets to the Rigging Rod Connections on section 2. Ensure that the locking pins are inserted fully.
16. Connect a Rigging Rod Connector to each of the second Rigging Rods ensuring that the locking pins are inserted fully. Fit the Rigging Rod Connectors into the Rigging Support Brackets as shown on page 9.
17. Connect 2 standard rigging rods to the Rigging Rod Connectors and in turn to the to the rigging connectors on section 3. Ensure that the locking pins are inserted fully.
18. Hand tighten the rods by turning the turnbuckles until the rods are taut.
19. When the Rigging Rods are taut and running in a straight line, insert the locking pin connecting the Rigging Rod Connectors into the Rigging Support Brackets on section 3 as shown on page 9.
20. Connect the 200cm / 6' 6" extension number 4 to extension number 3. Slip the connection flanges into each other and secure with the provided safety pin.

21. Connect the 200cm / 6' 6" extension number 5 to extension number 4. Slip the connection flanges into each other and secure with the provided safety pin.
22. Remove the support stand or rostrum supporting the counterweight bucket section and place it under the end of extension number 5.
23. Connect the 100cm / 3' 3" extension to extension number 5. Slip the connection flanges into each other and secure with the provided safety pin.
24. Connect the Remote Extension to the 100cm / 3' 3" extension. Slip the connection flanges into each other and secure with the provided safety pin.
25. Connect the Remote Bracket as described on pages 10 to 11.
Tip: The Remote Bracket has an integrated leveller. By turning it, the Remote Bracket can be set to a perfect right angle. Correct setting of the angle adjuster enhances the crane's balance.
16. Connect a 200cm / 6' 6" parallelogram rod to the parallelogram connection on the middle section and secure it with a safety pin.
27. In turn, connect 4 x 200cm / 6' 6" parallelogram rods to the first parallelogram connection and secure it with a safety pin.
Note: Support the second and fourth parallelogram rod with the parallelogram support located on sections 2 and 4 and secure with the locking pin as shown on page 9.
28. Connect the 100cm / 3' 3" parallelogram rod to the last parallelogram connection and secure it with a safety pin.
29. Connect the Remote Extension parallelogram rod to the 100cm / 3' 3" parallelogram connection and secure it with a safety pin.
30. Support the Remote Extension parallelogram rod with the parallelogram support located on the Remote Extension and secure with the locking pin as shown on page 9.
31. Connect 2 turnbuckles to the top connection on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
32. Connect 2 standard rigging rods to the turnbuckles on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
33. Connect another 2 standard rigging rods to the first 2 standard rigging rods. Ensure that the locking pins are inserted fully.
34. Connect 2 Rigging Support Brackets to the Rigging Support Brackets on section 2. Ensure that the locking pins are inserted fully.
35. Connect a Rigging Rod Connector to each of the second Rigging Rods ensuring that the locking pins are inserted fully. Fit the Rigging Rod Connectors into the Rigging Support Brackets as shown on page 9.
36. Connect another 2 standard rigging rods to the Rigging Rod Connectors on the second 2 standard rigging rods. Ensure that the locking pins are inserted fully.
37. Connect another 2 standard rigging rods to the third 2 standard rigging rods. Ensure that the locking pins are inserted fully.
38. Connect 2 Rigging Support Brackets to the Rigging Rod Connections on section 4. Ensure that the locking pins are inserted fully.
39. Connect a Rigging Rod Connector to each of the fourth Rigging Rods ensuring that the locking pins are inserted fully. Fit the Rigging Rod Connectors into the Rigging Support Brackets on section 4 as shown on page 9.
40. Connect 2 standard rigging rods to the Rigging Rod Connectors. Ensure that the locking pins are inserted fully.
41. Connect 2 Rigging Rod Connectors to the fifth standard rigging rods. Ensure that the locking pins are inserted fully.
42. Connect 2 100cm / 3' 3" rigging rods to the Rigging Rod Connectors and in turn to the rigging connectors on the 100cm / 3' 3" section. Ensure that the locking pins are inserted fully.
43. Hand tighten the rods by turning the turnbuckles until the rods are taut.
44. When the Rigging Rods are taut and running in a straight line, insert the locking pin connecting the Rigging Rod Connectors into the Rigging Support Brackets on section 2 and section 4 as shown on page 9.

Read "Balancing the crane arm" on page 40.

Version 13



Front extension arms required	7 x 200cm / 6' 6"
Rear extension arm required	1 x 192cm / 6' 3"
Maximum remote bracket height (Mitchell plate)	1374 cm / 45'
Maximum lift capacity = remote head and camera	80 kg / 176 lbs
Total lift range	2269cm / 74' 5"
Counterweight required for max. load	1218 kg / 2679 lbs
Counterweight required to balance empty arm	722 kg / 1588 lbs
Arm reach (pivot to camera head mount)	1483 cm / 48' 7"
Length of rear end (pivot to outside of bucket)	278cm / 9' 1"
Max. pivot point height	199cm / 6' 6"
Max. operational height of pivot section	232cm / 7' 7"
Max. operational height of rigging harness	276 cm / 9'
Transport weight excluding counterweight	837 kg / 1841 lbs

Continue from page 6

11. Connect the 200cm / 6' 6" extension number 2 to extension number 1. Slip the connection flanges into each other and secure with the provided safety pin.
Note: Section 2 must be supported by a suitable support stand or rostrum.
Tip: To avoid the sections jamming or getting stuck make sure that the sections are joined parallel. Using a small amount of lubricant also helps. We suggest rubbing the joints with an oiled rag prior to assembly.
12. Connect the 200cm / 6' 6" extension number 3 to extension number 2. Slip the connection flanges into each other and secure with the provided safety pin.
Note: Move the support stand or rostrum to support section 3

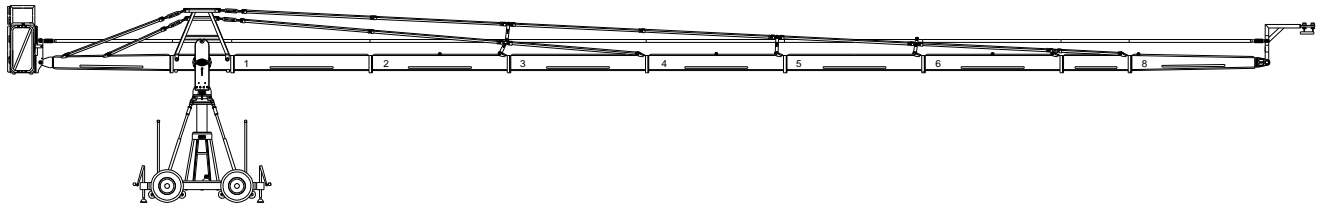
The "Rigging Harness Assembly" is described on page 7. After reading and following the instructions, please proceed as follows.

13. Connect 2 turnbuckles to the bottom connection on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
14. Connect 2 standard rigging rods to the turnbuckles on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
15. Connect 2 Rigging Support Brackets to the Rigging Rod Connections on section 2. Ensure that the locking pins are inserted fully.
16. Connect a Rigging Rod Connector to each of the second Rigging Rods ensuring that the locking pins are inserted fully. Fit the Rigging Rod Connectors into the Rigging Support Brackets as shown on page 9.
17. Connect 2 standard rigging rods to the Rigging Rod Connectors and in turn to the to the rigging connectors on section 3. Ensure that the locking pins are inserted fully.
18. Hand tighten the rods by turning the turnbuckles until the rods are taut.
19. When the Rigging Rods are taut and running in a straight line, insert the locking pin connecting the Rigging Rod Connectors into the Rigging Support Brackets on section 3 as shown on page 9.
20. Connect the 200cm / 6' 6" extension number 4 to extension number 3. Slip the connection flanges into each other and secure with the provided safety pin.

21. Connect the 200cm / 6' 6" extension number 5 to extension number 4. Slip the connection flanges into each other and secure with the provided safety pin.
22. Remove the support stand or rostrum supporting the counterweight bucket section and place it under the end of extension number 5.
23. Connect the 200cm / 6' 6" extension number 6 to extension number 5. Slip the connection flanges into each other and secure with the provided safety pin.
24. Place a support stand or rostrum under the end of extension number 6. Only remove the support stand or rostrum supporting section 5 provided the support stand or rostrum supporting section 3 is not removed.
25. Connect the Remote Extension to extension number 6. Slip the connection flanges into each other and secure with the provided safety pin.
26. Connect a 200cm / 6' 6" parallelogram rod to the parallelogram connection on the middle section and secure it with a safety pin.
27. In turn, connect 5 x 200cm / 6' 6" parallelogram rods to the first parallelogram connection and secure it with a safety pin.
Note: Support the second, fourth and sixth parallelogram rod with the parallelogram support located on sections 2, 4 and 6 and secure with the locking pin as shown on page 9.
28. Connect the Remote Extension parallelogram rod to the last 200cm / 6' 6" parallelogram connection and secure it with a safety pin.
29. Support the Remote Extension parallelogram rod with the parallelogram support located on the Remote Extension and secure with the locking pin as shown on page 9.
30. Connect the Remote Bracket as described on pages 10 to 11.
Tip: The Remote Bracket has an integrated leveller. By turning it, the Remote Bracket can be set to a perfect right angle. Correct setting of the angle adjuster enhances the crane's balance.
31. Connect 2 turnbuckles to the top connection on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
32. Connect 2 standard rigging rods to the turnbuckles on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
33. Connect another 2 standard rigging rods to the first 2 standard rigging rods. Ensure that the locking pins are inserted fully.
34. Connect 2 Rigging Support Brackets to the Rigging Support Brackets on section 2. Ensure that the locking pins are inserted fully.
35. Connect a Rigging Rod Connector to each of the second Rigging Rods ensuring that the locking pins are inserted fully. Fit the Rigging Rod Connectors into the Rigging Support Brackets as shown on page 9.
36. Connect another 2 standard rigging rods to the Rigging Rod Connectors on the second 2 standard rigging rods. Ensure that the locking pins are inserted fully.
37. Connect another 2 standard rigging rods to the third 2 standard rigging rods. Ensure that the locking pins are inserted fully.
38. Connect 2 Rigging Support Brackets to the Rigging Rod Connections on section 4. Ensure that the locking pins are inserted fully.
39. Connect a Rigging Rod Connector to each of the fourth Rigging Rods ensuring that the locking pins are inserted fully. Fit the Rigging Rod Connectors into the Rigging Support Brackets on section 4 as shown on page 9.
40. Connect 2 standard rigging rods to the Rigging Rod Connectors. Ensure that the locking pins are inserted fully.
41. Connect 2 Rigging Rod Connectors to the fifth standard rigging rods. Ensure that the locking pins are inserted fully.
42. Connect 2 standard rigging rods to the Rigging Rod Connectors and in turn to the rigging connectors on section 6. Ensure that the locking pins are inserted fully.
43. Hand tighten the rods by turning the turnbuckles until the rods are taut.
44. When the Rigging Rods are taut and running in a straight line, insert the locking pin connecting the Rigging Rod Connectors into the Rigging Support Brackets on section 2 and section 4 as shown on page 9.

Read "Balancing the crane arm" on page 40.

Version 14



Front extension arms required	7 x 200cm / 6' 6" + 1 x 100cm / 3' 3"
Rear extension arm required	1 x 192cm / 6' 3"
Maximum remote height (Mitchell plate)	1452 cm / 47' 7"
Maximum lift capacity = remote head and camera	80 kg / 176 lbs
Total lift range	2424cm / 79' 6"
Counterweight required for max. load	1394 kg / 3066 lbs
Counterweight required to balance empty arm	854 kg / 1878 lbs
Arm reach (pivot to camera head mount)	1581 cm / 51' 10"
Length of rear end (pivot to outside of bucket)	278cm / 9' 1"
Pivot point height	178 cm / 6'
Max. pivot point height	199cm / 6' 6"
Max. operational height of pivot section	232cm / 7' 7"
Max. operational height of rigging harness	276 cm / 9'
Transport weight excluding counterweight	858 kg / 1887 lbs

Continue from page 6

11. Connect the 200cm / 6' 6" extension number 2 to extension number 1. Slip the connection flanges into each other and secure with the provided safety pin.
Note: Section 2 must be supported by a suitable support stand or rostrum.
Tip: To avoid the sections jamming or getting stuck make sure that the sections are joined parallel. Using a small amount of lubricant also helps. We suggest rubbing the joints with an oiled rag prior to assembly.
12. Connect the 200cm / 6' 6" extension number 3 to extension number 2. Slip the connection flanges into each other and secure with the provided safety pin.
Note: Move the support stand or rostrum to support section 3

The "Rigging Harness Assembly" is described on page 7. After reading and following the instructions, please proceed as follows.

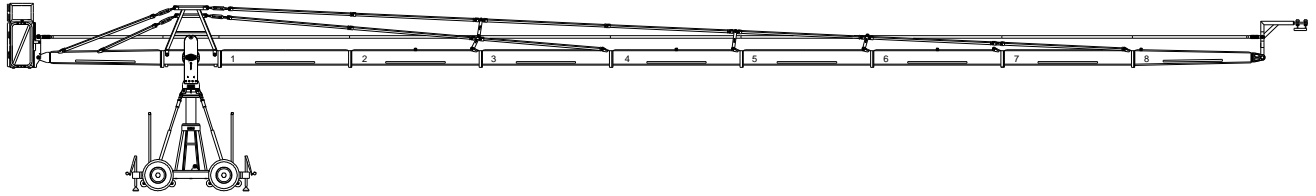
13. Connect 2 turnbuckles to the bottom connection on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
14. Connect 2 standard rigging rods to the turnbuckles on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
15. Connect 2 Rigging Support Brackets to the Rigging Rod Connections on section 2. Ensure that the locking pins are inserted fully.
16. Connect a Rigging Rod Connector to each of the second Rigging Rods ensuring that the locking pins are inserted fully. Fit the Rigging Rod Connectors into the Rigging Support Brackets as shown on page 9.
17. Connect 2 standard rigging rods to the Rigging Rod Connectors and in turn to the rigging connectors on section 3. Ensure that the locking pins are inserted fully.
18. Hand tighten the rods by turning the turnbuckles until the rods are taut.

19. When the Rigging Rods are taut and running in a straight line, insert the locking pin connecting the Rigging Rod Connectors into the Rigging Support Brackets on section 3 as shown on page 9.
20. Connect the 200cm / 6' 6" extension number 4 to extension number 3. Slip the connection flanges into each other and secure with the provided safety pin.
21. Connect the 200cm / 6' 6" extension number 5 to extension number 4. Slip the connection flanges into each other and secure with the provided safety pin.
22. Remove the support stand or rostrum supporting the counterweight bucket section and place it under the end of extension number 5.
23. Connect the 200cm / 6' 6" extension number 6 to extension number 5. Slip the connection flanges into each other and secure with the provided safety pin.
24. Place a support stand or rostrum under the end of extension number 6. Only remove the support stand or rostrum supporting section 5 provided the support stand or rostrum supporting section 3 is not removed.
25. Connect the 100cm / 3' 3" extension to extension number 6. Slip the connection flanges into each other and secure with the provided safety pin.
26. Connect the Remote Extension to the 100cm / 3' 3" extension. Slip the connection flanges into each other and secure with the provided safety pin.
27. Connect a 200cm / 6' 6" parallelogram rod to the parallelogram connection on the middle section and secure it with a safety pin.
28. In turn, connect 5 x 200cm / 6' 6" parallelogram rods to the first parallelogram connection and secure it with a safety pin.
Note: Support the second, fourth and sixth parallelogram rod with the parallelogram support located on sections 2, 4 and 6 and secure with the locking pin as shown on page 9.
29. Connect the 100cm / 3' 3" parallelogram rod to the last parallelogram connection and secure it with a safety pin.
30. Connect the Remote Extension parallelogram rod to the 100cm / 3' 3" parallelogram connection and secure it with a safety pin.
31. Support the Remote Extension parallelogram rod with the parallelogram support located on the Remote Extension and secure with the locking pin as shown on page 9.
32. Connect the Remote Bracket as described on pages 10 to 11.
Tip: The Remote Bracket has an integrated leveller. By turning it, the Remote Bracket can be set to a perfect right angle. Correct setting of the angle adjuster enhances the crane's balance.
33. Connect 2 turnbuckles to the top connection on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
34. Connect 2 standard rigging rods to the turnbuckles on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
35. Connect another 2 standard rigging rods to the first 2 standard rigging rods. Ensure that the locking pins are inserted fully.
36. Connect 2 Rigging Support Brackets to the Rigging Support Brackets on section 2. Ensure that the locking pins are inserted fully.

37. Connect a Rigging Rod Connector to each of the second Rigging Rods ensuring that the locking pins are inserted fully. Fit the Rigging Rod Connectors into the Rigging Support Brackets as shown on page 9.
38. Connect another 2 standard rigging rods to the Rigging Rod Connectors on the second 2 standard rigging rods. Ensure that the locking pins are inserted fully.
39. Connect another 2 standard rigging rods to the third standard rigging rods. Ensure that the locking pins are inserted fully.
40. Connect 2 Rigging Support Brackets to the Rigging Rod Connections on section 4. Ensure that the locking pins are inserted fully.
41. Connect a Rigging Rod Connector to each of the fourth Rigging Rods ensuring that the locking pins are inserted fully. Fit the Rigging Rod Connectors into the Rigging Support Brackets on section 4 as shown on page 9.
42. Connect 2 standard rigging rods to the Rigging Rod Connectors. Ensure that the locking pins are inserted fully.
43. Connect 2 Rigging Support Brackets to the rigging connectors on section 5. Ensure that the locking pins are inserted fully.
44. Connect 2 Rigging Rod Connectors to the fifth standard rigging rods. Ensure that the locking pins are inserted fully.
45. Connect 2 standard rigging rods to the Rigging Rod Connectors. Ensure that the locking pins are inserted fully.
46. Connect 2 Rigging Rod Connectors to the sixth standard rigging rods. Ensure that the locking pins are inserted fully.
47. Connect 2 100cm / 3' 3" rigging rods to the Rigging Rod Connectors and in turn to the rigging connectors on the 100cm / 3' 3" section. Ensure that the locking pins are inserted fully.
48. Hand tighten the rods by turning the turnbuckles until the rods are taut.
49. When the Rigging Rods are taut and running in a straight line, insert the locking pins connecting the Rigging Rod Connectors into the Rigging Support Brackets on sections 2, 4 and 5 as shown on page 9.

Read "Balancing the crane arm" on page 40.

Version 15



Front extension arms required	8 x 200cm / 6' 6"
Rear extension arm required	1 x 192cm / 6' 3"
Maximum remote height (Mitchell plate)	1531 cm / 50' 2"
Maximum lift capacity = remote head and camera	60 kg / 132 lbs
Total lift range	2548cm / 83' 7"
Counterweight required for max. load	1362 kg / 2996 lbs
Counterweight required to balance empty arm	938 kg / 2063 lbs
Arm reach (pivot to camera head mount)	1681 cm / 55' 1"
Length of rear end (pivot to outside of bucket)	278cm / 9' 1"
Pivot point height	178 cm / 6'
Max. pivot point height	199cm / 6' 6"
Max. operational height of pivot section	232cm / 7' 7"
Max. operational height of rigging harness	276 cm / 9'
Transport weight excluding counterweight	869 kg / 1911 lbs

Continue from page 6

11. Connect the 200cm / 6' 6" extension number 2 to extension number 1. Slip the connection flanges into each other and secure with the provided safety pin.
Note: Section 2 must be supported by a suitable support stand or rostrum.

Tip: To avoid the sections jamming or getting stuck make sure that the sections are joined parallel. Using a small amount of lubricant also helps. We suggest rubbing the joints with an oiled rag prior to assembly.

12. Connect the 200cm / 6' 6" extension number 3 to extension number 2. Slip the connection flanges into each other and secure with the provided safety pin.
Note: Move the support stand or rostrum to support section 3

The "Rigging Harness Assembly" is described on page 7. After reading and following the instructions, please proceed as follows.

13. Connect 2 turnbuckles to the bottom connection on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
14. Connect 2 standard rigging rods to the turnbuckles on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
15. Connect 2 Rigging Support Brackets to the Rigging Rod Connections on section 2. Ensure that the locking pins are inserted fully.
16. Connect a Rigging Rod Connector to each of the second Rigging Rods ensuring that the locking pins are inserted fully. Fit the Rigging Rod Connectors into the Rigging Support Brackets as shown on page 9.

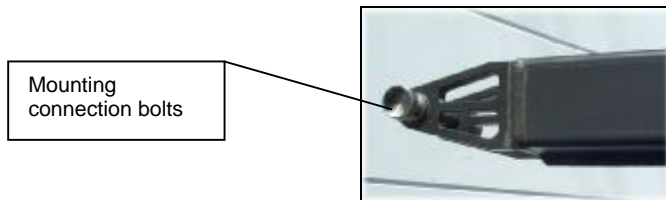
17. Connect 2 standard rigging rods to the Rigging Rod Connectors and in turn to the to the rigging connectors on section 3. Ensure that the locking pins are inserted fully.
18. Hand tighten the rods by turning the turnbuckles until the rods are taut.
19. When the Rigging Rods are taut and running in a straight line, insert the locking pin connecting the Rigging Rod Connectors into the Rigging Support Brackets on section 3 as shown on page 9.
20. Connect the 200cm / 6' 6" extension number 4 to extension number 3. Slip the connection flanges into each other and secure with the provided safety pin.
21. Connect the 200cm / 6' 6" extension number 5 to extension number 4. Slip the connection flanges into each other and secure with the provided safety pin.
22. Remove the support stand or rostrum supporting the counterweight bucket section and place it under the end of extension number 5.
23. Connect the 200cm / 6' 6" extension number 6 to extension number 5. Slip the connection flanges into each other and secure with the provided safety pin.
24. Place a support stand or rostrum under the end of extension number 6. Only remove the support stand or rostrum supporting section 5 provided the support stand or rostrum supporting section 3 is not removed.
25. Connect the 200cm / 6' 6" extension number 7 to extension number 6. Slip the connection flanges into each other and secure with the provided safety pin.
26. Connect the Remote Extension to the 200cm / 6' 6" extension number 7. Slip the connection flanges into each other and secure with the provided safety pin.
27. Connect a 200cm / 6' 6" parallelogram rod to the parallelogram connection on the middle section and secure it with a safety pin.
28. In turn, connect 6 x 200cm / 6' 6" parallelogram rods to the first parallelogram connection and secure it with a safety pin.
Note: Support the second, fourth and sixth parallelogram rod with the parallelogram support located on sections 2, 4 and 6 and secure with the locking pin as shown on page 9.
29. Connect the Remote Extension parallelogram rod to the last 200cm / 6' 6" parallelogram connection and secure it with a safety pin.
30. Support the Remote Extension parallelogram rod with the parallelogram support located on the Remote Extension and secure with the locking pin as shown on page 9.
31. Connect the Remote Bracket as described on pages 10 to 11.
Tip: The Remote Bracket has an integrated leveller. By turning it, the Remote Bracket can be set to a perfect right angle. Correct setting of the angle adjuster enhances the crane's balance.
32. Connect 2 turnbuckles to the top connection on the front side of the rigging harness. Ensure that the locking pins are inserted fully.

33. Connect 2 standard rigging rods to the turnbuckles on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
34. Connect another 2 standard rigging rods to the first 2 standard rigging rods. Ensure that the locking pins are inserted fully.
35. Connect 2 Rigging Support Brackets to the Rigging Support Brackets on section 2. Ensure that the locking pins are inserted fully.
36. Connect a Rigging Rod Connector to each of the second Rigging Rods ensuring that the locking pins are inserted fully. Fit the Rigging Rod Connectors into the Rigging Support Brackets as shown on page 9.
37. Connect another 2 standard rigging rods to the Rigging Rod Connectors on the second 2 standard rigging rods. Ensure that the locking pins are inserted fully.
38. Connect another 2 standard rigging rods to the third standard rigging rods. Ensure that the locking pins are inserted fully.
39. Connect 2 Rigging Support Brackets to the Rigging Rod Connections on section 4. Ensure that the locking pins are inserted fully.
40. Connect a Rigging Rod Connector to each of the fourth Rigging Rods ensuring that the locking pins are inserted fully. Fit the Rigging Rod Connectors into the Rigging Support Brackets on section 4 as shown on page 9.
41. Connect 2 standard rigging rods to the Rigging Rod Connectors. Ensure that the locking pins are inserted fully.
42. Connect 2 Rigging Support Brackets to the rigging connectors on section 5. Ensure that the locking pins are inserted fully.
43. Connect 2 Rigging Rod Connectors to the fifth standard rigging rods. Ensure that the locking pins are inserted fully.
44. Connect 2 standard rigging rods to the Rigging Rod Connectors. Ensure that the locking pins are inserted fully.
45. Connect 2 Rigging Rod Connectors to the sixth standard rigging rods. Ensure that the locking pins are inserted fully.
46. Connect 2 standard rigging rods to the Rigging Rod Connectors and in turn to the rigging connectors on the section 7. Ensure that the locking pins are inserted fully.
47. Hand tighten the rods by turning the turnbuckles until the rods are taut.
48. When the Rigging Rods are taut and running in a straight line, insert the locking pins connecting the Rigging Rod Connectors into the Rigging Support Brackets on sections 2, 4 and 5 as shown on page 9.

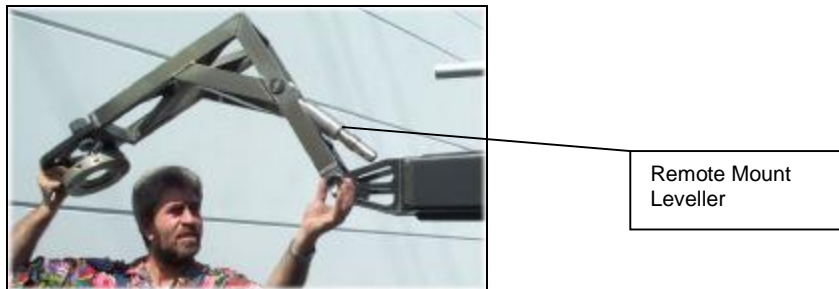
Read “Balancing the crane arm” on page 40.

Remote Head Mount

1. The Remote Head Mount is connected to the remote “nose” section.



2. Connect the Remote Mount to the connection bolts on the nose section and lock securely



3. Connect the Remote Mount Leveller to the parallelogram rod.



4. Secure the Remote Mount Leveller to the parallelogram rod by inserting the locking pin. Level the Remote Mount as needed.

Balancing the crane arm

Attention : When loading the crane the maximum working load capacities must never be exceeded.

Note : **Do not load weights until the rigging system is mounted.**

After the assembly procedure has been completed, the seat arms, seats, risers, camera etc may now be assembled on the platform or the remote head system may be mounted. An itemized weight list for GFM accessories may be found on page 10. Place the correct amount of counterweight in the weight bucket to balance the load. The counterweights should not be thrown into the bucket but rather placed softly in the bucket. When the arm is balanced, the camera operator / operators can then take their position on the platform.

Attention : **The safety belts provided must be fastened upon sitting down and kept fastened at all times when on the platform.**

Only original GFM seats, seat arms, risers etc may be used.

Working load capacity = Camera operator / operators + accessories

Place the required amount of counterweights in the weight bucket so that the crane arm balances and remains easily in position. If necessary, the crane can be fine balanced by adjusting the sliding weight on the rear parallelogram at the weight bucket. Do not forget to lock the sliding weight in position before tilting the arm. The counterweight bucket door must be locked when operating the crane.

Deloading:

Attention : When dismantling the crane it is essential that the platform is supported fully by a stable underlay i.e. rostrum or ground surface. In any case the platform should not be in the air without support.

The counterweights must always be gradually removed from the counterweight bucket before personnel leave the platform. When the weights are removed, the platform personnel should dismount one at a time but only after being instructed to do so by the crane operator. At all times, extreme caution must be given to the shifting payload.

Attention : all necessary precautions should be taken so that unauthorized third parties cannot use the crane.

General Safety:

Operational conditions :

At a wind speed of 26km/h crane operation must be stopped and the crane secured, dismantled and the necessary safety precautions taken.

If, for example, it takes 2 mins. to unload the counterweights and take the necessary precautions to secure the crane, one must commence with the procedure at a wind speed of 20km/h. DIN15019, part 1, section 6.13.

The crane may not be used in a lightning storm as there is the danger of electrocution.

Weight List for GF-16 Platform Accessories

Qty.	Description		Weight kg	Weight lbs
1	Seat arm combined 10cm / 4"	AL-2210	0,75 kg	1,65 lbs
1	Seat arm combined 20cm / 8"	AL-2220	1,15 kg	2,53 lbs
1	Seat arm combined 30cm / 12"	AL-2230	1,60 kg	3,52 lbs
1	Seat arm vertical 10cm / 4"	AL-2211	1,25 kg	2,75 lbs
1	Seat arm vertical 20cm / 8"	AL-2212	1,75 kg	3,85 lbs
1	Seat arm vertical 30cm / 12"	AL-2213	2,20 kg	4,84 lbs
1	Crane seat with seat belt	AL-1030	7,20 kg	15,84 lbs
1	Riser 10 cm / 4"	AL-2310	2,80 kg	6,16 lbs
1	Riser 20cm / 8"	AL-2320	2,95 kg	6,49 lbs
1	Riser 30cm / 12"	AL-2330	3,40 kg	7,48 lbs
1	Riser 40cm / 16"	AL-2340	3,80 kg	8,36 lbs
1	Riser 50cm / 20"	AL-2350	4,25 kg	9,35 lbs
1	Connection pin	AL-2240	0,40 kg	0,88 lbs
1	Ball Adapter	AL-2150	2,17 kg	4,77 lbs

Accessories for the GF- 16 Crane System



Track wheel / wheel lock



Levelling leg



Utensil tray



Push bar

Notice:

When operating the crane with the push bar mounted on the dolly, pay attention that the crane arm at no time collides with the push bar.

Always use the levelling legs to level the crane when on uneven surfaces.

Transport trolleys for the GF-16 Crane System



The photo's depict the correct transportation of the GF-16 in versions 1 to 15. Only the base, mounting column and pivot are separate.

