

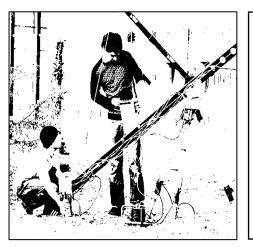


## CRANE 100 TECHNICAL USER GUIDE

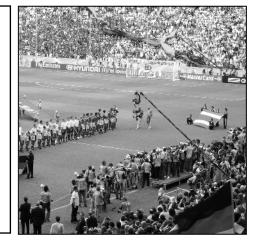
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## **MovieTech**

GRIP EQUIPMENT YOU CAN RELY ON!

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## **1. Introduction**

We are very glad that you decided to work with our MovieTech / ABC Crane 100 System.

The Light Crane 100 is the all-rounder under the ABC product range of light cranes. It is manufactured from high-quality materials, yet light and convinces through quick and easy assembly and dismantling. The modular system allows for effortless modification of the crane length. Used in conjunction with the ABC- Remote head, this crane enables the operator to achieve smooth and steady shots both in the studio and on location

We hope you enjoy it as much as we do !

Everyone at MovieTech is passionate about grip equipment. In case you have useful feedback for us or you have a question concerning our products, please do not hesitate a second to contact us – we re gladly there for you!

To make your experience with this crane most enjoyable, please follow these instructions carefully. Any camera crane is only as safe as the person operating it.

These are our contact details:

MovieTech AG Martin-Kollar-Str. 9 80801 Munich – Germany +49 (0) 89 /436 891 3 | info@movietech.de

All the best, Your MovieTech Team.



## 2. General Information

## 1) Intended use:

The Crane 100 is a mobile camera crane system which shall only be used to carry cameras remote heads for use in motion picture productions in a stationary position (on a tripod or base dolly) or on tracks (with track wheels). The crane system may not be used for any purpose other than that specified.

The Crane 100 System is a product family that can be set up in various different assembly versions. This user manual describes the most common configurations. Configurations that are not described in this user manual require prior configuration of the MovieTech technical department. Components of other Camera Crane Types may not be combined with any component of the Crane 100 System family.

Please carefully read and understand the following safety instructions and set up manual before use of the equipment! Operating the crane system can be dangerous when the safety instructions as follows are not strictly taken care of. The Crane may only be set-up by trained and skilled staff and in accordance to the instructions as follows.

Product:	MovieTech Crane 100					
Manufacturer:	MovieTech AG Martin-Kollar-Str. 9 D- 80801 München +49 (0) 89 /436 891 3					
Payload:	Depending on version (see following pages)					
Material:	Aluminum (mainly), stainless steel, synthetic materials					
Surface treatment:	Powder coating, anodization					
Year of construction:						
Version:						
Serial no.:						
Purchaser:	Company:					
	Address:					
	Contact details:					
	Contact person:					

## 2) Product details

## 3) Warranty

All parts have a warranty period of 12 months, beginning on the date of delivery.

**Caution:** Any warranty expires if operating and maintenance instructions are not strictly followed. The same applies if any changes are made to the product, if parts of the equipment are replaced with external parts, or if the equipment is handled improperly.

The purchaser undertakes to exempt us from any claims for compensation which might arise on the part of third parties vis-à-vis us, whether resulting from putting into service or from using the equipment. The purchaser must inform our customer service management in writing about any discernible defects without delay – at the latest, however, within one week after receipt of the delivered item. Defects which do not become discernible within this period, even after careful examinations, must be reported to MovieTech by the purchaser in writing immediately after discovery. In the event that the purchaser should report that the products do not correspond to the warranty, we may require at our discretion that either

- the defective equipment or the defective part is to be sent to MovieTech for repair and subsequent return, or
- the purchaser keeps the defective equipment or the defective part available, and we shall commission an expert who will be sent to carry out the repair.

Transport cost and travelling expenses incurred for the purpose of remedying defects shall be borne by the purchaser. Defects which occur to the equipment as a result of natural wear and tear are not covered by the warranty. When asserting claims under warranty, it is the duty of the purchaser to prove that the defects were not caused by any circumstance which are among the risks within his sphere of responsibility (such as transport damage, improper operation, etc.). Any further claims in particular claims for damages for direct or indirect damage are excluded. If after an appropriate time it is not possible to remedy the defect, the purchaser may at his discretion demand a reduction of the payment or cancellation of the contract. Only the direct purchaser shall be entitled to make warrantly claims against MovieTech; such claims are not assignable.



### 3. EU – Declaration of conformity



## 4. Safety Guidelines



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- Training for a safe operation of the system is offered by Movie Tech. Contact us +49 (0) 89 436 89 1 3
- Two people are required to set up the crane. Personnel must wear safety shoes, since the counterweights can present a particular danger if they fall.
- Minimum Age to operate the crane system is 18 years.
- You must read and understand the instruction manual before using the crane. The instruction manual must always be available to the operator at the point of use.
- The crane may only be operated when balanced horizontally an all directions. Levelling legs or a level track are used for alignment. A bubble level is used to check the balance. A commercially available bubble level can also be used.
- The crane can only be operated on levelling legs or with guide wheels. The mounted pneumatic tyres are used to transport the crane to the point of use only. The pneumatic tyres can be used to move the erected crane without payload and without the corresponding counterweight.
- Make sure that the ground can bear the weight of the crane before setting it up (at least 1000 kg/m2). The surface load is a result of the crane's own weight in the required version plus counterweight and payload divided by the footprint or contact area. On this basis, the total surface load is approx. 1.5 m<sup>2</sup> (load-bearing capacity of ceilings in buildings). For the load under an individual levelling leg, particularly important in an open area, a third of the total weight of the version used is to be taken into account. It may be necessary to increase the area under the levelling legs using wooden plates or similar (grass, meadow, beach).
- Do not set up or operate the crane while under the influence of drugs, alcohol or other medicines and narcotics.
- Never operate the crane in the immediate vicinity of high-voltage lines danger to life.
- The crane must be shut down in sufficient time before the maximum permitted operating wind of 25 km/h or 6,9 m/s (15.5mph) is reached.
- Particular care is required when operating the crane in unfavourable weather conditions. The crane must be shut down in sufficient time when a thunderstorm is threatening. When in doubt, the crane should be secured and the area evacuated. Pathways and operating elements should be kept free of ice if there is a risk of ice forming.

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- All elements of the crane must be within the field of vision of the operating personnel when in use. Visual obstructions can include window blinds, fog or darkness. The crane can only be moved by line of sight.
- Any movements to be carried out with the crane must be adequately rehearsed. Pay
  particular attention to keeping the area of movement in front of and behind the crane
  free of obstacles. Quick movements and/or panning must be rehearsed starting at low
  speeds. Make sure that the stability of the crane is not negatively affected by the
  dynamics of the quicker movement under increasing speed. Pay attention to critical
  situations that may arise when lifting a levelling leg or guide wheel.
- EXTREME CAUTION: These safety measures are especially important when moving the crane on curved tracks! The maximum speed in the circle (Master Track, diameter approx. 6 m) is 6.5 km/h | 4 mph (slow walking pace), which corresponds to 35°/sec. or three crossties per second. Caution risk of tipping!



- All materials and equipment used must be securely attached to the platform or remote crossbeam to prevent any drops.
- Platform crew must immediately buckle up upon mounting the platform and should only dismount after consulting with operating personnel. Caution risk of tipping!
- Prevent the unauthorised use of the erected crane system.
- It is not allowed to exceed the maximum payload of the respective version and the corresponding maximum counterweight.
- Do not operate the crane on vehicles of any type uncontrollable movements can be dangerous. (communication between driver <=> operating personnel, uneven surface, etc.)
- Standing under overhead loads until release by operating personnel is prohibited. Keep the danger zone cordoned off until release and mark as a danger zone if necessary. People within the pivoting range of the crane must be specially instructed and informed about the dangers. The operator must anticipate that such individuals may suddenly find themselves within pivoting range of the crane and therefore, must maintain a safe distance to the crane to ensure sufficient reaction time.
- Should you need to route cable along the crane arm to the remote head or camera, the cable should not negatively impact the movements of the crane in any way. It should also be noted that the weight of the cable counts towards the overall payload.
- The crane system and its individual components should be clean and dry when stored. Any accumulated dirt can negatively impact proper function when the crane is operated next.
- When transporting the crane system, make sure that the components do not rub together and cause any material wear. Severe damage to the surface coating can lead to increased corrosion. Also make sure when transporting the individual components that they do not hit against each other to avoid bending or denting them. Any bends or dents can weaken the structure and make the system unusable.

- Crane components that have become unusable must be professionally disposed of. Movie Tech AG can properly dispose of such components for you by sending them back to us.
- Warranty: 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.
- To avoid accidents due to misuse, Accident Prevention Guidelines especially DGUV regulation 1 (previously BGV A1), and DGUV regulation 3 (previously BGV A3) as well as VDE regulations (especially VDE 0105 section 100) must be adhered to. If the nominal voltage cannot be determined, a minimum clearance of 5m / 16ft must be kept at all times.
- The load capacities stated contain all elements that are being attached.
- Mark the crane's working area (e.g. with flags of safety band) in order to keep all persons away from working rage at any time.
- Important note: All equipment mounted to the crane may only be adjusted or dismantled with the clear consent of the crane operator, as this may interfere with the balance of the system as a whole. Counterweight must be taken out of the crane and the outrigger needs to be secured before camera or any weight is taken off of the crane.
- Never operate with a damaged crane. Immediately stop operating the crane system when a damage occurs.
- Only use original MovieTech parts or parts authorized by MovieTech.
- What to do when damages occur or an accident happened:

Please immediately inform MovieTech about how the accident took place, how severe it was and about any kind of damage to the crane. Damaged parts should be sent back to the MovieTech factory for evaluation, repair and replacement. Operating the crane with damaged parts is not allowed – MovieTech takes no liability for damages or injuries due to the use of damaged parts. Please follow the locally applicable accident prevention guidelines!

Please be aware of possible dangers at all times and work with caution and responsibility. **STAY SAFE !!** 





## 5. How to set it up

## 1) Set-Up: step by step









2. Montage der Kranstütze/ Assembling of column on the stand



3. Sternschraube mit Beilagscheibe sicher befestigen / Fix screw with shim



4. Sternschraube sicher anziehe/ Fix screw securely



5. Eingebaute Wasserwaage / Spirit level integrated



6. Stativ ausrichten – O Punkt/ Spirit level 0 point



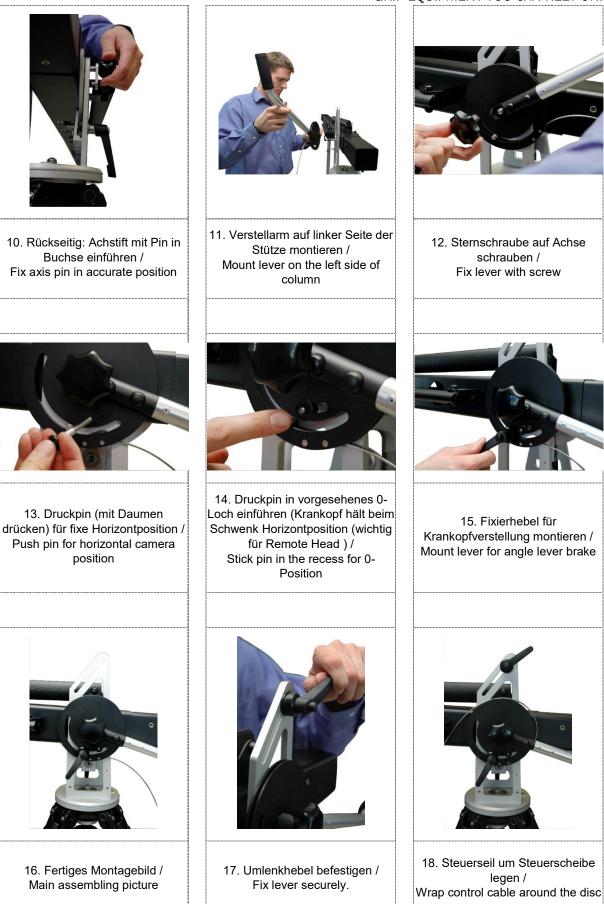
7. Kranbremse mit Abstand montieren/ Brake callipers with space for mounting of basic segment





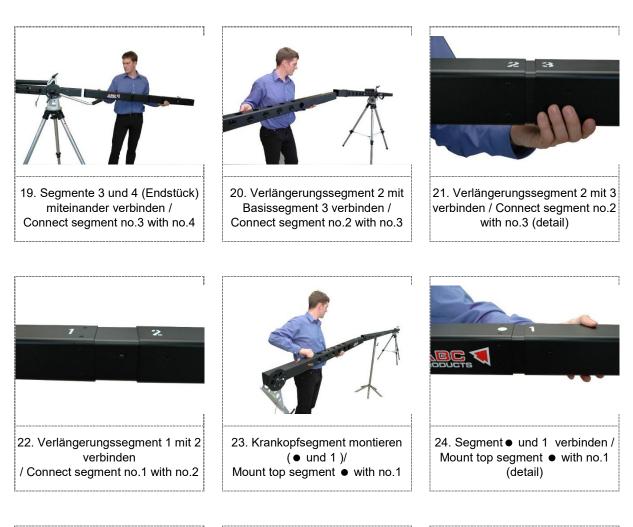
9. Achsstift einführen / Mount axis





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25. Verlängerung des Turmrohrs aufstecken (Aufbauversion 8) / Mount extension of tower tube

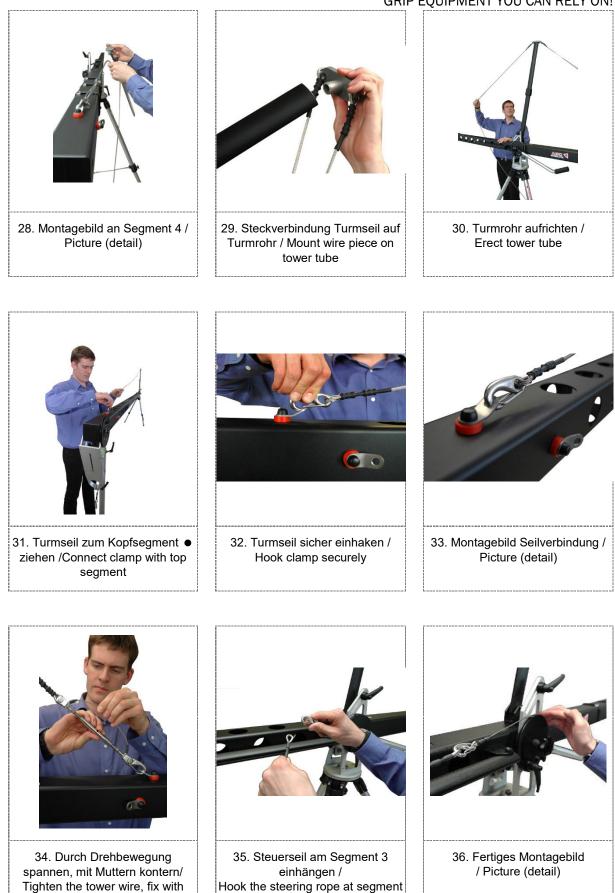


26. Elemente auf Anschlag miteinander verbinden / Connect the parts to stop position



27. Turmseil mit Haken an Endsegment 4 einhängen/ Hook tower cable at the segment 4

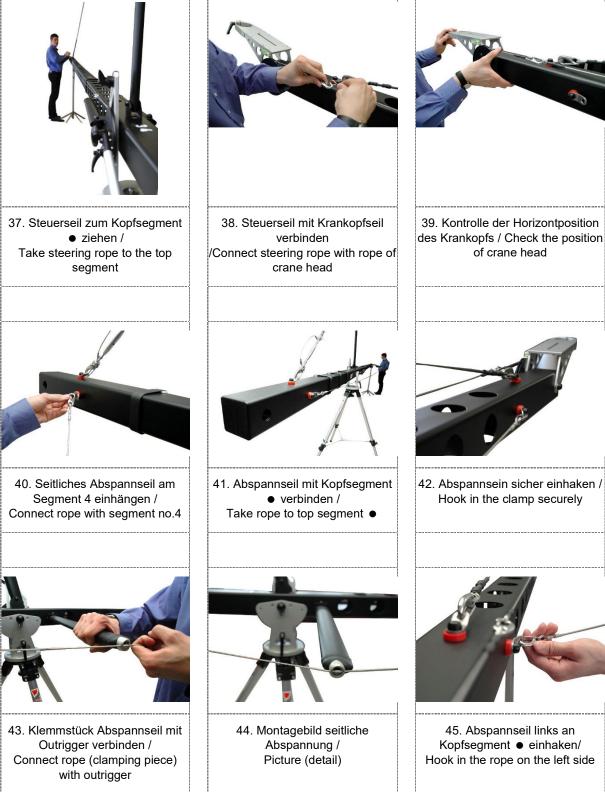




no.3 securely

screw nut









46. Seil am Endsegment 4 einhaken/ Hook in the rope on the end segment no.4



47. Klemmstück Seil mit Outrigger verbinden / Mount rope (clamping piece) with outrigger



48. Spannschloss schließen / Close rod strainer of end segment no.4



49. Remote Head (Alex;V5) bündig montieren mit Seilsicherung sichern/ Kameramontage auf Krankopf mit Grundplatte oder direkt mit mitgelieferten Befestigungsschrauben sicher montieren
/ Connecting of Remote Head (Alex;V5)



50. Mit Nivelierungsvorrichtung ausgleichen / Leveling process



51. Alle Segmente sicher mit beiliegenden Schrauben (3 Stck. je Segment) verbinden / Fix all segments with screws (3 pcs. per segment)



52. Gewichtsträgerrohr mit Segment 4 verbinden / Connect counterweight tube with segment 4



53. Gewichte aufladen. "Kran in die Waage bringen" / Load up the counterweights for taring the crane, secure weights on tubes with securing clips



54. Für Aufbauversion "Mittel" und "Kurz" Turmrohr in Grundlänge verwenden / For assembling the crane in "middle" and "short" version use short tower tube







## 6. Technical Description

## **1)** Gerneral Information

**Note:** Any camera crane is only as safe as the person operating it! Follow these instructions carefully to ensure a safe and enjoyable experience with the MovieTech Crane100

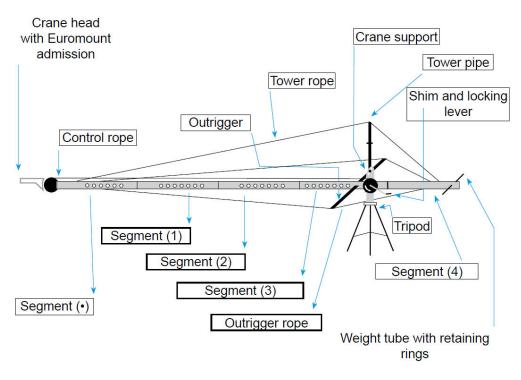


Illustration: 8 meter version

## 2) LOAD:

The Light Crane 100 is a lightweight construction made of a special squared tube. Despite a total weight of approximately 66.14 lb / [30 kg] (without tripod) it can hold cameras as heavy as 44.09 lb / [20 kg] **Please note that the maximum load capacity decreases with an increase in crane length.** 

Crane 100-8.11 Weight: 30 kg / [66.14 lb] Max. load capacity: 20 kg [44.09 lb]

## 3) TRIPOD:

The tripod must be placed on a hard and level surface (use of a water level is recommended) to prevent the crane from tipping over. Soft surfaces have to be prepared in a manner that neither of the tripod legs can sink in.

The tripod legs have to be spread to the fullest extent and the screw on the middle tube must always be securely tightened. If you wish to extend the tripod legs to reach greater height, always firmly tighten the height fixations on each leg and use the provided lockaxis pins for additional safety.

- Tripod 132X modified 8321-01

## 4) Counterweights:

Required for a maximum camera weight of 20 kg (44.09 lb) /

- total weight 105 kg (231.48 lb)

Recommended splitting of counterweights "Version Large 8m"

- 6 x 16 kg (25.27 lb)
- 1 x 8 kg (17.63 lb)
- 1 x 4 kg (8.81 lb)

## 5) Remote Head:

Item No. 8416-01

Remote Head Alex "Analog" (digital version available on request!) Please note camera weight! Net weight: 5.8 kg / 12.78 lb

Item No. 8417-0 Remote Head V5 (see Remote Heads). Please note maximum camera weight 5kg / 11.02 lb

## 6) Dollies:

Item No. 7510-0SET Standard Basis Dolly CD 5 for Crane 100 with extension Item No. 7530-0SET Broad basis Dolly CD 6 for Crane 100 with extension

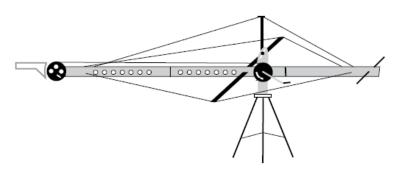
Dollies are expandable with optional accessory for camera dolly on tracks!



## 7) Version "S" 5,01m [16.44ft]

Front crane arm length: 11.02 ft / [3,36 m] Back crane arm length: 5.41 ft / [1,65 m]

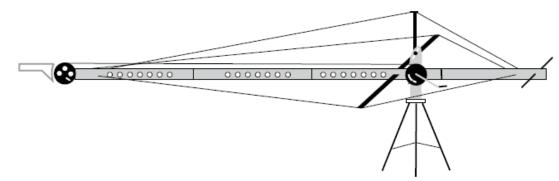
#### Tower pipe half-length



### 8) Version "M" 6,56m [21.52ft]

Front crane arm length: 11.02 ft / [3,36 m] Back crane arm length: 5.41 ft / [1,65 m]

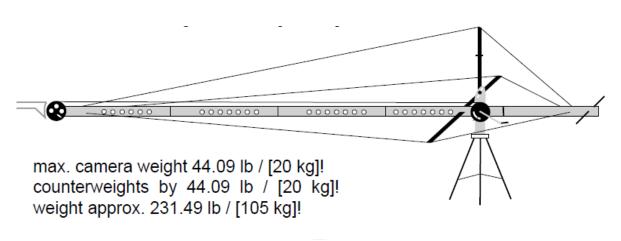
#### Tower pipe half-length



### 9) Version "L" 6,56m [21.52ft]

Front crane arm length: 21.19 ft / [6,46 m] Back crane arm length: 5.41 ft / [1,65 m]

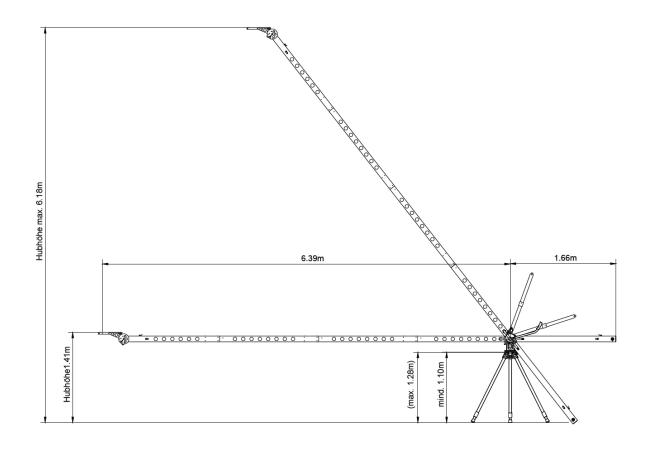
Tower pipe full-length 2 parts





## **10)** Crane length overview

	Max camera weight	Front crane arm	Back crane arm	Total length
Version L	44.09lb / 20kg	20.96ft / 6,39m	5.45ft / 1,66m	26.41ft / 8,05m
Version M	44.09lb / 20kg	16.11ft / 4,91m	5.45ft / 1,66m	21.19ft / 6,46m
Version S	44.09lb / 20kg	11.02ft / 3,36m	5.45ft / 1,66m	16.10ft / 4,91m





## **11)** Package includes:

- 1 Crane-head segment
- 1 End segment
- 2 Extension segments
- 1 Main segment with foldable outrigger and two-piece tower-tube
- 1 Weight tube / safety rings
- 1 Crane prop
- 1 Clamp unit (brake) with clamp lever
- 1 Hand-adjustment lever (control rig crane head angle)
- 2 integrated water-levels
- 1 Star screw M12 for crane prop
- 1 Crane-head with Euro mount connection for Remote Head
- 1 Rig Set 3 control rigs for crane angle setup
- 1 Rig Set 3 outrigger rigs (lateral bracing)
- 1 Rig Set 3 tower rigs (carrying brace) for versions
- 5.01 m (16.44 ft) / 6.56 m (21.52 ft) / 8.11 m (26.61 ft)
- 1 Screw Set M6 segment screws 15 pcs. + 3 spare screws
- 1 Manual



## 7. Special Version "Crane 100 KIT"



The "Crane 100 KIT" is a special version of the standard Crane 100.

It is featured with:

- Big crane head with Euro-clamp (design Crane 120)
- Big counter weight holder (design Crane 120)
- Tare-weight rod with tare weight for fine adjustment.

This version is particularly suitable for working with larger remote heads.

The trim-cable with lever is without function in this version.



## 8. Recurrent inspection

Ref. safety-related and und maschine-related equipment on stages and in studios. Certification of recurrent inspection according to "§34 UVV Veranstaltungs- und Produktionsstätten für szenische Darstellung (VBG 70)."

Product:	MovieTech – Crane 100							
The following inspections have been performed:								
Date:	Description of maintenance:	Name:						
Date:	Description of maintenance:	Name:						
Date:	Description of maintenance:	Name:						
Date:	Description of maintenance:	Name:						
Date:	Description of maintenance:	Name:						



# **DEKRA**

### Test Sheet Movie Tech AG

onfirmation of expertise for installation, inspection and maintenance of specific	c camera cranes in
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xaminers:	
ate:	
lanufacturer/ Type:	
erial number:	
ustomer name/ Owner:	

	Tested	Defects		Others
		Yes	No	
Visual inspection				
Mechanical connections				
Deformation of parts, in particular segments				
Damage to parts, especially segments				
(dents/cracks)				
Thread of segments				
Rope and crimp connections				
Turnbuckles and hooks				
Axles				
Crane head with clamp/strap				
Crane centre part with threaded pin and brakes				
Counterweight unit with weight bars				
Struts/ Outrigger				
Completeness of all parts				
Structure and functional test				
Plug connection and segments				
Folding function Outtrigger				
Screw connections Segments				
Swivel bearing / Smoothness / Noises				
Brakes (horizontal and vertical)				
Clamping crane head 80mm/ Mitchell				
Function test with payload				

r unodon dott man payload					
Max. Payload max. counterweight with function					
test					



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Max. Payload max. counterweight with function		
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		Yes	No	
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Completeness of all parts				
Structure and functional test				

Plug connection and segments		
Folding function Outtrigger		
Screw connections Segments		
Swivel bearing / Smoothness / Noises		
Brakes (horizontal and vertical)		
Clamping crane head 80mm/ Mitchell		

# Function test with payload Max. Payload max. counterweight with function test





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		Yes	No	
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Mechanical connections				
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Damage to parts, especially segments				
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Completeness of all parts				
Structure and functional test				

Suructure and functional test		
Plug connection and segments		
Folding function Outtrigger		
Screw connections Segments		
Swivel bearing / Smoothness / Noises		
Brakes (horizontal and vertical)		
Clamping crane head 80mm/ Mitchell		

# Function test with payload Max. Payload max. counterweight with function test



**MovieTech** 

## The MovieTech family





Everyone at MovieTech is passionate about grip equipment.

Our brand stands for high quality and reliable grip equipment – since 1993.

In order to meet the high demands of our customers and to fulfill our motto

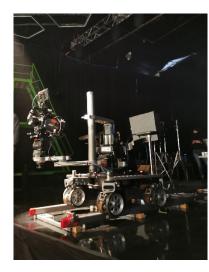
"Grip-Equipment you can rely on", we produce all our MovieTech products with passion and care in our factory in Munich.

Always with the aim of developing user-friendly, versatile, robust and reliable camera support systems that users will love.

## **MovieTech**







www.movietech.de



www.abc-products.de

www.mts-germany.de

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