Grip Factory Munich

**YOUR INNOVATIVE PARTNER FOR CAMERA SUPPORT**

# GF-8

# Crane System

# Instruction Manual

## Standard-Versions 1-18
## Xten-Versions 1-8

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## Contents:

# SAFETY GUIDELINES

The assembly instructions must be read and understood before set-up or operation. The crane may only be assembled in accordance with the manufacturer's instruction manual.
The GF-8 Crane may only be set-up or operated by trained and experienced personnel. To avoid misuse by untrained personnel, the crane should be dismantled when not in use or under supervision.
For further information on the qualifications required for test personnel please refer to BGV 1, § 33 and §34.

The crane may not be assembled or operated under the influence of alcohol, drugs or any other intoxicating substances. The respective protective clothing e.g. gloves, should be worn.

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

Before assembling the crane ensure that the ground surface is stable and cannot give way. The ground surface must be stable enough to support at least 1000 kg/m2 = 2200 lbs/ sq yard.

Crane operation is only allowed with solid tires. Use with pneumatic wheels is not allowed.

The crane dolly must be level at all times. If necessary, level the crane with the provided levelling legs ensuring that the levelling legs cannot sink or breakthrough the surface and are supported enough were necessary. Whether operating or moving the crane on track or on a solid ground surface it is essential that the track or surface is completely level, stable and free from obstructions.

When operating the crane on track, ensure that the track is level, properly laid, constructed and supported. The correct underlay must be used to ensure that the track and underlay are secured against moving, slipping and collapse. Ensure that the underlay meets the specified support and stability requirements. Only GFM Track or comparable track systems with a payload capacity of 1200kg / 2640lbs and a maximum track runner distance of 640mm / 25inches (measured inside edge to inside edge) may be used. Extreme caution must be used if tracking on curved track (no faster than a slow walking pace).

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.

Changing weather conditions should be taken into consideration. The crane must be taken out of operation before the operational wind speed reaches 40kmh. / 25mph. See page 39.

The complete lift and panning range of the crane must be kept clear of obstructions at all times. A safety clearance of 0.5m / 19" to surrounding objects and 1m / 39" to persons must be observed on all sides of the crane during operation.

The crane may not be used in the direct vicinity of high voltage power cables. To avoid accidents due to misuse in the vicinity of high voltage power cables, Safety Guidelines (especially VBG 1 and 4) as well as VDE regulations (especially 0105 part 100) must be adhered to. If the nominal voltage cannot be determined, a minimum clearance of 5m / 16ft must be kept at all times. Failing to do so can cause fatalities.

Personnel on board the crane's platform must use safety belts at all times. They should not make any sudden, abrupt movements or lean out over the side of the platform. 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 as the case may be, the remote head or camera are removed.

The manufacturers technical specifications and limits must be adhered to at all times and in no way exceeded. Adding extra counterweight by placing it on top of the couterweight bucket or on any other crane part is strictly forbidden.

In the interest of safe crane operation abrupt, sudden movement of the crane should be avoided.

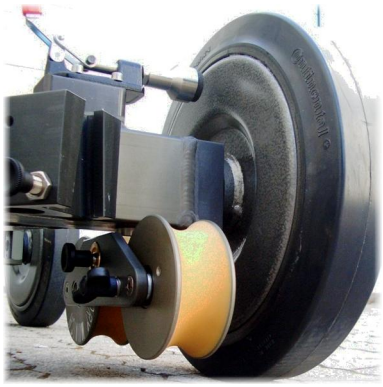
Only original accessories manufactured by GFM may be used with the crane.

# General Assembly Procedure – GF–8

**Before and during assembly observe the Safety Guidelines.**

## For all GF-8 Standard-Versions:

1. Secure the base dolly so that it cannot move or roll. Lock all wheel brakes. Move the steering rod towards the centre of the dolly or remove it so that the set-up personnel do not trip over it.
2. For the Standard-Versions 1 to 8 bolt the 90cm crane mounting column to the base dolly (pivot height 154cm ). Make sure that the 4 locking bolts are locked securely.
   **Tip**: The carrying handle on the bazooka should point away from the steering end of dolly.

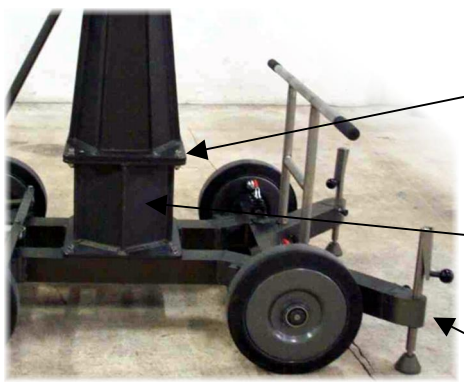


Locked **wheel brake** on Base Dolly


Base Dolly with 90cm / 3ft Mounting Column and Pivot Seection (Versions 1-8)

The 30cm / 1ft column extension is used in versions 9 to 18 to increase the pivot height from 154cm to 184cm. It is connected to the standard GF-8 column with 4 locking nuts and bolts. Make sure that the 4 locking bolts are locked securely.

As an option a 3 stage column is also available. It consists of 2 x 30cm / 1ft column extensions and a 60cm / 2ft Mounting Column. Assemble the column extension between the column and the base dolly locking the 12 locking bolts securely.



Base Dolly with 30cm / 1ft Column Extension and 90cm / 3ft Mounting Column

**Locking bolts**

**Column Extension**

**Extended levelling legs**


3 stage mounting column

**3 pivot heights are possible:**

184cm / 6ft with all 3 parts

154cm / 5ft with a 30cm / 12inch column extension and mounting column

124cm / 4ft with Mounting Column.

3. For Standard Versions 9 to 18 we recommend using the 4 telescopic column supports. In smaller versions they are not required but using them does increase the columns stability. To mount the supports connect the grooved end to the connection on the column, securing with the locking pin. Remove the locking pin in the middle of the column support enabling the rod to reach the connection on the base dolly and secure with the locking pin. The locking pin previously removed from the centre of the column support can now be reinserted to fix the length. Turn the grooved part in an anti-clockwise direction to apply tension.
   **Tip**: Should the column not have the 4 connections for the column supports, an adapter is availble. It is connected to the column between the pan bearing and the top of the column. To do so the pan bearing must be removed by unscrewing the 6 screws. The adapter must be mounted in line to the connections on the base dolly with the adapter ring connectors pointing towards the base dolly. The original screws must be replaced by 5mm longer screws


3 Stage Mounting Column
(2 x 30cm + 60cm Column sections) with Supports

**Telescopic Column Supports**

Adapter ring for column supports

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 these friction locks which can be found on the left and right hand side of the middle section. 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.


**Tilt brake**

**Pan brake**

Middle section with pan and tilt lock

**Unless otherwise stated it is required to use the rigging system when more than 1 x 150cm / 5ft section is mounted to the front of the crane i.e. all versions excepte 1 and 9.**

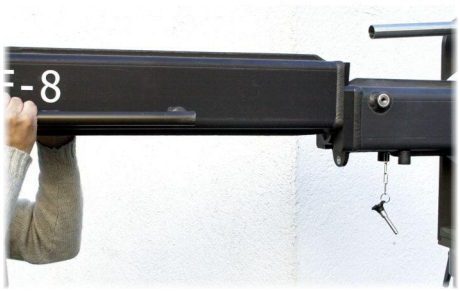
5. Connect the 2 sections of the rigging harness to the middle section of the GF-8. Ensure that the 4 locking bolts are fastened tightly.
6. Connect the cross bar to stabilize the rigging harness. Ensure that the 2 locking pins are inserted fully



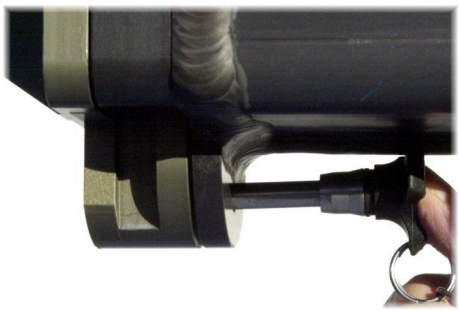
7. For Standard Versions 1 to 16 connect the 127cm / 4ft section to the middle section. For Standard Versions 17 and 18 connect the 150cm / 5ft section to the middle section. Slip the connection flanges into each other and secure with the provided safety pin.
   Connect the respective127cm or 150cm parallelogram rod to the middle section, mount the sliding weight and secure with the locking screw. Connect the rod to the angle adjuster and secure it with a safety pin at each end. Other shorter versions can be built by using the 100cm / 3' 3" or 150cm / 5' extension and its parallelogram rod.

   **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.

   **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.

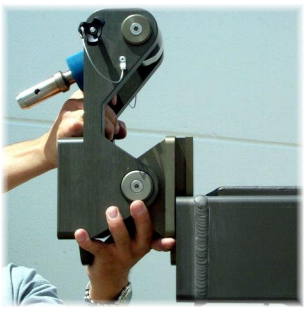



Mounting an extension arm



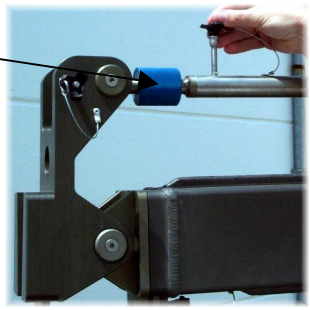
Securing the arm with a safety pin

8. Connect one of the angle adjusters to the end of the 127cm /4ft section and secure it with the provided safety pin.



Securing the rod with safety pin

**Integrated leveller**



Securing with a safety pin

9. Depending on the version being assembled connect 2 of the respective rigging rods to the turnbuckles on the rigging harness and in turn to the 2 connections on the arm section leading to the weight bucket.

Arm section 127 / 4ft = 115cm / 3’ 9”
Arm section 150cm / 5ft = 142cm / 4’ 7”

Hand tighten the rods by turning the turnbuckles until the rods are taut.

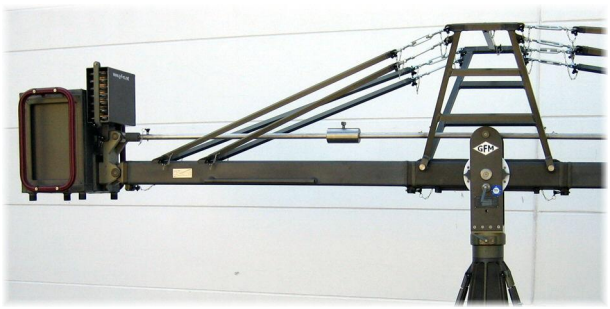

**Middle sized rigging rod**

## For all GF-8 Xten-Versions:

With the exception of a few steps, the assembly of the Xten Versions are identical with those of the Standard Versions. However, the following points should be followed:

- All Xten Versions require a pivot height of 184cm / 6ft as follows:
- 30cm / 1ft Column Extension and 90cm / 3ft Mounting Column
- 2 x 30cm / 1ft column extensions and a 60cm / 2ft Mounting Column
  More details can be found on pages 3.
- The Mounting Column for all Xten Versions (1 to 8) must be supported with the 4 Telescopic Column Supports. More details can be found on page 4
- All Xten-Versions (1 to 8) require the Large Rigging Harness with the double turnbuckles. An example of the assembley can be found on page 5.

Large Rigging Harness for double Rigging
(Xten Versions 1 to 8)

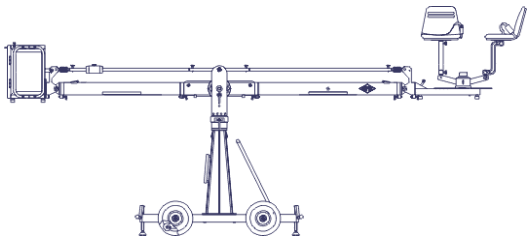


Double Rigging System with 160cm / 5’3“ Rear Extension
(Xten-Versions 1 to 8)

- All Xten Versions (1 to 8) require the 160cm / 5’ 3“ rear arm extension as well as the 160cm / 5’ 3“ parallelogram rod to be mounted between the pivot and counterweight bucket. Example of the assembly can be found on page 6.
- All Xten Versions (1 to 8) require a double rigging system. Connect the 142cm / 4’ 7” rigging rods to the top turnbuckles and the outside connections on the rear extension. Connect the 115cm / 3’ 9” rigging rods to the lower turnbuckles and the inside connections on the rear extension.

# Assembly & Technical Specification Version 1 to 16

## Version 1



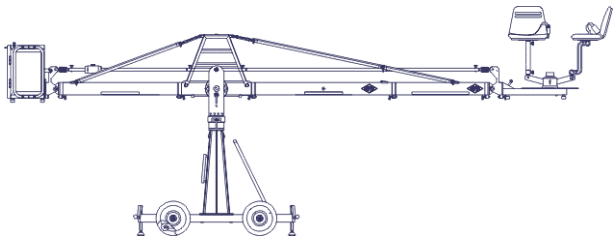
| | |
|---|---|
| Front extension arms required | 1 x 150 cm / 5’ |
| Rear extension arm required | 1 x 127 cm / 4’ 2” |
| Lift range | 319 cm / 10’ 5” |
| Maximum Euro-adapter height | 331 cm / 10’ 10“ |
| Lift capacity (working load) 2 pers. + accessories | 250 kg / 550 lbs |
| Counterweight required for max. load | 276 kg / 607 lbs |
| Counterweight required to balance empty arm | 0 kg / 0 lbs |
| Crane weight (excluding dolly and weights) | 149 kg / 327 lbs |
| Dolly weight | 80 kg / 176 lbs |
| Arm reach (pivot to camera head mount) | 253 cm / 8’ 3“ |
| Length of rear end (pivot to outside of bucket) | 220 cm / 7’ 2“ |

**Continue from § 9, page 6**

10. Connect one of the 150cm / 5’ sections to the middle section. Slip the connection flanges into each other and secure them with the provided safety pin.
11. Connect the remaining angle adjuster to the end of the150cm / 5’ section and secure it with the provided safety pin.
12. Connect one of the 150cm / 5’ parallelogram rods to the middle section and the angle adjuster and secure it with a safety pin at each end.
13. Connect the platform to the angle adjuster by inserting the male platform flange into the female flange on the angle adjuster. Secure it with the safety pin.
14. Attach the weight bucket to the short end of the crane by inserting the male weight bucket flange into the female flange on the angle adjuster. Secure it with the 2 safety pins on the top of the angle adjuster.
    **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. Level the weight bucket before loading any weights

**Before operation, all locking pins, locking screws etc should be inspected to ensure that all assembly sections are securely fastened.**

## Version 2



| | |
|---|---|
| Front extension arms required | 1 x 150 cm / 5' + 100 cm / 3' 3" |
| Rear extension arm required | 1 x 127 cm / 4' 2" |
| Lift range | 481 cm / 15' 9" |
| Maximum Euro-adapter height | 412 cm / 13' 5" |
| Lift capacity (working load) 2 pers. + accessories | 250 kg / 550 lbs |
| Counterweight required for max. load | 456 kg / 1003 lbs |
| Counterweight required to balance empty arm | 28 kg / 61 lbs |
| Crane weight (excluding dolly and weights) | 173 kg / 380 lbs |
| Dolly weight | 80 kg / 176 lbs |
| Arm reach (pivot to camera head mount) | 351 cm / 11' 5" |
| Length of rear end (pivot to outside of bucket) | 220 cm / 7' 2" |

**Rigging is required! Observe guidelines on pages 35**

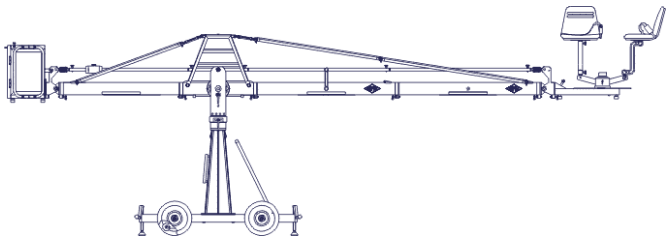
**To use this version as a 2 man rideable crane, rigging must be attached.**

**Continue from § 9, page 6**

10. Connect one of the 150cm / 5' sections to the middle section. Slip the connection flanges into each other and secure them with the provided safety pin.
11. Connect the 100cm / 3' 3" section to the 150cm / 5' section. Slip the connection flanges into each other and secure them with the provided safety pin.
    **Note**: Support the second section by placing it on a support stand or rostrum
12. Connect the remaining angle adjuster to the end of the 100cm / 3' 3" section and secure it with the provided safety pin.
13. Connect one of the 150cm / 5' parallelogram rods to the middle section and then connect the 100cm / 3' 3" parallelogram rod to the 150cm / 5' rod. Then connect the angle adjuster and secure it with a safety pin at each end.
    **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.
14. Connect the platform to the angle adjuster by inserting the male platform flange into the female flange on the angle adjuster. Secure it with the safety pin.
15. Attach the weight bucket to the short end of the crane by inserting the male weight bucket flange into the female flange on the angle adjuster. Secure it with the 2 safety pins on the top of the angle adjuster.
    **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. Level the weight bucket before loading any weights

**Before operation, all locking pins, locking screws etc should be inspected to ensure that all assembly sections are securely fastened.**

## Version 3



| | |
|---|---|
| Front extension arms required | 2 x 150 cm / 5’ |
| Rear extension arm required | 1 x 127 cm / 4’ 2” |
| Lift range | 564 cm / 18’ 6” |
| Maximum Euro-adapter height | 453 cm / 14’ 10“ |
| Lift capacity (working load) 2 pers. + accessories | 216 kg / 475 lbs |
| Counterweight required for max. load | 480 kg / 1056 lbs |
| Counterweight required to balance empty arm | 46 kg / 101 lbs |
| Crane weight (excluding dolly and weights) | 179 kg / 393 lbs |
| Dolly weight | 80 kg / 176 lbs |
| Arm reach (pivot to camera head mount) | 401 cm / 13’ 1“ |
| Length of rear end (pivot to outside of bucket) | 220 cm / 7’ 2“ |

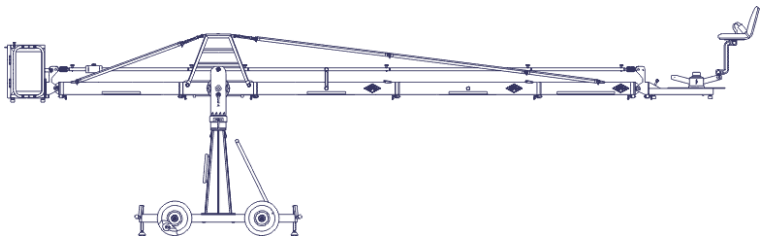
**Rigging is required! Observe guidelines on pages 35**

**Continue from § 9, page 6**

10. Connect one of the 150cm / 5’ sections to the middle section. Slip the connection flanges into each other and secure them with the provided safety pin.
11. Connect another 150cm section to the first 150cm section. Slip the connection flanges into each other and secure them with the provided safety pin.
    **Note**: Support the second section by placing it on a support stand or rostrum
12. Connect the remaining angle adjuster to the end of the second 150cm section and secure it with the provided safety pin.
13. Connect one of the 150cm / 5’ parallelogram rods to the middle section and then connect the second 150cm parallelogram rod to the first 150cm rod. Then connect the angle adjuster and secure it with a safety pin at each end.
    **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.
14. Connect the platform to the angle adjuster by inserting the male platform flange into the female flange on the angle adjuster. Secure it with the safety pin.
15. Attach the weight bucket to the short end of the crane by inserting the male weight bucket flange into the female flange on the angle adjuster. Secure it with the 2 safety pins on the top of the angle adjuster.
    **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. Level the weight bucket before loading any weights

**Before operation, all locking pins, locking screws etc should be inspected to ensure that all assembly sections are securely fastened.**

## Version 4



| | |
|---|---|
| Front extension arms required | 2 x 150 cm / 5' + 100 cm / 3' 3" |
| Rear extension arm required | 1 x 127 cm / 4' 2" |
| Lift range | 727 cm / 23' 9" |
| Maximum Euro-adapter height | 534 cm / 17' 6" |
| Lift capacity (working load) 1 pers. + accessories | 150 kg / 330 lbs |
| Counterweight required for max. load | 480 kg / 1056 lbs |
| Counterweight required to balance empty arm | 88 kg / 176 lbs |
| Crane weight (excluding dolly and weights) | 191 kg / 420 lbs |
| Dolly weight | 80 kg / 176 lbs |
| Arm reach (pivot to camera head mount) | 498 cm / 16' 4" |
| Length of rear end (pivot to outside of bucket) | 220 cm / 7' 2" |

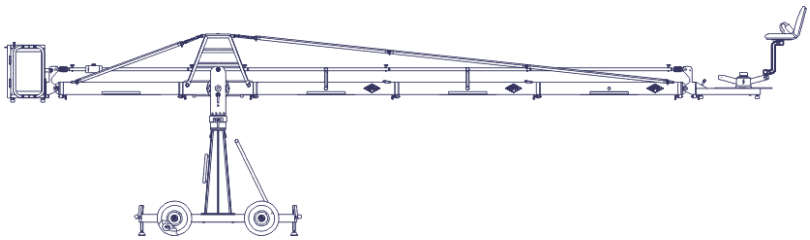
**Rigging is required! Observe guidelines on pages 35**

**Continue from § 9, page 6**

10. Connect one of the 150cm / 5' sections to the middle section. Slip the con-nection flanges into each other and secure them with the provided safety pin.
11. Connect another 150cm section to the first 150cm section. Slip the connection flanges into each other and secure them with the provided safety pin.
    **Note**: Support the second section by placing it on a support stand or rostrum
12. Connect the third 150cm section to the second 150cm section. Slip the connection flanges into each other and secure them with the provided safety pin.
13. Connect the remaining angle adjuster to the end of the third 150cm section and secure it with the provided safety pin.
14. Connect one of the 150cm / 5' parallelogram rods to the middle section and then connect the second 150cm parallelogram rod to the first 150cm rod. In turn, connect the third 150cm parallelogram rod to the second 150cm rod. Then connect the angle adjuster and secure it with a safety pin at each end.
    **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.
15. Connect the platform to the angle adjuster by inserting the male platform flange into the female flange on the angle adjuster. Secure it with the safety pin.
16. Attach the weight bucket to the short end of the crane by inserting the male weight bucket flange into the female flange on the angle adjuster. Secure it with the 2 safety pins on the top of the angle adjuster.
    **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. Level the weight bucket before loading any weights

**Before operation, all locking pins, locking screws etc should be inspected to ensure that all assembly sections are securely fastened.**

## Version 5



| | |
|---|---|
| Front extension arms required | 3 x 150 cm / 5’ |
| Rear extension arm required | 1 x 127 cm / 4’ 2” |
| Lift range | 809 cm / 30’ 7” |
| Maximum Euro-adapter height | 576 cm / 18’ 10“ |
| Lift capacity (working load) 1 pers. + accessories | 128 kg / 281 lbs |
| Counterweight required for max. load | 480 kg / 1056 lbs |
| Counterweight required to balance empty arm | 112 kg / 246 lbs |
| Crane weight (excluding dolly and weights) | 197 kg / 433 lbs |
| Dolly weight | 80 kg / 176 lbs |
| Arm reach (pivot to camera head mount) | 549 cm / 18’ |
| Length of rear end (pivot to outside of bucket) | 220 cm / 7’ 2“ |

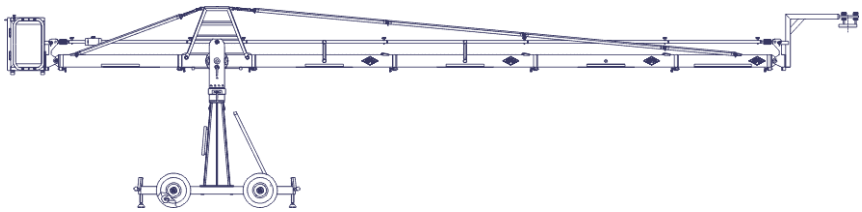
**Rigging is required! Observe guidelines on pages 35**

**Continue from § 9, page 6**

10. Connect one of the 150cm / 5’ sections to the middle section. Slip the con-nection flanges into each other and secure them with the provided safety pin.
11. Connect another 150cm section to the first 150cm section. Slip the connection flanges into each other and secure them with the provided safety pin.
    **Note**: Support the second section by placing it on a support stand or rostrum
12. Connect the 100cm section to the second 150cm section. Slip the connection flanges into each other and secure them with the provided safety pin.
13. Connect the remaining angle adjuster to the end of the second 100cm section and secure it with the provided safety pin.
14. Connect one of the 150cm / 5’ parallelogram rods to the middle section and then connect the second 150cm parallelogram rod to the first 150cm rod. In turn, connect the 100cm parallelogram rod to the second 150cm rod. Then connect the angle adjuster and secure it with a safety pin at each end.
    **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.
15. Connect the platform to the angle adjuster by inserting the male platform flange into the female flange on the angle adjuster. Secure it with the safety pin.
16. Attach the weight bucket to the short end of the crane by inserting the male weight bucket flange into the female flange on the angle adjuster. Secure it with the 2 safety pins on the top of the angle adjuster.
    **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. Level the weight bucket before loading any weights

**Before operation, all locking pins, locking screws etc should be inspected to ensure that all assembly sections are securely fastened.**

## Version 6



| | |
|---|---|
| Front extension arms required | 3 x 150 cm / 5' + 100 cm / 3' 3" |
| Rear extension arm required | 1 x 127 cm / 4' 2" |
| Lift range | 891 cm / 31' 10" |
| Maximum Euro-adapter height | 675 cm / 22' 1" |
| Lift capacity | 80 kg / 176 lbs |
| Counterweight required for max. load | 420 kg / 924 lbs |
| Counterweight required to balance empty arm | 140 kg / 308 lbs |
| Crane weight (excluding dolly and weights) | 199 kg / 437 lbs |
| Dolly weight | 80 kg / 176 lbs |
| Arm reach (pivot to camera head mount) | 663 cm / 21' 8" |
| Length of rear end (pivot to outside of bucket) | 220 cm / 7' 2" |

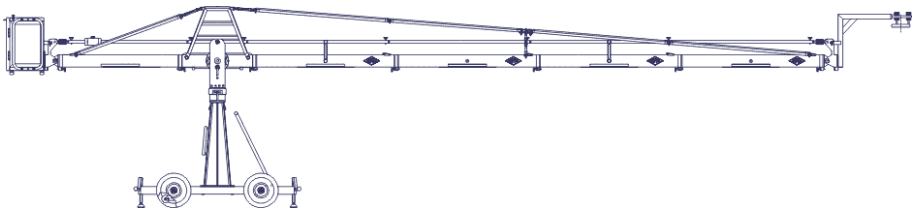
**Rigging is required! Observe guidelines on pages 35**

**Continue from § 9, page 6**

10. Connect one of the 150cm / 5' sections to the middle section. Slip the con-nection flanges into each other and secure them with the provided safety pin.
11. Connect another 150cm section to the first 150cm section. Slip the connection flanges into each other and secure them with the provided safety pin.
    **Note**: Support the second section by placing it on a support stand or rostrum
12. Connect the third 150cm section to the second 150cm section. Slip the connection flanges into each other and secure them with the provided safety pin.
13. Connect a 100cm section to the third 150cm section. Slip the connection flanges into each other and secure them with the provided safety pin.
    **Note**: Support the third section by placing it on a support stand or rostrum
14. Connect the remaining angle adjuster to the end of the 100cm section and secure it with the provided safety pin.
15. Connect one of the 150cm / 5' parallelogram rods to the middle section and then connect the second 150cm parallelogram rod to the first 150cm rod. In turn, connect the third 150cm parallelogram rod to the second 150cm rod. In turn, connect the 100cm parallelogram rod to the third 150cm rod. Connect the angle adjuster and secure it with a safety pins at each end.
    **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.
16. Connect the remote bracket to the angle adjuster by inserting the male flange into the female flange on the angle adjuster. Secure it with the safety pin.
17. Attach the weight bucket to the short end of the crane by inserting the male weight bucket flange into the female flange on the angle adjuster. Secure it with the 2 safety pins on the top of the angle adjuster.
    **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. Level the weight bucket before loading any weights

**Before operation, all locking pins, locking screws etc should be inspected to ensure that all assembly sections are securely fastened.**

## Version 7



| | |
|---|---|
| Front extension arms required | 4 x 150 cm / 5’ |
| Rear extension arm required | 1 x 127 cm / 4’ 2” |
| Lift range | 1054 cm / 34’ 6” |
| Maximum Euro-adapter height | 716 cm / 23’ 5“ |
| Lift capacity | 80 kg / 176 lbs |
| Counterweight required for max. load | 476 kg / 1047 lbs |
| Counterweight required to balance empty arm | 172 kg / 378 lbs |
| Crane weight (excluding dolly and weights) | 206 kg / 453 lbs |
| Dolly weight | 80 kg / 176 lbs |
| Arm reach (pivot to camera head mount) | 713 cm / 23’ 4“ |
| Length of rear end (pivot to outside of bucket) | 220 cm / 7’ 2“ |

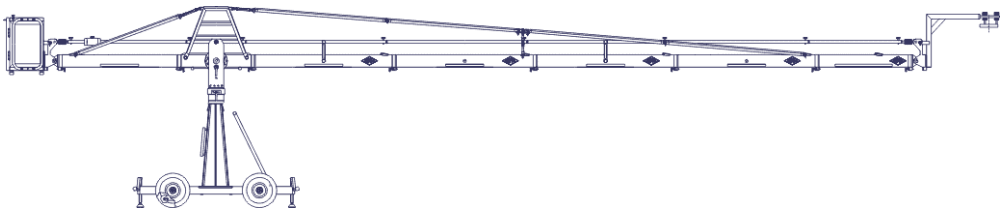
**Rigging is required! Observe guidelines on pages 35**

**Continue from § 9, page 6**

10. Connect one of the 150cm / 5’ sections to the middle section. Slip the con-nection flanges into each other and secure them with the provided safety pin.
11. Connect another 150cm section to the first 150cm section. Slip the connection flanges into each other and secure them with the provided safety pin.
    **Note**: Support the second section by placing it on a support stand or rostrum
12. Connect the third 150cm section to the second 150cm section. Slip the conn-ection flanges into each other and secure them with the provided safety pin.
13. Connect the fourth 150cm section to the third 150cm section. Slip the conn-ection flanges into each other and secure them with the provided safety pin.
    **Note**: Support the third section by placing it on a support stand or rostrum
14. Connect the remaining angle adjuster to the end of the 90cm section and secure it with the provided safety pin.
15. Connect one of the 150cm / 5’ parallelogram rods to the middle section and then connect the second 150cm parallelogram rod to the first 150cm rod. In turn, connect the third 150cm parallelogram rod to the second 150cm rod. In turn, connect the fourth 150cm parallelogram rod to the third 150cm rod. Then connect the angle adjuster and secure it with a safety pins at each end.
    **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.
16. Connect the remote bracket to the angle adjuster by inserting the male flange into the female flange on the angle adjuster. Secure it with the safety pin.Attach the weight bucket to the short end of the crane by inserting the male weight bucket flange into the female flange on the angle adjuster. Secure it with the 2 safety pins on the top of the angle adjuster.
    **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. Level the weight bucket before loading any weights

**Before operation, all locking pins, locking screws etc should be inspected to ensure that all assembly sections are securely fastened.**

## Version 8



| | |
|---|---|
| Front extension arms required | 4 x 150 cm / 5' + 100 cm / 3' 3" |
| Rear extension arm required | 1 x 127 cm / 4' 2" |
| Lift range | 1216 cm / 39' 10" |
| Maximum Euro-adapter height | 798 cm / 16' 2" |
| Lift capacity | 50 kg / 110 lbs |
| Counterweight required for max. load | 480 kg / 1056 lbs |
| Counterweight required to balance empty arm | 288 kg / 501 lbs |
| Crane weight (excluding dolly and weights) | 217 kg / 477 lbs |
| Arm reach (pivot to camera head mount) | 810 cm / 26' 6" |

**Rigging is required! Observe guidelines on pages 35**

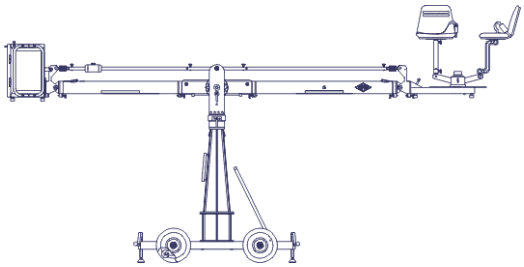
**Continue from § 9, page 6**

10. Connect one of the 150cm / 5' sections to the middle section. Slip the con-nection flanges into each other and secure them with the provided safety pin.
11. Connect another 150cm section to the first 150cm section. Slip the connection flanges into each other and secure them with the provided safety pin.
    **Note**: Support the second section by placing it on a support stand or rostrum
12. Connect the third 150cm section to the second 150cm section. Slip the conn-ection flanges into each other and secure them with the provided safety pin.
13. Connect the fourth 150cm section to the third 150cm section. Slip the conn-ection flanges into each other and secure them with the provided safety pin.
    **Note**: Support the third section by placing it on a support stand or rostrum
14. Connect the 100cm section to the fourth 150cm section. Slip the connection flanges into each other and secure them with the provided safety pin.
15. Connect the remaining angle adjuster to the end of the fourth 150cm section and secure it with the provided safety pin.
16. Connect one of the 150cm / 5' parallelogram rods to the middle section and then connect the second 150cm parallelogram rod to the first 150cm rod. In turn, connect the third 150cm parallelogram rod to the second 150cm rod. In turn, connect the fourth 150cm parallelogram rod to the third 150cm rod. In turn, connect the 100cm parallelogram rod to the fourth 150cm rod. Then connect the angle adjuster and secure it with a safety pins at each end.
    **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.
17. Connect the remote bracket to the angle adjuster by inserting the male flange into the female flange on the angle adjuster. Secure it with the safety pin.
18. Attach the weight bucket to the short end of the crane by inserting the male weight bucket flange into the female flange on the angle adjuster. Secure it with the 2 safety pins on the top of the angle adjuster.
    **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. Level the weight bucket before loading any weights

**Before operation, all locking pins, locking screws etc should be inspected to ensure that all assembly sections are securely fastened.**

**The following versions 9 to 16 require a 127cm / 4' 2" section to the rear i.e. Counterweight Bucket End.**
**The 30cm / 1ft Column Extension is also required to achieve a pivot height to 184cm / 6ft. See page 3**

## Version 9

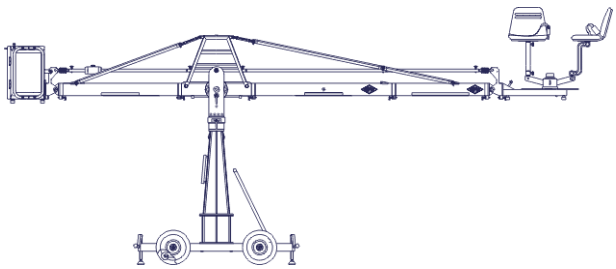


| | |
|---|---|
| Front extension arms required | 1 x 150 cm / 5' |
| Rear extension arm required | 1 x 127 cm / 4' 2" |
| Lift range | 319 cm / 10' 5" |
| Maximum Euro-adapter height | 361 cm / 11' 10" |
| Lift capacity | 250 kg / 550 lbs |
| Counterweight required for max. load | 276 kg / 607 lbs |
| Counterweight required to balance empty arm | 0 kg / 0 lbs |
| Crane weight (excluding dolly and weights) | 160 kg / 352 lbs |
| Dolly weight | 80 kg / 176 lbs |
| Arm reach (pivot to camera head mount) | 253 cm / 8' 3" |
| Length of rear end (pivot to outside of bucket) | 220 cm / 7' 2" |

**Assemble the GF-8 Column Extension as per the instructions on page 3**

The GF-8 version 9 is assembled in the same manner as version 1.

## Version 10

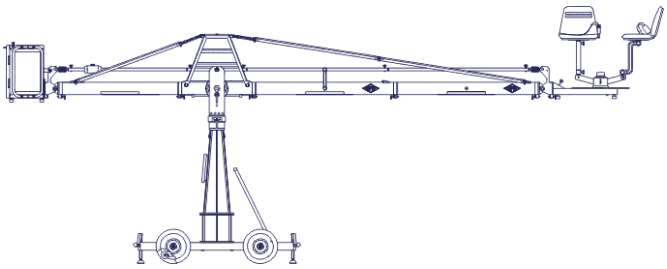


| | |
|---|---|
| Front extension arms required | 1 x 150 cm / 5' + 100 cm / 3' 3" |
| Rear extension arm required | 1 x 127 cm / 4' 2" |
| Lift range | 481 cm / 15' 9" |
| Maximum Euro-adapter height | 442 cm / 14' 5" |
| Lift capacity | 250 kg / 550 lbs |
| Counterweight required for max. load | 456 kg / 1003 lbs |
| Counterweight required to balance empty arm | 28 kg / 61 lbs |
| Crane weight (excluding dolly and weights) | 184 kg / 404 lbs |
| Dolly weight | 80 kg / 176 lbs |
| Arm reach (pivot to camera head mount) | 351 cm / 11' 5" |
| Length of rear end (pivot to outside of bucket) | 220 cm / 7' 2" |

**Assemble the GF-8 Column Extension as per the instructions on page 3**

The GF-8 version 10 is assembled in the same manner as version 2.

## Version 11

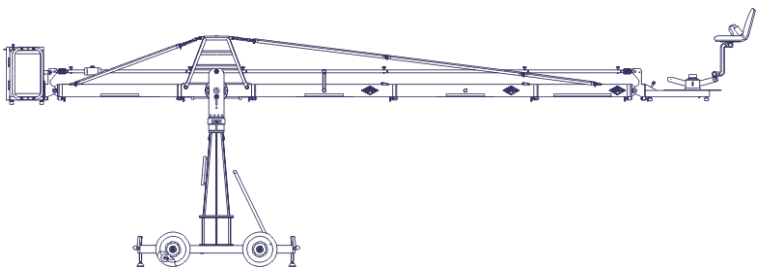


| | |
|---|---|
| Front extension arms required | 2 x 150 cm / 5’ |
| Rear extension arm required | 1 x 127 cm / 4’ 2” |
| Lift range | 564 cm / 18’ 6” |
| Maximum Euro-adapter height | 483 cm / 15’ 10“ |
| Lift capacity | 216 kg / 475 lbs |
| Counterweight required for max. load | 480 kg / 1056 lbs |
| Counterweight required to balance empty arm | 46 kg / 101 lbs |
| Crane weight (excluding dolly and weights) | 190 kg / 418 lbs |
| Dolly weight | 80 kg / 176 lbs |
| Arm reach (pivot to camera head mount) | 401 cm / 13’ 1“ |
| Length of rear end (pivot to outside of bucket) | 220 cm / 7’ 2“ |

**Assemble the GF-8 Column Extension as per the instructions on page 3**

The GF-8 version 11 is assembled in the same manner as version 3.

## Version 12

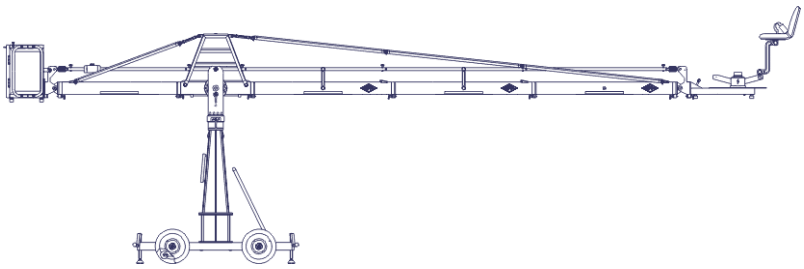


| | |
|---|---|
| Front extension arms required | 2 x 150 cm / 5’ + 100 cm / 3’ 3” |
| Rear extension arm required | 1 x 127 cm / 4’ 2” |
| Lift range | 727 cm / 23’ 9” |
| Maximum Euro-adapter height | 564 cm / 18’ 6“ |
| Lift capacity | 150 kg / 330 lbs |
| Counterweight required for max. load | 480 kg / 1056 lbs |
| Counterweight required to balance empty arm | 88 kg / 176 lbs |
| Crane weight (excluding dolly and weights) | 202 kg / 444 lbs |
| Dolly weight | 80 kg / 176 lbs |
| Arm reach (pivot to camera head mount) | 498 cm / 16’ 4“ |
| Length of rear end (pivot to outside of bucket) | 220 cm / 7’ 2“ |

**Assemble the GF-8 Column Extension as per the instructions on page 3**

The GF-8 version 12 is assembled in the same manner as version 4.

## Version 13

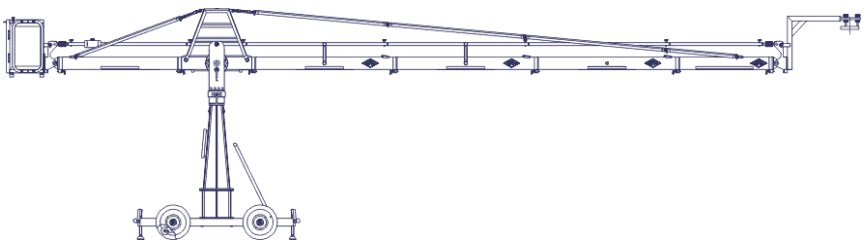


| | |
|---|---|
| Front extension arms required | 3 x 150 cm / 5’ |
| Rear extension arm required | 1 x 127 cm / 4’ 2” |
| Lift range | 809 cm / 30’ 7” |
| Maximum Euro-adapter height | 606 cm / 19’ 10“ |
| Lift capacity | 128 kg / 281 lbs |
| Counterweight required for max. load | 480 kg / 1056 lbs |
| Counterweight required to balance empty arm | 112 kg / 246 lbs |
| Crane weight (excluding dolly and weights) | 208 kg / 457 lbs |
| Dolly weight | 80 kg / 176 lbs |
| Arm reach (pivot to camera head mount) | 549 cm / 18’ |
| Length of rear end (pivot to outside of bucket) | 220 cm / 7’ 2“ |

**Assemble the GF-8 Column Extension as per the instructions on page 3**

The GF-8 version 13 is assembled in the same manner as version 5.

## Version 14

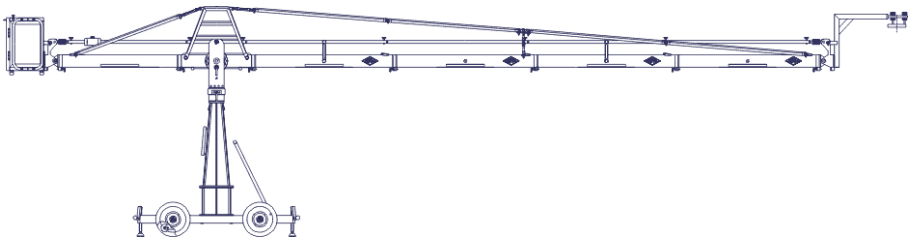


| | |
|---|---|
| Front extension arms required | 3 x 150 cm / 5’ + 100 cm / 3’ 3” |
| Rear extension arm required | 1 x 127 cm / 4’ 2” |
| Lift range | 891 cm / 31’ 10” |
| Maximum Euro-adapter height | 705 cm / 23’ 1“ |
| Lift capacity | 80 kg / 176 lbs |
| Counterweight required for max. load | 420 kg / 924 lbs |
| Counterweight required to balance empty arm | 140 kg / 308 lbs |
| Crane weight (excluding dolly and weights) | 210 kg / 462 lbs |
| Dolly weight | 80 kg / 176 lbs |
| Arm reach (pivot to camera head mount) | 663 cm / 21’ 8“ |
| Length of rear end (pivot to outside of bucket) | 220 cm / 7’ 2“ |

**Assemble the GF-8 Column Extension as per the instructions on page 3**

The GF-8 version 14 is assembled in the same manner as version 6.

## Version 15

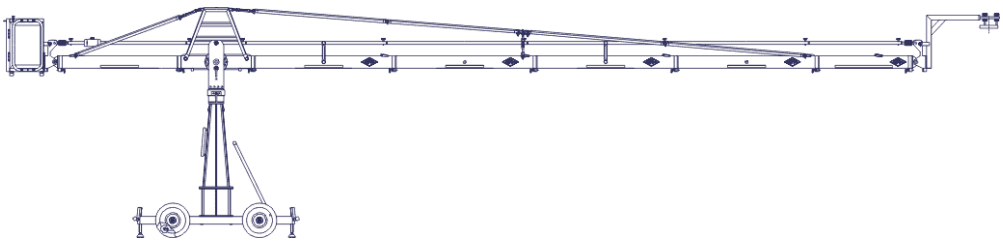


| | |
|---|---|
| Front extension arms required | 4 x 150 cm / 5’ |
| Rear extension arm required | 1 x 127 cm / 4’ 2” |
| Lift range | 1054 cm / 34’ 6” |
| Maximum Euro-adapter height | 747 cm / 24’ 5“ |
| Lift capacity | 80 kg / 176 lbs |
| Counterweight required for max. load | 476 kg / 1047 lbs |
| Counterweight required to balance empty arm | 172 kg / 378 lbs |
| Crane weight (excluding dolly and weights) | 217 kg / 477 lbs |
| Dolly weight | 80 kg / 176 lbs |
| Arm reach (pivot to camera head mount) | 713 cm / 23’ 4“ |
| Length of rear end (pivot to outside of bucket) | 220 cm / 7’ 2“ |

**Assemble the GF-8 Column Extension as per the instructions on page 3**

The GF-8 version 15 is assembled in the same manner as version 7.

## Version 16



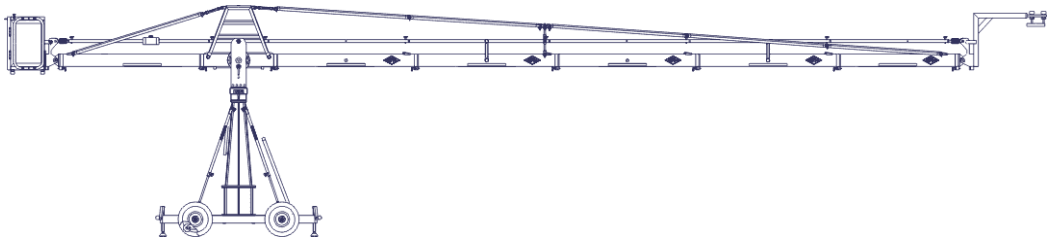
| | |
|---|---|
| Front extension arms required | 4 x 150 cm / 5’ + 100 cm / 3’ 3” |
| Rear extension arm required | 1 x 127 cm / 4’ 2” |
| Lift range | 1216 cm / 39’ 10” |
| Maximum Euro-adapter height | 828 cm / 27’ 2“ |
| Lift capacity | 50 kg / 110 lbs |
| Counterweight required for max. load | 480 kg / 1056 lbs |
| Counterweight required to balance empty arm | 288 kg / 501 lbs |
| Crane weight (excluding dolly and weights) | 288 kg / 501 lbs |
| Dolly weight | 80 kg / 176 lbs |
| Arm reach (pivot to camera head mount) | 810 cm / 26’ 6“ |
| Length of rear end (pivot to outside of bucket) | 220 cm / 7’ 2“ |

**Assemble the GF-8 Column Extension as per the instructions on page 3**

The GF-8 version 16 is assembled in the same manner as version 8.

**The following versions 17 and 18 require a 150cm / 5ft. section to the rear i.e. Counterweight Bucket End.**
**The 30cm / 1ft Column Extension is also required to achieve a pivot height to 184cm / 6ft. See page 3**

## Version 17



| | |
|---|---|
| Front extension arms required | 4 x 150 cm / 5' + 127 cm / 4' 2" |
| Rear extension arm required | 1 x 150 cm / 5' |
| Lift range | 1216 cm / 39' 10" |
| Maximum Euro-adapter height | 850 cm / 27' 10" |
| Lift capacity | 50 kg / 110 lbs |
| Counterweight required for max. load | 418 kg / 919 lbs |
| Counterweight required to balance empty arm | 214 kg / 470 lbs |
| Crane weight (excluding dolly and weights) | 239 kg / 525 lbs |
| Arm reach (pivot to camera head mount) | 837 cm / 27' 5" |
| Length of rear end (pivot to outside of bucket) | 243 cm / 7' 11" |

**Rigging is required! Observe guidelines on pages 35**

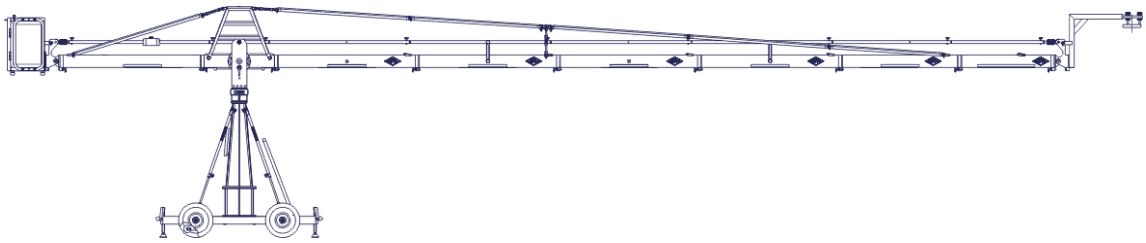
**Continue from § 9, page 6**

10. Connect one of the 150cm / 5' sections to the middle section. Slip the connection flanges into each other and secure them with the provided safety pin.
11. Connect another 150cm / 5' section to the first 150cm section. Slip the connection flanges into each other and secure them with the provided safety pin.
    **Note**: Support the second section by placing it on a support stand or rostrum
12. Connect the third 150cm / 5' section to the second 150cm / 5' section. Slip the connection flanges into each other and secure them with the safety pin.
13. Connect the fourth 150cm / 5' section to the third 150cm / 5' section. Slip the connection flanges into each other and secure them with the safety pin.
    **Note**: Support the third section by placing it on a support stand or rostrum
14. Connect the 127cm / 4' 2" section to the fourth 150cm / 5' section. Slip the connection flanges into each other and secure them with the safety pin.
15. Connect the remaining angle adjuster to the end of the 127cm / 4' 2" section and secure it with the provided safety pin.
16. Connect one of the 150cm / 5' parallelogram rods to the middle section and then connect the second 150cm / 5' parallelogram rod to the first 150cm / 5' rod. In turn, connect the third 150cm / 5' parallelogram rod to the second 150cm / 5' rod. In turn, connect the fourth 150cm / 5' parallelogram rod to the third 150cm / 5' rod. In turn, connect the 127cm / 4' 2" parallelogram rod to the fourth 150cm / 5' rod. Then connect the angle adjuster and secure it with a 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.
17. Connect the remote bracket to the angle adjuster by inserting the male flange into the female flange on the angle adjuster. Secure it with the safety pin.
18. Attach the weight bucket to the short end of the crane by inserting the male weight bucket flange into the female flange on the angle adjuster. Secure it with the 2 safety pins on the top of the angle adjuster.

**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. Level the weight bucket before loading any weights

**Before operation, all locking pins, locking screws etc should be inspected to ensure that all assembly sections are securely fastened.**

## Version 18



| | |
|---|---|
| Front extension arms required | 4 x 150 cm / 5' + 127 cm / 4' 2" + 100 cm / 3' 3" |
| Rear extension arm required | 1 x 150 cm / 5' |
| Lift range | 1423 cm / 46' 8" |
| Maximum Euro-adapter height | 931 cm / 30' 6" |
| Lift capacity | 50 kg / 110 lbs |
| Counterweight required for max. load | 498 kg / 1095 lbs |
| Counterweight required to balance empty arm | 228 kg / 501 lbs |
| Crane weight (excluding dolly and weights) | 250 kg / 625 lbs |
| Arm reach (pivot to camera head mount) | 935 cm / 30' 8" |
| Length of rear end (pivot to outside of bucket) | 243 cm / 7' 11" |

**Rigging is required! Observe guidelines on pages 35**

**Continue from § 9, page 6**

10. Connect one of the 150cm / 5' sections to the middle section. Slip the connection flanges into each other and secure them with the provided safety pin.
11. Connect another 150cm / 5' section to the first 150cm section. Slip the connection flanges into each other and secure them with the provided safety pin.
    **Note**: Support the second section by placing it on a support stand or rostrum
12. Connect the third 150cm / 5' section to the second 150cm / 5' section. Slip the connection flanges into each other and secure them with the safety pin.
13. Connect the fourth 150cm / 5' section to the third 150cm / 5' section. Slip the connection flanges into each other and secure them with the safety pin.
    **Note**: Support the third section by placing it on a support stand or rostrum
14. Connect the 127cm / 4' 2" section to the fourth 150cm / 5' section. Slip the connection flanges into each other and secure them with the safety pin.
15. Connect the 100cm section to the 127cm / 4' 2" section. Slip the connection flanges into each other and secure them with the provided safety pin.
16. Connect the remaining angle adjuster to the end of the 100cm section and secure it with the provided safety pin.
17. Connect one of the 150cm / 5' parallelogram rods to the middle section and then connect the second 150cm / 5' parallelogram rod to the first 150cm / 5' rod. In turn, connect the third 150cm / 5' parallelogram rod to the second 150cm / 5' rod. In turn, connect the fourth 150cm / 5' parallelogram rod to the third 150cm / 5' rod. Connect the 127cm / 4' 2" parallelogram rod to the fourth 150cm / 5' rod. In turn, connect the 100cm parallelogram rod to the 127cm / 4' 2" rod. Then connect the angle adjuster and secure it with a 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.

18. Connect the remote bracket to the angle adjuster by inserting the male flange into the female flange on the angle adjuster. Secure it with the safety pin.
19. Attach the weight bucket to the short end of the crane by inserting the male weight bucket flange into the female flange on the angle adjuster. Secure it with the 2 safety pins on the top of the angle adjuster.

    **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. Level the weight bucket before loading any weights

**Before operation, all locking pins, locking screws etc should be inspected to ensure that all assembly sections are securely fastened.**

# Assembly & Technical Specifications for the Xten Versions

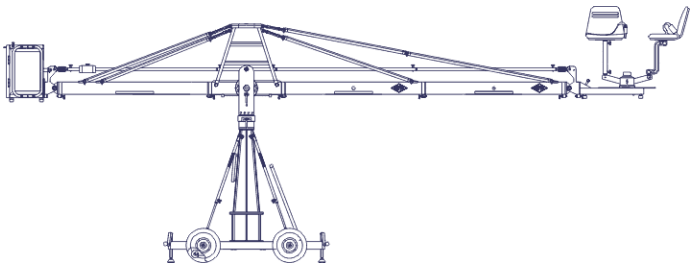
**The following Xten Versions, 1 to 8 require a 160cm / 5ft 3 inch section to the rear i.e. Counterweight Bucket End.**

**In addition to the standard mounting column, the 30cm / 1ft Column Extension is also required to achieve a pivot height of 184cm / 6ft**

**Note: a larger rigging harness than the standard and a double rigging rather than the standard single system is required to the front and rear of the crane arm.**

## Xten Version 1

(Pivot height 184cm / 6ft, Large Rigging Harness, Rear Extension 160cm / 5' 3")



| | |
|---|---|
| Front extension arms required | 2 x 150 cm / 5' |
| Rear extension arm required | 1 x 160 cm / 5' 3" |
| Lift range | 564 cm / 18' 6" |
| Maximum Euro-adapter height | 483 cm / 15' 10" |
| Lift capacity | 250 kg / 550 lbs |
| Counterweight required for max. load | 456 kg / 1003 lbs |
| Counterweight required to balance empty arm | 28 kg / 61 lbs |
| Crane weight (excluding dolly and weights) | 203 kg / 446 lbs |
| Dolly weight | 80 kg / 176 lbs |
| Arm reach (pivot to camera head mount) | 401 cm / 13' 1" |
| Length of rear end (pivot to outside of bucket) | 253 cm / 8' 3" |

**Double rigging is required! Observe guidelines on pages 36 and additionally ensure that the Large Rigging Harness is used with double rigging to the rear and front.**

**Continue from § 9, page 6**

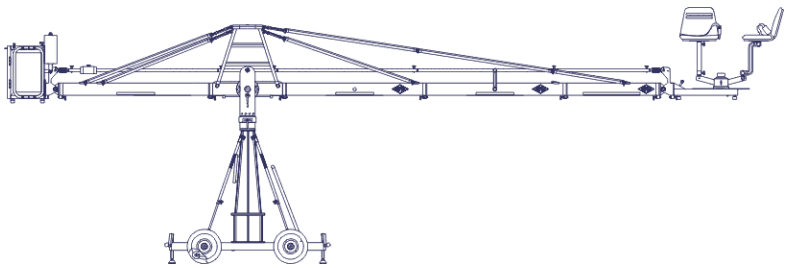
10. Connect one of the 150cm / 5' sections to the middle section. Slip the connection flanges into each other and secure them with the provided safety pin.
11. Connect 2 turnbuckles to the lower connection on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
12. Connect a 150cm / 5' rigging rod to each of the turnbuckles on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
13. Connect the 2 x 150cm / 5' rigging rods in turn to the connectors on the first extension. Ensure that the locking pins are inserted fully.
14. Hand tighten the rods by turning the turnbuckles until the rods are taut.
15. Connect another 150cm section to the first 150cm section. Slip the connection flanges into each other and secure them with the provided safety pin.
    **Note**: Support the second section by placing it on a support stand or rostrum
16. Now mount the top rigging system observing the guidelines on pages 36. Insert the Rigging Support Adjuster between the third and fourth rigging rods.

17. Connect the remaining angle adjuster to the end of the second 150cm section and secure it with the provided safety pin.
18. Connect one of the 150cm / 5' parallelogram rods to the middle section and then connect the second 150cm parallelogram rod to the first 150cm rod. Then connect the angle adjuster and secure it with a safety pin at each end.
    **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..
19. Connect the platform to the angle adjuster by inserting the male platform flange into the female flange on the angle adjuster. Secure it with the safety pin.
20. Attach the weight bucket to the short end of the crane by inserting the male weight bucket flange into the female flange on the angle adjuster. Secure it with the 2 safety pins on the top of the angle adjuster.
    **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. Level the weight bucket before loading any weights

**Before operation, all locking pins, locking screws etc should be inspected to ensure that all assembly sections are securely fastened.**

## Xten Version 2

(Pivot height 184cm / 6ft, Large Rigging Harness, Rear Extension 160cm / 5' 3")



| | |
|---|---|
| Front extension arms required | 2 x 150 cm / 5' + 100 cm / 3' 3" |
| Rear extension arm required | 1 x 160 cm / 5' 3" |
| Lift range | 727 cm / 23' 10" |
| Maximum Euro-adapter height | 564 cm / 18' 6" |
| Lift capacity | 240 kg / 528 lbs |
| Counterweight required for max. load | 586 kg / 1289 lbs |
| Counterweight required to balance empty arm | 64 kg / 140 lbs |
| Crane weight (excluding dolly and weights) | 220 kg / 484 lbs |
| Dolly weight | 80 kg / 176 lbs |
| Arm reach (pivot to camera head mount) | 499 cm / 16' 4" |
| Length of rear end (pivot to outside of bucket) | 253 cm / 8' 3" |

**Double rigging is required! Observe guidelines on pages 36 and additionally ensure that the Large Rigging Harness is used with double rigging to the rear and front.**

**Continue from § 9, page 6**

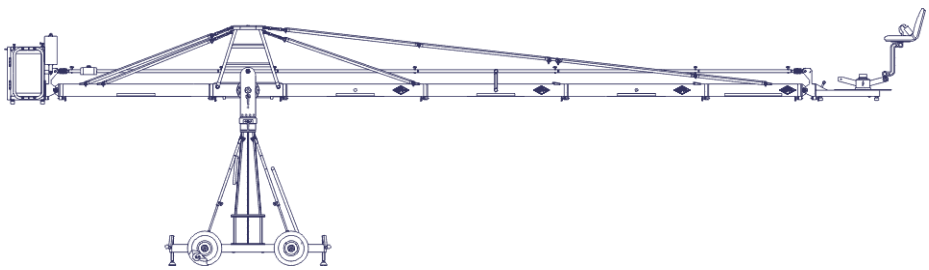
10. Connect one of the 150cm / 5' sections to the middle section. Slip the con-nection flanges into each other and secure them with the provided safety pin.
11. Connect 2 turnbuckles to the lower connection on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
12. Connect a 150cm / 5' rigging rod to each of the turnbuckles on the front side of the rigging harness. Ensure that the locking pins are inserted fully.

13. Connect the 2 x 150cm / 5’ rigging rods in turn to the connectors on the first extension. Ensure that the locking pins are inserted fully.
14. Hand tighten the rods by turning the turnbuckles until the rods are taut.
15. Connect another 150cm section to the first 150cm section. Slip the connection flanges into each other and secure them with the provided safety pin.
    **Note**: Support the second section by placing it on a support stand or rostrum
16. Connect the 100cm section to the second 150cm section. Slip the connection flanges into each other and secure them with the provided safety pin.
17. Now mount the top rigging system observing the guidelines on pages 36. Insert the Rigging Support Adjuster between the third and fourth rigging rods.
18. Connect the remaining angle adjuster to the end of the second 100cm section and secure it with the provided safety pin.
19. Connect one of the 150cm / 5’ parallelogram rods to the middle section and then connect the second 150cm parallelogram rod to the first 150cm rod. In turn, connect the 100cm parallelogram rod to the second 150cm rod. Then connect the angle adjuster and secure it with a safety pin at each end.
    **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.
20. Connect the platform to the angle adjuster by inserting the male platform flange into the female flange on the angle adjuster. Secure it with the safety pin.
21. Attach the weight bucket to the short end of the crane by inserting the male weight bucket flange into the female flange on the angle adjuster. Secure it with the 2 safety pins on the top of the angle adjuster.
    **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. Level the weight bucket before loading any weights

**Before operation, all locking pins, locking screws etc should be inspected to ensure that all assembly sections are securely fastened.**

## Xten Version 3

(Pivot height 184cm / 6ft, Large Rigging Harness, Rear Extension 160cm / 5’ 3")



| | |
|---|---|
| Front extension arms required | 3 x 150 cm / 5’ + 100 cm / 3’ 3” |
| Rear extension arm required | 1 x 160 cm / 5’ 3” |
| Lift range | 971 cm / 31’ 10” |
| Maximum Euro-adapter height | 687 cm / 22’ 6“ |
| Lift capacity | 170 kg / 374 lbs |
| Counterweight required for max. load | 600 kg / 1320 lbs |
| Counterweight required to balance empty arm | 130 kg / 286 lbs |
| Crane weight (excluding dolly and weights) | 238 kg / 523 lbs |
| Dolly weight | 80 kg / 176 lbs |
| Arm reach (pivot to camera head mount) | 647 cm / 21’ 2“ |
| Length of rear end (pivot to outside of bucket) | 253 cm / 8’ 3“ |

**Double rigging is required! Observe guidelines on pages 36 and additionally ensure that the Large Rigging Harness is used with double rigging to the rear and front.**

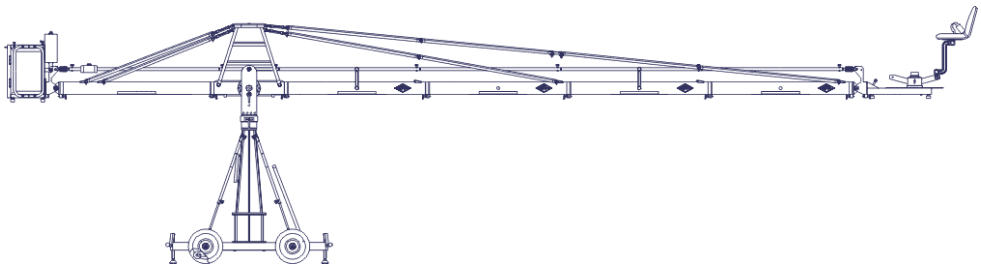
**Continue from § 9, page 6**

10. Connect one of the 150cm / 5' sections to the middle section. Slip the con-nection flanges into each other and secure them with the provided safety pin.
11. Connect 2 turnbuckles to the lower connection on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
12. Connect a 150cm / 5' rigging rod to each of the turnbuckles on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
13. Connect the 2 x 150cm / 5' rigging rods in turn to the connectors on the first extension. Ensure that the locking pins are inserted fully.
14. Hand tighten the rods by turning the turnbuckles until the rods are taut.
15. Connect another 150cm section to the first 150cm section. Slip the connection flanges into each other and secure them with the provided safety pin.
    **Note**: Support the second section by placing it on a support stand or rostrum
16. Connect the third 150cm section to the second 150cm section. Slip the connection flanges into each other and secure them with the provided safety pin.
17. Connect a 100cm section to the third 150cm section. Slip the connection flanges into each other and secure them with the provided safety pin.
    **Note**: Support the third section by placing it on a support stand or rostrum
18. Connect the remaining angle adjuster to the end of the 100cm section and secure it with the provided safety pin.
19. Now mount the top rigging system observing the guidelines on pages 36. Insert the Rigging Support Adjuster between the third and fourth rigging rods.
20. Connect one of the 150cm / 5' parallelogram rods to the middle section and then connect the second 150cm parallelogram rod to the first 150cm rod. In turn, connect the third 150cm parallelogram rod to the second 150cm rod. In turn, connect the 100cm parallelogram rod to the third 150cm rod. Connect the angle adjuster and secure it with a safety pins at each end.
    **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..
21. Connect the platform to the angle adjuster by inserting the male platform flange into the female flange on the angle adjuster. Secure it with the safety pin.
22. Attach the weight bucket to the short end of the crane by inserting the male weight bucket flange into the female flange on the angle adjuster. Secure it with the 2 safety pins on the top of the angle adjuster.
    **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. Level the weight bucket before loading any weights

**Before operation, all locking pins, locking screws etc should be inspected to ensure that all assembly sections are securely fastened.**

## Xten Version 4

(Pivot height 184cm / 6ft, Large Rigging Harness, Rear Extension 160cm / 5’ 3")



| | |
|---|---|
| Front extension arms required | 4 x 150 cm / 5’ |
| Rear extension arm required | 1 x 160 cm / 5’ 3” |
| Lift range | 1054 cm / 34’ 6” |
| Maximum Euro-adapter height | 728 cm / 23’ 10“ |
| Lift capacity | 140 kg / 308 lbs |
| Counterweight required for max. load | 600 kg / 1320 lbs |
| Counterweight required to balance empty arm | 154 kg / 338 lbs |
| Crane weight (excluding dolly and weights) | 246 kg / 541 lbs |
| Dolly weight | 80 kg / 176 lbs |
| Arm reach (pivot to camera head mount) | 697 cm / 22’ 10“ |
| Length of rear end (pivot to outside of bucket) | 253 cm / 8’ 3“ |

**Double rigging is required! Observe guidelines on pages 36 and additionally ensure that the Large Rigging Harness is used with double rigging to the rear and front.**

**Continue from § 9, page 6**

23. Connect one of the 150cm / 5’ sections to the middle section. Slip the con-nection flanges into each other and secure them with the provided safety pin.
24. Connect another 150cm section to the first 150cm section. Slip the connection flanges into each other and secure them with the provided safety pin.
    **Note**: Support the second section by placing it on a support stand or rostrum
25. Connect 2 turnbuckles to the lower connection on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
26. Connect a 150cm / 5’ rigging rod to each of the turnbuckles on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
27. Connect another 2 x 150cm / 5’ rigging rods to the first 2 rigging rods. Ensure that the locking pins are inserted fully.
28. Connect 2 x 150cm / 5’ rigging rods in turn to the connectors on the second extension. Ensure that the locking pins are inserted fully.
29. Hand tighten the rods by turning the turnbuckles until the rods are taut.
30. Connect the third 150cm section to the second 150cm section. Slip the conn-ection flanges into each other and secure them with the provided safety pin.
31. Connect the fourth 150cm section to the third 150cm section. Slip the conn-ection flanges into each other and secure them with the provided safety pin.
    **Note**: Support the third section by placing it on a support stand or rostrum
32. Now mount the top rigging system observing the guidelines on pages 36. Insert the Rigging Support Adjuster between the third and fourth rigging rods.
33. Connect the remaining angle adjuster to the end of the 90cm section and secure it with the provided safety pin.
34. Connect one of the 150cm / 5’ parallelogram rods to the middle section and then connect the second 150cm parallelogram rod to the first 150cm rod. In turn, connect the third 150cm parallelogram rod to the second 150cm rod. In turn, connect the fourth 150cm parallelogram rod to the third 150cm rod. Then connect the angle

adjuster and secure it with a safety pins at each end.

**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.

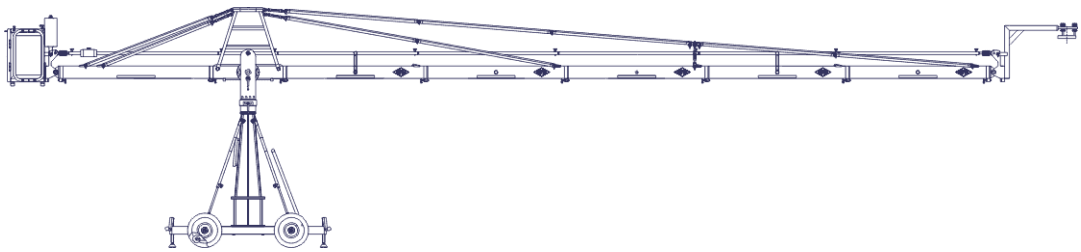
35. Connect the platform to the angle adjuster by inserting the male platform flange into the female flange on the angle adjuster. Secure it with the safety pin.
36. Attach the weight bucket to the short end of the crane by inserting the male weight bucket flange into the female flange on the angle adjuster. Secure it with the 2 safety pins on the top of the angle adjuster.

    **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. Level the weight bucket before loading any weights

**Before operation, all locking pins, locking screws etc should be inspected to ensure that all assembly sections are securely fastened.**

## Xten Version 5

(Pivot height 184cm / 6ft, Large Rigging Harness, Rear Extension 160cm / 5' 3")



| | |
|---|---|
| Front extension arms required | 5 x 150 cm / 5' |
| Rear extension arm required | 1 x 160 cm / 5' 3" |
| Lift range | 1299 cm / 42' 7" |
| Maximum Euro-adapter height | 869 cm / 28' 6" |
| Lift capacity | 80 kg / 176 lbs |
| Counterweight required for max. load | 526 kg / 1159 lbs |
| Counterweight required to balance empty arm | 214 kg / 471 lbs |
| Crane weight (excluding dolly and weights) | 255 kg / 561 lbs |
| Dolly weight | 80 kg / 176 lbs |
| Arm reach (pivot to camera head mount) | 861 cm / 28' 2" |
| Length of rear end (pivot to outside of bucket) | 253 cm / 8' 3" |

**Double rigging is required! Observe guidelines on pages 36 and additionally ensure that the Large Rigging Harness is used with double rigging to the rear and front.**

**Continue from § 9, page 6**

10. Connect one of the 150cm / 5' sections to the middle section. Slip the connection flanges into each other and secure them with the provided safety pin.
11. Connect another 150cm section to the first 150cm section. Slip the connection flanges into each other and secure them with the provided safety pin.

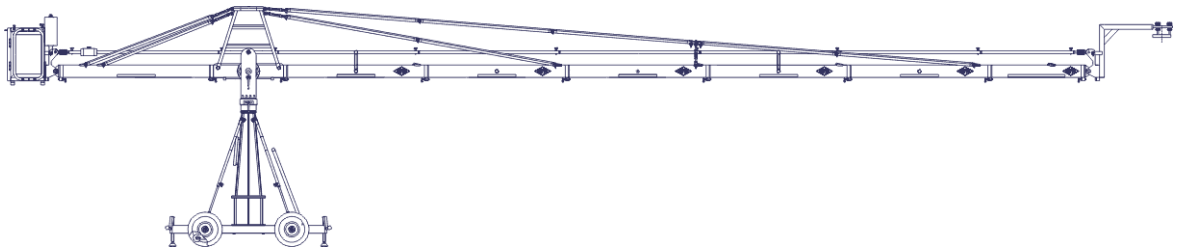
    **Note**: Support the second section by placing it on a support stand or rostrum
12. Connect 2 turnbuckles to the lower connection on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
13. Connect a 150cm / 5' rigging rod to each of the turnbuckles on the front side of the rigging harness. Ensure that the locking pins are inserted fully.

14. Connect another 2 x 150cm / 5’ rigging rods to the first 2 rigging rods. Ensure that the locking pins are inserted fully.
15. Connect the 2 x 150cm / 5’ rigging rods in turn to the connectors on the first extension. Ensure that the locking pins are inserted fully.
16. Hand tighten the rods by turning the turnbuckles until the rods are taut.
17. Connect the third 150cm section to the second 150cm section. Slip the connection flanges into each other and secure them with the provided safety pin.
18. Connect the fourth 150cm section to the third 150cm section. Slip the connection flanges into each other and secure them with the provided safety pin.
    **Note**: Support the third section by placing it on a support stand or rostrum.
19. Connect the fifth 150cm section to the fourth 150cm section. Slip the connection flanges into each other and secure them with the provided safety pin.
    **Note**: Support the fourth section by placing it on a support stand or rostrum.
20. Connect the remaining angle adjuster to the end of the last section and secure it with the provided safety pin.
21. Connect one of the 150cm / 5’ parallelogram rods to the middle section and then connect the second 150cm parallelogram rod to the first 150cm rod. In turn, connect the third 150cm parallelogram rod to the second 150cm rod. In turn, connect the fourth 150cm parallelogram rod to the third 150cm rod. In turn, connect the fifth 150cm parallelogram rod to the fourth 150cm rod. Then connect the angle adjuster and secure it with a 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.
22. Now mount the top rigging system observing the guidelines on pages 36. Insert the Rigging Support Adjuster between the third and fourth rigging rods.
23. Connect the remote bracket to the angle adjuster by inserting the male flange into the female flange on the angle adjuster. Secure it with the safety pin.Attach the weight bucket to the short end of the crane by inserting the male weight bucket flange into the female flange on the angle adjuster. Secure it with the 2 safety pins on the top of the angle adjuster.
    **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. Level the weight bucket before loading any weights

**Before operation, all locking pins, locking screws etc should be inspected to ensure that all assembly sections are securely fastened.**

## Xten Version 6

(Pivot height 184cm / 6ft, Large Rigging Harness, Rear Extension 160cm / 5’ 3")



| | |
|---|---|
| Front extension arms required | 5 x 150 cm / 5’ + 100 cm / 3’ 3” |
| Rear extension arm required | 1 x 160 cm / 5’ 3” |
| Lift range | 1462 cm / 47’ 9” |
| Maximum Euro-adapter height | 950 cm / 31’ 2“ |
| Lift capacity | 70 kg / 154 lbs |
| Counterweight required for max. load | 588 kg / 1293 lbs |
| Counterweight required to balance empty arm | 266 kg / 585 lbs |
| Crane weight (excluding dolly and weights) | 266 kg / 585 lbs |
| Dolly weight | 80 kg / 176 lbs |
| Arm reach (pivot to camera head mount) | 958 cm / 31’ 4“ |
| Length of rear end (pivot to outside of bucket) | 253 cm / 8’ 3“ |

**Double rigging is required! Observe guidelines on pages 36 and additionally ensure that the Large Rigging Harness is used with double rigging to the rear and front.**

**Continue from § 9, page 6**

10. Connect one of the 150cm / 5’ sections to the middle section. Slip the con-nection flanges into each other and secure them with the provided safety pin.
11. Connect another 150cm section to the first 150cm section. Slip the connection flanges into each other and secure them with the provided safety pin.
    **Note**: Support the second section by placing it on a support stand or rostrum
12. Connect 2 turnbuckles to the lower connection on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
13. Connect a 150cm / 5’ rigging rod to each of the turnbuckles on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
14. Connect another 2 x 150cm / 5’ rigging rods to the first 2 rigging rods. Ensure that the locking pins are inserted fully.
15. Connect 2 x 150cm / 5’ rigging rods in turn to the connectors on the second extension. Ensure that the locking pins are inserted fully.
16. Hand tighten the rods by turning the turnbuckles until the rods are taut.
17. Connect the third 150cm section to the second 150cm section. Slip the connection flanges into each other and secure them with the provided safety pin.
18. Connect the fourth 150cm section to the third 150cm section. Slip the connection flanges into each other and secure them with the provided safety pin.
    **Note**: Support the third section by placing it on a support stand or rostrum
19. Connect the fifth 150cm section to the fourth 150cm section. Slip the connection flanges into each other and secure them with the provided safety pin.
    **Note**: Support the fourth section by placing it on a support stand or rostrum.
20. Connect the 100cm section to the fifth 150cm section. Slip the connection flanges into each other and secure them with the provided safety pin.
21. Connect the remaining angle adjuster to the end of the last section and secure it with the provided safety pin.
22. Connect one of the 150cm / 5’ parallelogram rods to the middle section and then

connect the second 150cm parallelogram rod to the first 150cm rod. In turn, connect the third 150cm parallelogram rod to the second 150cm rod. In turn, connect the fourth 150cm parallelogram rod to the third 150cm rod. In turn, connect the fifth 150cm parallelogram rod to the fourth 150cm rod. Connect the 100cm parallelogram rod to the fifth 150cm rod.Then connect the angle adjuster and secure it with a 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.

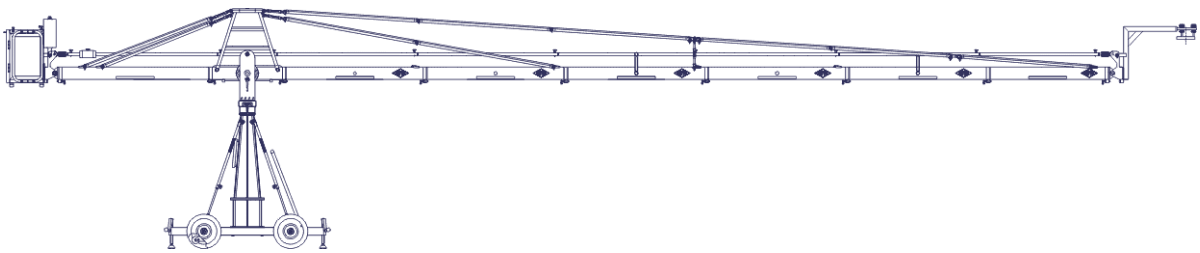
23. Now mount the top rigging system observing the guidelines on pages 36. Insert the Rigging Support Adjuster between the third and fourth rigging rods.
24. Connect the remote bracket to the angle adjuster by inserting the male flange into the female flange on the angle adjuster. Secure it with the safety pin
25. Attach the weight bucket to the short end of the crane by inserting the male weight bucket flange into the female flange on the angle adjuster. Secure it with the 2 safety pins on the top of the angle adjuster.

    **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. Level the weight bucket before loading any weights

**Before operation, all locking pins, locking screws etc should be inspected to ensure that all assembly sections are securely fastened.**

## Xten Version 7

(Pivot height 184cm / 6ft, Large Rigging Harness, Rear Extension 160cm / 5' 3")



| | |
|---|---|
| Front extension arms required | 5 x 150 cm / 5' + 127 cm / 4' 2" |
| Rear extension arm required | 1 x 160 cm / 5' 3" |
| Lift range | 1506 cm / 49' 4" |
| Maximum Euro-adapter height | 973 cm / 31' 10" |
| Lift capacity | 65 kg / 143 lbs |
| Counterweight required for max. load | 602 kg / 1324 lbs |
| Counterweight required to balance empty arm | 288 kg / 633 lbs |
| Crane weight (excluding dolly and weights) | 271 kg / 598 lbs |
| Dolly weight | 80 kg / 176 lbs |
| Arm reach (pivot to camera head mount) | 985 cm / 32' 3" |
| Length of rear end (pivot to outside of bucket) | 253 cm / 8' 3" |

**Double rigging is required! Observe guidelines on pages 36 and additionally ensure that the Large Rigging Harness is used with double rigging to the rear and front.**

**Continue from § 9, page 6**

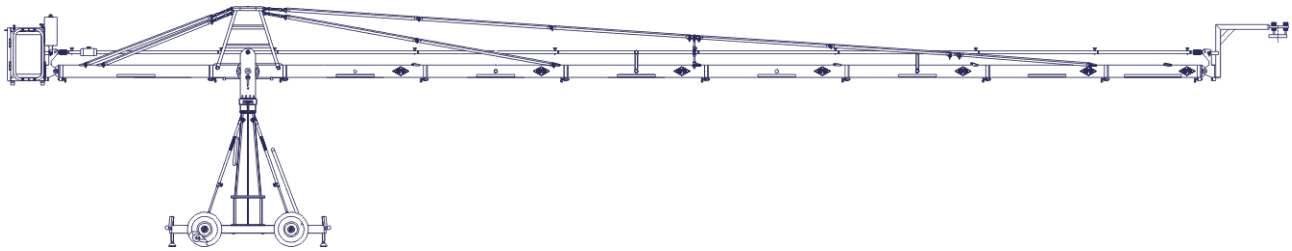
10. Connect one of the 150cm / 5' sections to the middle section. Slip the connection flanges into each other and secure them with the provided safety pin.

11. Connect another 150cm / 5’ section to the first 150cm / 5’ section. Slip the connection flanges into each other and secure them with the provided safety pin.
    **Note**: Support the second section by placing it on a support stand or rostrum
12. Connect 2 turnbuckles to the lower connection on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
13. Connect a 150cm / 5’ rigging rod to each of the turnbuckles on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
14. Connect another 2 x 150cm / 5’ rigging rods to the first 2 rigging rods. Ensure that the locking pins are inserted fully.
15. Connect 2 x 150cm / 5’ rigging rods in turn to the connectors on the second extension. Ensure that the locking pins are inserted fully.
16. Hand tighten the rods by turning the turnbuckles until the rods are taut.
17. Connect the third 150cm / 5’ section to the second 150cm / 5’ section. Slip the connection flanges into each other and secure them with the provided safety pin.
18. Connect the fourth 150cm / 5’ section to the third 150cm / 5’ section. Slip the connection flanges into each other and secure them with the provided safety pin.
    **Note**: Support the third section by placing it on a support stand or rostrum
19. Connect the fifth 150cm / 5’ section to the fourth 150cm / 5’ section. Slip the connection flanges into each other and secure them with the provided safety pin.
    **Note**: Support the fourth section by placing it on a support stand or rostrum.
20. Connect the 127cm / 4’ 2” section to the fifth 150cm / 5’ section. Slip the connection flanges into each other and secure them with the provided safety pin.
21. Connect the remaining angle adjuster to the end of the last section and secure it with the provided safety pin.
22. Connect one of the 150cm / 5’ parallelogram rods to the middle section and then connect the second 150cm / 5’ parallelogram rod to the first 150cm / 5’ rod. In turn, connect the third 150cm / 5’ parallelogram rod to the second 150cm / 5’ rod. In turn, connect the fourth 150cm / 5’ parallelogram rod to the third 150cm / 5’ rod. In turn, connect the fifth 150cm / 5’ parallelogram rod to the fourth 150cm / 5’ rod. In turn, connect the 127cm / 4’ 2” parallelogram rod to the fifth 150cm / 5’ rod.Then connect the angle adjuster and secure it with a 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.
23. Now mount the top rigging system observing the guidelines on pages 36. Insert the Rigging Support Adjuster between the third and fourth rigging rods.
24. Connect the remote bracket to the angle adjuster by inserting the male flange into the female flange on the angle adjuster. Secure it with the safety pin.
25. Attach the weight bucket to the short end of the crane by inserting the male weight bucket flange into the female flange on the angle adjuster. Secure it with the 2 safety pins on the top of the angle adjuster.
    **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. Level the weight bucket before loading any weights

**Before operation, all locking pins, locking screws etc should be inspected to ensure that all assembly sections are securely fastened.**

## Xten Version 8

(Pivot height 184cm / 6ft, Large Rigging Harness, Rear Extension 160cm / 5’ 3")



| | |
|---|---|
| Front extension arms required | 5 x 150 cm / 5’ + 127 cm / 4’ 2” + 100 cm / 3’ 3” |
| Rear extension arm required | 1 x 160 cm / 5’ 3” |
| Lift range | 1660 cm / 54’ 5” |
| Maximum Euro-adapter height | 1054 cm / 34’ 6“ |
| Lift capacity | 50 kg / 110 lbs |
| Counterweight required for max. load | 602 kg / 1324 lbs |
| Counterweight required to balance empty arm | 350 kg / 770 lbs |
| Crane weight (excluding dolly and weights) | 282 kg / 620 lbs |
| Dolly weight | 80 kg / 176 lbs |
| Arm reach (pivot to camera head mount) | 1083 cm / 35’ 6“ |
| Length of rear end (pivot to outside of bucket) | 253 cm / 8’ 3“ |

**Double rigging is required! Observe guidelines on pages 36 and additionally ensure that the Large Rigging Harness is used with double rigging to the rear and front.**

**Continue from § 9, page 6**

10. Connect one of the 150cm / 5’ sections to the middle section. Slip the connection flanges into each other and secure them with the provided safety pin.
11. Connect another 150cm section to the first 150cm section. Slip the connection flanges into each other and secure them with the provided safety pin.
    **Note**: Support the second section by placing it on a support stand or rostrum
12. Connect 2 turnbuckles to the lower connection on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
13. Connect a 150cm / 5’ rigging rod to each of the turnbuckles on the front side of the rigging harness. Ensure that the locking pins are inserted fully.
14. Connect another 2 x 150cm / 5’ rigging rods to the first 2 rigging rods. Ensure that the locking pins are inserted fully.
15. Connect 2 x 150cm / 5’ rigging rods in turn to the connectors on the second extension. Ensure that the locking pins are inserted fully.
16. Hand tighten the rods by turning the turnbuckles until the rods are taut.
17. Connect the third 150cm / 5’ section to the second 150cm / 5’ section. Slip the connection flanges into each other and secure them with the provided safety pin.
18. Connect the fourth 150cm / 5’ section to the third 150cm / 5’ section. Slip the connection flanges into each other and secure them with the provided safety pin.
    **Note**: Support the third section by placing it on a support stand or rostrum
19. Connect the fifth 150cm / 5’ section to the fourth 150cm / 5’ section. Slip the connection flanges into each other and secure them with the provided safety pin.
    **Note**: Support the fourth section by placing it on a support stand or rostrum.
20. Connect the 127cm / 4’ 2” section to the fifth 150cm / 5’ section. Slip the connection flanges into each other and secure them with the provided safety pin.
21. Connect the 100cm section to the 127cm / 4’ 2” section. Slip the connection flanges into each other and secure them with the provided safety pin.

22. Connect the remaining angle adjuster to the end of the last section and secure it with the provided safety pin.
23. Connect one of the 150cm / 5’ parallelogram rods to the middle section and then connect the second 150cm / 5’ parallelogram rod to the first 150cm / 5’ rod. In turn, connect the third 150cm / 5’ parallelogram rod to the second 150cm / 5’ rod. In turn, connect the fourth 150cm / 5’ parallelogram rod to the third 150cm rod. In turn, connect the fifth 150cm parallelogram rod to the fourth 150cm / 5’ rod. In turn, connect the 127cm / 4’ 2” parallelogram rod to the fifth 150cm / 5’ rod. In turn, connect the 100cm parallelogram rod to the 127cm / 4’ 2” rod. Then connect the angle adjuster and secure it with a 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.
24. Now mount the top rigging system observing the guidelines on pages 36. Insert the Rigging Support Adjuster between the third and fourth rigging rods.
25. Connect the remote bracket to the angle adjuster by inserting the male flange into the female flange on the angle adjuster. Secure it with the safety pin.
26. Attach the weight bucket to the short end of the crane by inserting the male weight bucket flange into the female flange on the angle adjuster. Secure it with the 2 safety pins on the top of the angle adjuster.

    **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. Level the weight bucket before loading any weights

**Before operation, all locking pins, locking screws etc should be inspected to ensure that all assembly sections are securely fastened.**

# Parallelogram Rod Support

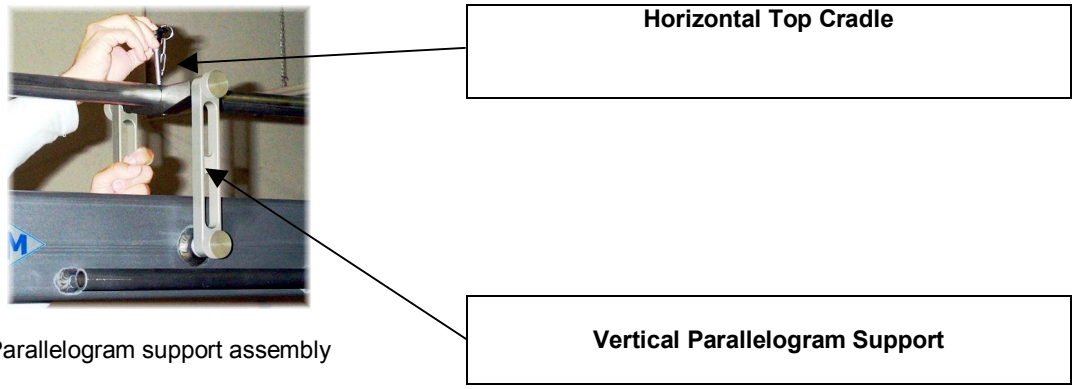
**The Parallelogram Rod Supports are required from Version 3 onwards. Assembly is as follows:**

The support consists of 3 parts: 2 vertical side supports and a horizontal top cradle. Connect a side support to the top cradle by screwing the parts together. Bolt the vertical part to the crane arm extension by turning the knurled knob. Connect the other vertical support to opposite side in the same manner.
**Note**: when connecting the vertical support to the horizontal top cradle and the crane arm, turn the top and bottom knurled knobs equally to avoid jamming. When the parallelogram support is mounted, connect the parallelogram rod to the horizontal top cradle by inserting the locking pin from the upper side, through the parallelogram rod and into the horizontal top.

**Positioning of the Parallelogram Rod Supports:**

- Standard-Versions 3, 4, 11 and 12 on the 1st 150cm/5ft extension arm
- Standard-Versions 5, 6, 13 and 14 on the 1st & 2nd 150cm/5ft extension arm
- Standard-Versions 7, 8, 15 and 16 on the 1st & 3rd 150cm/5ft extension arm
- Standard-Versions 17 and 18 on the 2nd & 4th 150cm/5ft extension arm
- Xten-Versions 2 and 3 on the 2nd 150cm/5ft extension arm
- Xten-Versions 4 on the 1st & 3rd 150cm/5ft extension arm
- Xten-Versions 5 and 6 on the 1st & 4th 150cm/5ft extension arm
- Xten-Versions 7 and 8 on the 3rd & 5th 150cm/5ft extension arm

To avoid mistakes, use the crane drawings provided in the Instruction Manual etc to ensure that all parts are in the correct position.




Parallelogram support assembly

# Rigging system

The rigging system must be mounted as of Standard Versions 2 onwards i.e. versions with more than 1 x 150cm section to the front. For each extension section there is a matching pair of rigging rods. The rods for the 150cm sections are all identical. In principle, mounting the rigging requires connecting the respective rods starting at the turnbuckles on the rigging harness and finishing at the connection on the last arm section or in some cases the second last section.

| | | |
|---|---|---|
| 100cm / 3’ 3” arm section | = | 75 cm / 2’ 6” rigging rod |
| 127cm / 4ft arm section | | 115cm / 3’ 9” rigging rod |
| 150cm / 5ft arm section | | 142cm / 4’ 7” rigging rod |
| 160cm / 5’ 3” arm section | | 142cm / 4’ 7” and 115cm / 3’ 9” rigging rod |

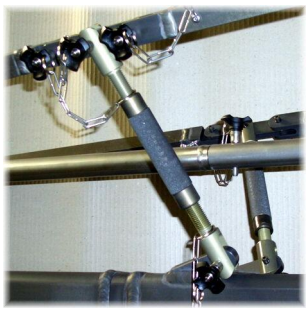
**The following example describes the assembly procedure for Versions 17 & 18**

1. Connect 2 x 142cm / 4’ 7” rigging rods to the turnbuckles on the front side of the standard rigging harness. Ensure that the locking pins are inserted fully.

Connecting 2 x 142cm rigging rods to the turnbuckles


Connecting the rods together

2. Connect another 2 x 142cm / 4’ 7” rigging rods to the first 2 rigging rods. Ensure that the locking pins are inserted fully.
3. Connect a Rigging Rod Connector to each of the second Rigging Rods. In turn connect the 2 Adjustable Rigging Rod Supports to the Rigging Connections on the second 150cm / 5ft arm section and then to the Rigging Rod Connectors ensuring that the locking pins are inserted fully.
   **Note**: This positioning applies to versions 7, 8 and versions 15 to 18.



4. Connect 2 x 142cm / 4’ 7” rigging rods to the Rigging Rod Connectors and in turn connect another 2 x 142cm / 4’ 7” rigging rods to the 3rd Rigging Rod. Ensure that the locking pins are inserted fully.
5. Connect 2 x 115cm / 3’ 9” rigging rods to the last 142cm / 4’ 7” rigging rods and in turn to the Rigging Rod Connections on the 127cm / 4ft arm section. Ensure that the locking pins are inserted fully.

Connect the rigging rod to the end section and secure with a locking pin.


Tensioning the turnbuckle

6. Hand tighten the turnbuckles until the rigging rods are taut and secure with the locking nuts. The rigging should provide the support needed to keep the arm straight. If the arm is hanging downwards then the rigging is too loose. If the arm is bent upwards then the rigging is too tight.

**Before operation, all locking pins, locking screws etc should be inspected to ensure that all assembly sections are securely fastened.**

# Double Rigging System

The Double Rigging System and Large Rigging Harness must be mounted for all GF-8 Xten Versions. For each extension section there is a matching pair of rigging rods. The rods for the 150cm sections are all identical. In principle, mounting the rigging requires connecting the respective rods starting at the turnbuckles on the rigging harness and finishing at the connection on the last arm section or in some cases the second last section.

| | | |
|---|---|---|
| 100cm / 3’ 3” arm section | = | 75 cm / 2’ 6” rigging rod |
| 127cm / 4ft arm section | | 115cm / 3’ 9” rigging rod |
| 150cm / 5ft arm section | | 142cm / 4’ 7” rigging rod |
| 160cm / 5’ 3” arm section | | 142cm / 4’ 7” and 115cm / 3’ 9” rigging rod |

**The following example describes the assembly procedure for the GF-8 Xten, Double Rigging System as per Versions 7 & 8**

## Lower, front rigging

1. Connect 2 x 142cm / 4’ 7” rigging rods to the lower turnbuckles on the front side of the large rigging harness. Ensure that the locking pins are inserted fully.
2. Connect another 2 x 142cm / 4’ 7” rigging rods to the first 2 rigging rods and in turn to the second crane arm extension. Ensure that the locking pins are inserted fully. Hand tighten the turnbuckles until the rigging rods are taut and secure with the locking nuts.

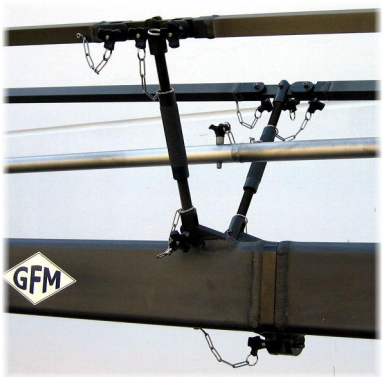
Connecting the rods together


Double Rigging System

## Top, front rigging

1. Connect 3 x 142cm / 4’ 7” rigging rods to each of the turnbuckles on the top front side of the large rigging harness. Ensure that the locking pins are inserted fully.
2. Connect a Rigging Rod Connector to each of the third Rigging Rods. In turn connect the 2 Adjustable Rigging Rod Supports to the Rigging Connections on the third 150cm / 5ft arm section and then to the Rigging Rod Connectors ensuring that the locking pins are inserted fully.

   **Note**: This positioning applies to versions 5 to 8.

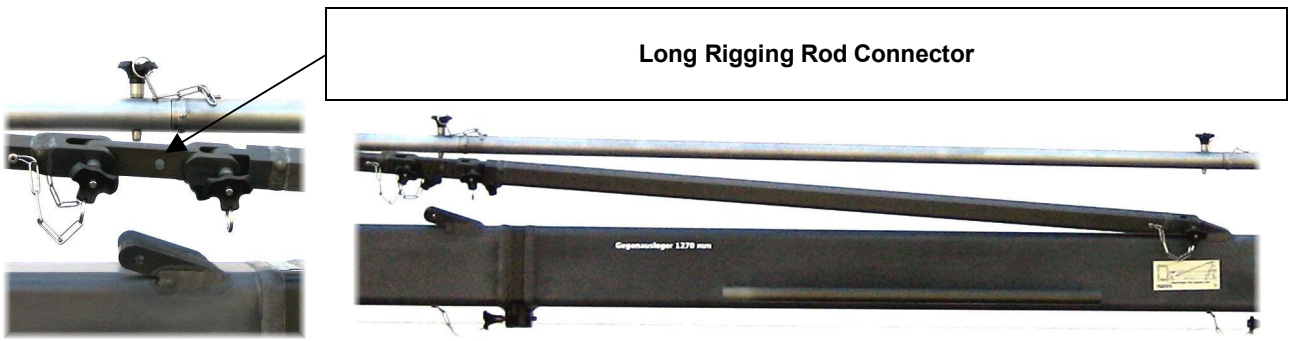


3. Connect 2 x 142cm / 4’ 7” rigging rods to the Rigging Rod Connectors and in turn connect another 2 x 142cm / 4’ 7” rigging rods to the 4th Rigging Rods. Ensure that the locking pins are inserted fully.
4. Connect a long Rigging Rod Connector to each of the last 142cm / 4’ 7” rigging rods. Ensure that the locking pins are inserted fully.
5. Connect 2 x 115cm / 3’ 9” rigging rods to the long Rigging Rod Connectors and in turn to the Rigging Rod Connections on the 127cm / 4ft arm section. Ensure that the locking pins are inserted fully.
   **Attention**: The Rigging Rod Connectors should be positioned in the respective versions as per the following instructions. Furthermore the rigging must be assembled symmetrically by using the same length rods, connectors etc in the same position on each side.

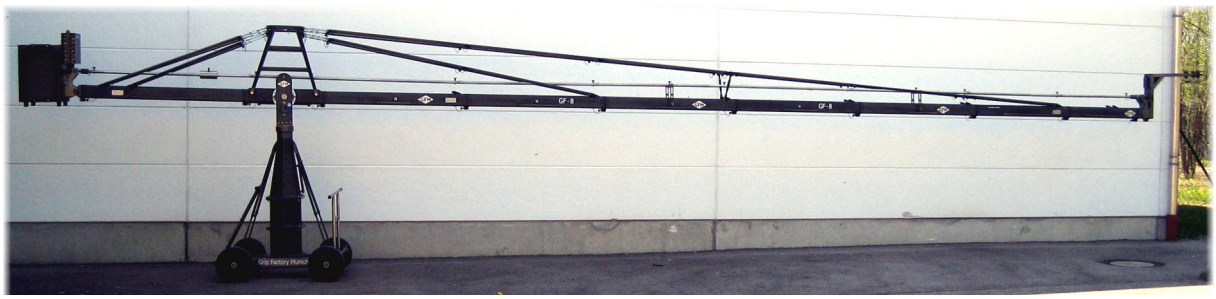
- Xten-Versions 7 and 8:
  Short Rigging Rod Connector : attach to Adjustable Rigging Rod Support and use to connect 3rd and 4th upper rigging rods.
  Long Rigging Rod Connector : use to connect 5th and 6th upper rigging rods.

- Xten-Versions 5 and 6:
  Short Rigging Rod Connector : attach to Adjustable Rigging Rod Support and use to connect 3rd and 4th upper rigging rods.
  Long Rigging Rod Connector : not required.

- Xten-Versionen 3 und 4:
  Short Rigging Rod Connector : use to connect 3rd and 4th upper rigging rods.
  Long Rigging Rod Connector : not required.

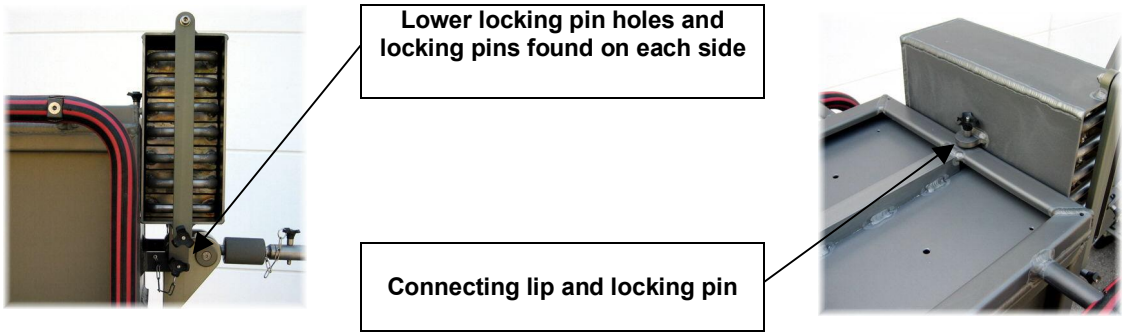



6. Hand tighten the turnbuckles until the rigging rods are taut and secure with the locking nuts. The rigging should provide the support needed to keep the arm straight. If the arm is hanging downwards then the rigging is too loose. If the arm is bent upwards then the rigging is too tight.



## Mounting the Extra, Mini Counterweight Bucket for Xten Versions

Position the weight bucket above the Angle Adjuster so that the lower locking pin holes are aligned and so that the connecting lip is positioned over the main weight bucket. Then insert the locking pins on each side of the bucket.
Insert the third locking pin through the connecting lip and into the main counterweight bucket. Ensure that the locking pins are inserted fully.




## Balancing the crane arm

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

**As a rule, no more than 504kg / 1108lbs of counterweight may be used in the main counterweight bucket and no more than 98kg / 215lbs 572lbs in the Xten mini counterweight bucket.**

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. The working payload capacities may not be exceeded. An itemized weight list for GFM accessories may be found below. Place the correct amount of counterweight in the weight bucket to balance the load. Depending on the version that has been set-up, the camera operator / operators can then take their position on the platform.

**Accessories for GF-8 Crane platform weight list**

| 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 | **Connection pin** | AL-2240 | 0,40 kg | 0,88 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 | **Ball Adapter** | AL-2150 | 2,17 kg | 4,77 lbs |

**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**

**Attention: we recommend that the camera and remote head are additionally secured to the remote head mount with a safety cord.**

Place the required amount of counterweights in the weight bucket so that the crane arm becomes balanced and remains in the horizontal 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: 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. Extreme caution must be given to the shifting payload at all times. When dismantling the crane it is essential that the whole 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.

## General Safety

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**Attention: all necessary precautions should be taken so that unauthorized third parties cannot use or operate the crane and also to ensure that only authourized personnel have access to it.**

Before operation, all locking pins, locking screws etc should be inspected to ensure that all assembly sections are securely fastened.

**Taking the crane out of service:**

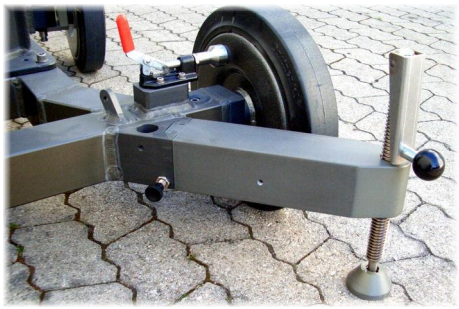
The crane should be dismantled in the reverse order to the assembly procedure

**Operational conditions:**

At a wind speed of 40km/h 25mph crane operation must be stopped and the crane secured, dismounted and the necessary safety precautions taken.

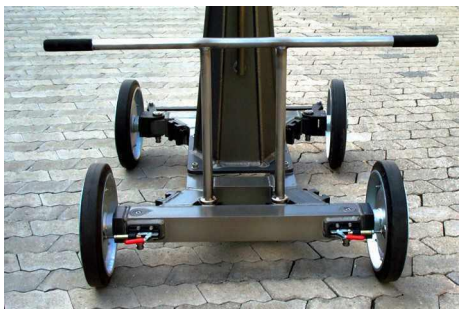
If, for example, it takes 2 mins. to unload the counterweights and take the necessary precautions to secure the crane, one must commence with the procedure at a wind speed of 27km/h / 16.8mph. DIN15019, part 1, section 6.13.
The crane may not be used in a lightening storm as there is the danger of electrocution.

# Accessories for GF- 8 crane

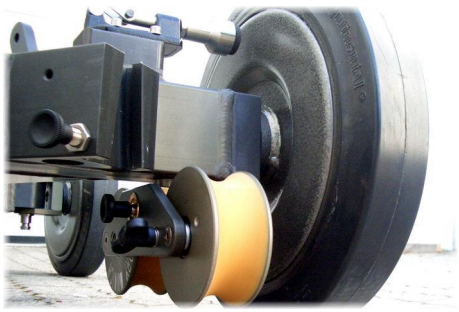


Levelling leg

Monitor carrier



Push bar



Track wheel with brake

## Mounting the accessories

### Levelling Legs:

Crank the spindle up to give enough clearance to connect the levelling arm to the dovetail connection on the base dolly. Ensure that the automatic locking pin inserts fully. When all 4 Levelling Legs are mounted the base can be levelled.

### Monitor Carrier:

Insert the monitor carrier axle through the respective holes on the pivot section and secure with the knurled locking knobs.

### Push Bar:

Can be connected to either end on the base dolly by inserting the push bar stubs into the respective holes on the base. Lock tightly with the locking knobs.

### Track Wheels:

Connect to the track wheel bolts on the underside of the base. Ensure that the automatic locking pin inserts fully. Mount the track wheels so that the track wheel brake on each of the units as well as the automatic locking pin points towards the mounting column.

### 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.

## Use with GFM Track (GF-Track)

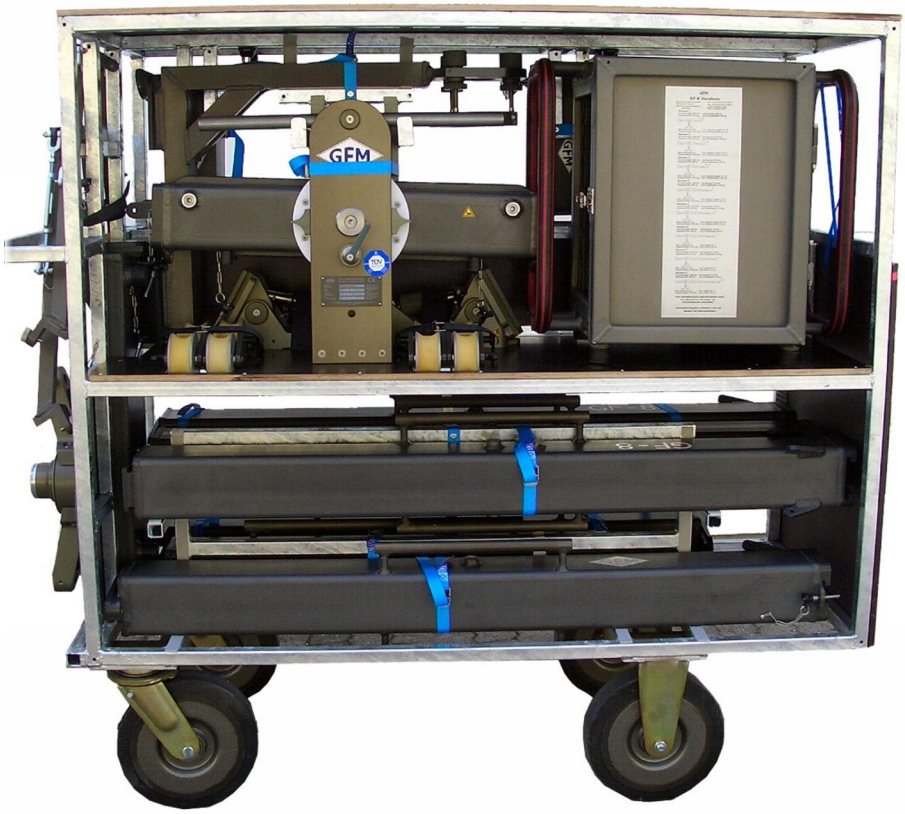
The maximum payload on standard GF-Track: $m_{zul}$ = 1200 kg / 2640lbs

- authourized GFM Cranes:
  **GF-9, GF-6, GF-8 Standard and GF-8 Xten with 4 x 2 (double) GF-Track Wheels.**
  **Track width = 620mm / 24,5 inches**

**There are a number of ways to mount the GF-8 on track:**

- The crane can be assembled on track
- By using the 4 levelling legs, the assembled and balanced crane can be cranked upwards to allow the track to be placed under the base and already mounted track wheels. The base can then be carefully lowered by cranking the 4 levelling legs simultaneously downwards.
  Note: ensure that the track wheels are parallel to the track.
- The assembled and balanced crane can be rolled onto the track by using the GFM Starter Ramp. To do so remove the levelling legs and ensure that the track wheels are aligned with the track.
  Moving the crane onto the track should be carried out by at least 3 operators. It is essential to make sure that the track underlay cannot move or shift.

# Transport trolley for the GF-8 Crane





The above photos show the practical transport solution for the GF-8 Crane System. The GFM trolley fits the complete system with dolly and column as an extra unit.

# GF-8 Crane Dollies

### The GF-8 Mini Base

Ideal for going through narrow doorways and working in very confined spaces. Track wheels are mounted by replacing the standard rubber wheels, keeping size to a minimum. Levelling legs are also available. For use with Standard GF-8 versions.

### GF-8 Base as Track or Western Dolly

The crane platform may be mounted on the base dolly to provide a track or western dolly style function. Insert the 3 bolts located on the underside of the chassis through the platform and into the turnstile mount. Lock the 3 bolts tightly with an Allen Key.

### The GF-8 Standard Base Dolly

Equipped with solid rubber wheels and with single ended, corrected steering geometry allowing a minimum circular movement of 258cm / 9' 4" inside diameter. Can roll from floor to standard 62cm /24,5“ track by just clicking on the track wheels. Levelling legs and and adapters to 100cm / 39“ track are also available.

### The GF-8 Double Ended Steering Base

offers all the features of the standard base but with double ended steering. Each end functions independently with a dedicated steering rod for each operator. Can roll from floor to standard 62cm /24,5“ track by just clicking on the track wheels. Levelling legs and and adapters to 100cm / 39“ track are also available.

**Attention: The assembly or operation of the crane with pneumatic wheels only is not allowed. The only exception is when the levelling legs are mounted and the base is levelled and supported by them. In general the pneumatic wheels are only for transportation.**

## The GF-8 Double Ended Connected Steering Base

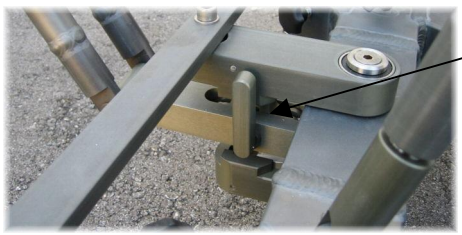
Offers all the features of the standard base but with GFM's connected steering system. The 3 steering functions are controlled from the rear of the dolly by simply flicking a lever. You can roll from floor to standard 62cm /24,5" track by just clicking on the track wheels. Levelling legs and and adapters to 100cm / 39" track are also available. Provides the utmost in manouverabilty.

- **Front 2 wheel:** operated from the rear of the dolly. In this mode the front wheels are steered allowing a minimum circular movement of 258cm / 9' 4" inside diameter.
- **4 wheel inverted:** all 4 wheels can be turned together giving a "roundy round" steering effect
- **Rear 2 wheel:** in this mode the rear wheels are steered from the rear of the dolly.

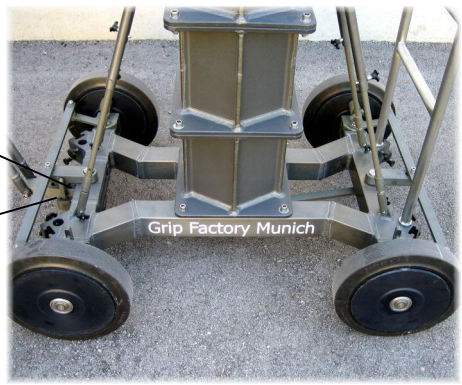
To change steering mode please observe the following guidlines.

- Before switching, all wheels must be aligned
- To position the swicht lever in the required position first release the safety knob (see next page), found on the opposite side. After switching, reinsert the saftey knob, (Steering position secured).

Safety knob



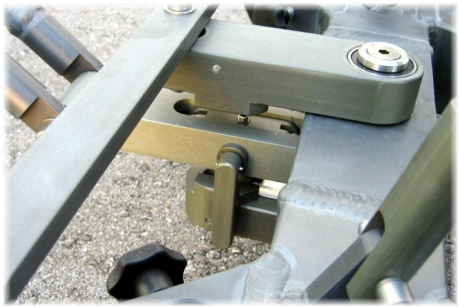
Switch lever (here in the upward position)



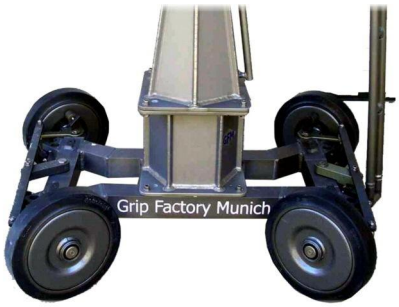

Dolly Double Ended Connected Steering

**Steering mode 1: 2 wheel front steering** – rear wheels fixed

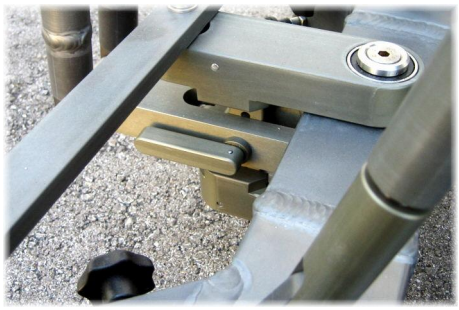
Front wheel steering


Switch lever (here in the downward position)

**Steering mode 2: 4 wheel steering** – all 4 wheels can be turned together giving a "roundy round" steering effect for narrow curves.

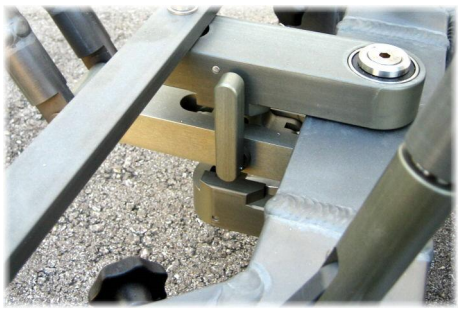


4 wheel steering


Switch lever (here in middle position)

**Steering mode 3: 2 wheel rear steering** – front wheels fixed

Rear wheel steering


Switch lever (here in downwards position)