

4x4 Dolly



4x4 Dolly Operating Instructions

English Version

4x4 Dolly

CE			Issue Date: 2016/10

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1. Information about the equipment

1.1 Scope of supply

1.	4x4 Dolly platform
2.	4x Wheels
3.	1x Pan bar
4.	1x Steering rod
5.	1 x Operating instructions
6.	
7.	
8.	
9.	
10.	
11.	
12.	

Packed on (Date):

Signature:

1.2 Responsibilities of the Manufacturer / EC Declaration of Conformity

EC Declaration of Conformity in accordance with the Machinery Directive 2006/42/EG Appendix II 1.A

The manufacturer / distribution company

MovieTech AG
Martin-Kollar-Str. 9
D-81829 München

Herewith declares that the following product

Product Designation: 4x4 Dolly
Brand: MovieTech
Serial Number:
Type Designation: Dolly product
Description: The 4x4 Dolly is a product developed for the photography and film industries to enable sliding camera moves.

Meets all relevant provisions of the above directive as well as other directives applied (see below) - including valid changes at the time of this declaration.

The following harmonized standards have been applied:

EN ISO 12100-1:2003 Safety of Machinery - Basic Concepts, General Principles for Design - Part 1: Basic Terminology, Methodology (ISO 12100-1:2003)

EN ISO 12100-2:2003 Safety of Machinery - Basic Concepts, General Principles for Design - Part 2: Technical Principles (ISO 12100-2:2003)

EN ISO 14121-1:2007 Safety of Machinery – Risk Assessment - Part 1: Principles (ISO 14121-1:2007)

Name and address of the person authorized to compile the technical documentation:

Mr. F. Strassmann

Location: Munich

Date: 20.10.2016

1.3 Responsibilities of the operator

Rules for overhauling

Overhauling of the 4x4 dolly is allowed only by MovieTech AG or authorized contracting partner.

Disposal

The 4x4 Dolly may not be disposed of in household waste. It must be disposed of at a collection point (please obtain information from your local community) or by your dealer / manufacturer.

This ensures environmentally friendly disposal.

Care

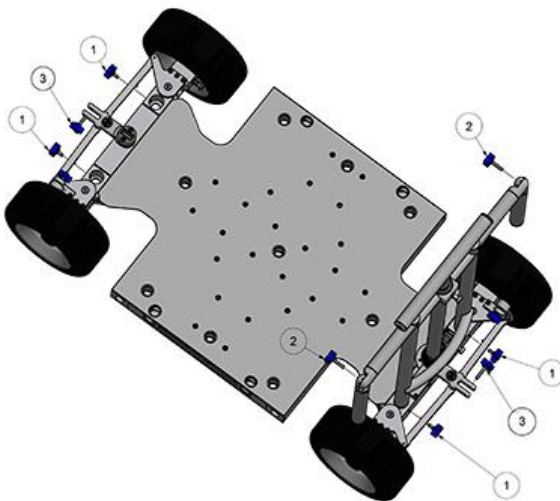
It is recommended to clean the 4x4 Dolly with a damp, clean cloth if it is dirty. Avoid caustic or aggressive cleaning additives. Regular cleaning of the track profile (side and bottom) as well as the track rollers is necessary for optimum smooth running.

1.4 Exploded drawing with numbering

NOTE

Please use the part numbers given when ordering spare parts!

4x4 Dolly



1.5 External Interfaces

The 4x4 Dolly is self-contained.

1.6 Legal information

The limit values specified by the manufacturer must be absolutely complied with. Any exceeding is to be avoided in all circumstances.

In the event of accidents because of negligent or improper use, the manufacturer can not be held responsible for any damage or injuries whatsoever. It is imperative that the sequence of assembly and disassembly specified in the operating instructions is followed.

For the maintenance of the product, original spare parts are to be used exclusively.

Accessories from other manufacturers may not restrict either the application or safe use of the 4x4 Dolly!

The people entrusted with the use of the 4x4 Dolly must have read and understood the original operating instructions of the manufacturer. The manufacturer should be contacted for questions concerning safe use. The contact person can be found in these operating instructions or on the website under www.movietech.de.

Useful life of the equipment:

The useful life is limited by component wear and component fatigue. The use life is therefore dependant upon the frequency of use and the environmental conditions to which the 4x4 Dolly is subjected.

2. Operating Instructions

We thank you for choosing the 4x4 Dolly and placing your trust in us.
We wish you lots of pleasure and success with your new MovieTech 4x4 Dolly!

Your 4x4 Dolly has the following key features:

- 2- and 4-wheel extensions
- platform with several mounting positions for turnstile and fastening bolts
- adaptable for an addition platform
- adaptable for track wheels
- adaptable for levelling legs

Please read the operating instructions through carefully before you use your new equipment for the first time. It contains everything you need to know for its use in order to avoid injuries to people or damage to property.



Please read carefully all safety advices in these operating instructions.

Please keep these operating instructions safely. Hand these operating instructions over to the new owner if you sell the equipment or otherwise dispose of it.








Please inform further users of the necessity of reading and understanding the operation instructions before the first use.

2.1 How to correctly understand the operating instructions

2.1.1 Signs on the equipment

	<p>CE Mark:</p> <p>This sign means that your equipment meets the safety requirements of the applicable EU directives</p>
	<p>Rubbish Bin:</p> <p>This sign means that the equipment may only be disposed of at a local waste disposal centre</p>

2.1.2 Signs in these operating instructions

Sign	Meaning
	Makes you aware of the use and effect of safety information.
 WARNING	Makes you aware of a dangerous situations which could lead to serious injury or death if it is not avoided.
 ATTENTION	Makes you aware of a dangerous situation which could lead to slight or medium injuries if it is not avoided.
NOTE	Makes you aware of possible property damage and other important information in connection with your equipment.
 Foot protection	Safety shoes: Mandatory sign in accordance with ANSI (in accordance with Z 535.3 - 2007) Meaning: Foot protection
 Fall down / drop	Falling objects / downward movement Warning sign in accordance with ANSI (in accordance with Z 535.3 - 2007) Meaning: Falling objects / downward movement – Danger to the feet
  Crush Hazard bruise / crush	Crush Hazard: Warning sign in accordance with ANSI (in accordance with Z 535.3 - 2007) Meaning: Crush hazard – Danger to the hands

3. Safety Information

3.1 Manufacturer's General Safety Advice

- Only qualified people must be given the job of assembly, disassembly and operation of dollies. Authorization must be given in writing.
- Be aware of possible pinch points when assembling and disassembling, and during operation (please see the chapter "Assembly" and special warning notices for each phase of operation). Warning signs on the product and in the operating instructions must be observed!
- Safety gloves should be worn to avoid injury during assembly and disassembly.
- Electrical equipment such as, monitors, must always be protected against moisture and dampness.

3.2 General Safety Advice for Use

- Please observe the advice for the use of a maximum camera weight of 350 kg, warnings on the equipment, special advice on stability and safe use.
- Do not leave the assembled Scooter Dolly unattended. Secure it against unauthorized use.
- Due to the danger of a lightening strike, cease operating in the event of an approaching thunderstorm.
- The 4x4 Dolly may be used in ambient temperatures from -30 to +50°C.
- The 4x4 Dolly is suitable for studio and limited outdoor use. Sandy, dusty, salty and wet environments should be avoided as location sites.
- The slamming of the dolly, especially the wheels against objects and obstacles with sharp edges should be avoided because of the possible damage to the materials. Damaged wheels and other safety relevant components must be replaced and can be obtained from the manufacturer.

3.3 General Safety Advice for Inspection

- Safety must be checked through visual and functional checks before every use (in accordance with DIN15999)
- Especially the following criteria should be considered
 - unusual noise or movement,
 - deformation (for example, bending, twisting),
 - damage (for example, cracks, corrosion),
 - missing parts (for example safety split pins, fasteners)
 - un-round movement of the wheels (for example through standing for a long time or contamination of the running surface)
 - grinding of the brakes (for example contamination of the braking surface, locked brakes when moving the dolly)
- In the event of any changes in shape or damage, the manufacturer must be contacted!
- Please note all other safety advice in the following chapters!

3.4 Correct and Proper Use of the 4x4 Dolly

The 4x4 Dolly may only be used in accordance with its “**Correct and Proper Use**”. The 4x4 Dolly is intended for horizontal camera travel. The weight of a tilting or swivel head or similar or an alternative camera fixing must also be considered.

Attention!

The dolly must always be evenly loaded! Unbalanced loading impairs smooth running. When using side or similar adapters, for example, a counter weight must be used for balance.

The dolly must be used on the specially designed track profile (MasterTrack Profile from MovieTech in the width defined by the special track adapters: 62cm).

3.5 Requirements Placed on Personnel

The operator of the dolly should be able to control the camera picture as well as the operating radius of the 4x4 Dolly. The use of the 4x4 Dolly must always be considered with respect to the relevant safety aspects. The responsibility for safe use lies with the user. Distances between camera and objects must always be correctly judged with respect to safety to avoid accidents and injuries. Responsible handling of the product in the respective environment is required. The user must have noticed and have understood the safety related aspects of the operation through the operating instructions.

General Safety at Work Advice:

In operating the 4x4 Dolly, the danger of the head colliding with a performer arises.



**Walking on
this surface
is forbidden**

Access to the inside of the action radius of the 4x4 Dolly is only allowed for the operator!

The presence of people beneath the travel tracks is not allowed out of safety reasons!

3.6 Safety Related Environment Conditions

The 4x4 Dolly is suitable for use in the following environmental conditions:

Studio and limited outdoor operation.

Sandy, dusty, salty and wet environments should be avoided as location sites!

Environments with heavy rain, snowfall and strong or squally winds must be avoided!

The base must be flat and of a stable composition suitable for the total weight of the Dolly.

Avoid the setting up of the 4x4 Dolly on snow, sand and boggy ground.

3.7 Possible Misuse

The following uses of the 4x4 Dolly are not allowed and **must be avoided**:

- The use of accessories with a total weight of over 350 kg
- The use of the dolly on the track **without** end stops!
- **The use of the dolly on dirty track profiles!**

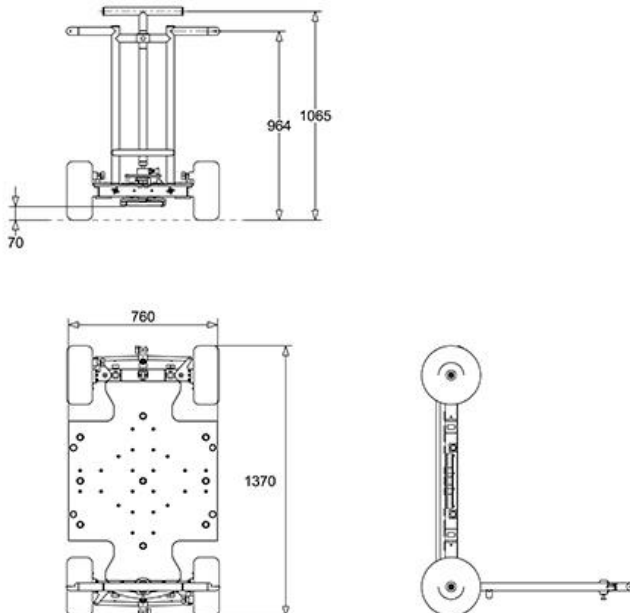
3.8 Other Risks and Protective Measures

Transport / Storage:

- When transporting the 4x4 Dolly, it must be ensured that no point loads are put on any of the individual parts.
- The dolly must be stored in a dry room.
- The dolly must not be stored in direct sunlight.

4. Technical Information

Packed dimensions case:	1370 x 760 mm
Weight:	43,6kg / 47,8kg (with extension platform)
Height: (platform/steering rod)	1065 mm / Max. Payload: 350kg



Materials Used:

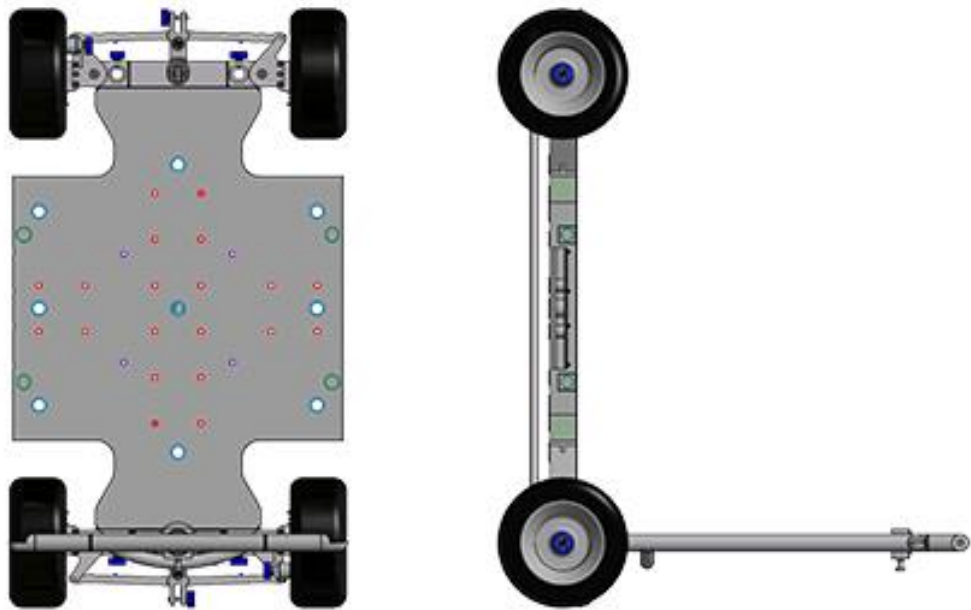
Dolly platform: Aluminium, stainless steel

Screws and small parts: Stainless steel – aluminium – rubber compounds

Mounting positions for turnstile on the platform (red markings): 7x

Mounting positions for clamping bolts (N200-1000): 9x

Adaptable for levelling legs: 4x

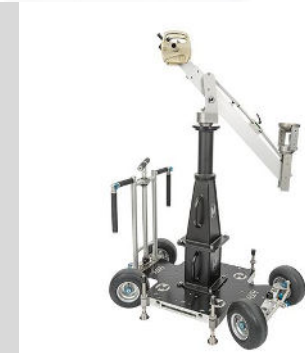


5. Assembly and Operation

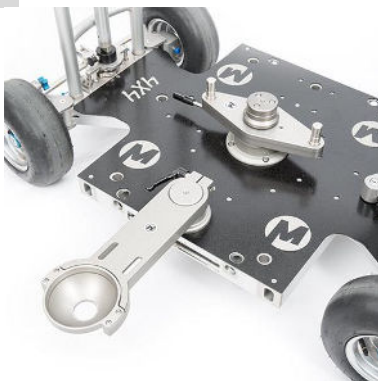
5.1 Main Components



Dolly with platform, wheels,
pan bar, steering rod,
parking brake



Example: Dolly with the 3-piece crane
column, levelling legs and Mini Jib.



Example: Dolly with turnstile mount,
Euromount with off-set ball adapter



Example: Dolly with levelling legs

1 x Case with inlay

Subject to technical changes, articles may be different to the picture

5.2 Optional Accessories



Item No. 2960-01 SET 4x4 Dolly Track wheels set (curve)



Item No. 2912-1000
Turnstile mount for 4x4 Dolly



Item No. 2912-500
Track wheels "Skate wheels" (4 pcs) incl. transport case



Item No. 7531-0SET
Levelling legs set (4 pcs)



Item No. 2912-3000
Adapter for steering rod with 1/4" and 1/8" threads



Item No. N100-6 Euromount 80/120mm with clamp bolt



Item No. N100-6
Euromount 80/95mm with clamp bolt



Item No. N200-1000 Clamp bolt 25mm



Item No. N800-1

System low rig adapter "small" (for system low rig tube 80 mm)



Item No. N800-2

System low rig adapter "big" (for system low rig tube 80 mm)



Item No. 2912-99SET

Stative feet (3 pcs)



Item No. 2912-2100

Additional platform for 4x4 Dolly (1 pc.)



Item No. 2912-3000 Extension for pan bar (1 pc.)



Item No. 2300-8500 Telescopic seat

Technische Änderungen vorbehalten, Artikel können vom Bild abweichen

Subject to technical changes, articles may be different to the picture.

5.3 Delivery and Assembly

Please open the transport packing carefully.

Do not use any sharp tools such as cutters, scissors etc., which could lead to the damage of the transport bag or case or the tracks of the Dolly.

Please check the delivery contents. Compare the delivered goods with your delivery note!

In the event of missing parts, please contact your distributor.

In the event of damage to the packaging, the delivery company / forwarding agent must be informed without delay!

A later claim against the manufacturer because of damage to the goods from external foreign effects is expressly excluded!

5.4 Switching from the 2-wheel to the 4-wheel steering mode



Picture **01**

Pull and turn the pin to unlock the upper switch locking device.



Picture **02**

Pull and turn the pin to the right until it reaches the unlocking position.



Picture **03**

Pull and turn the security pin to the right to unlock the lower switch locking device as well.



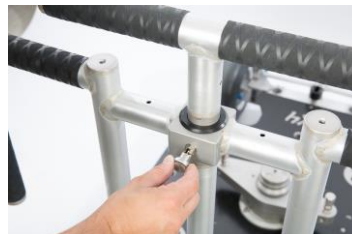
Picture **04**

By pulling the steering rod upwards, you can switch from the 2-wheel to the 4-wheel steering mode.



Picture **05**

When in the upper position, the steering rod is in the 2-wheel steering mode.



Picture **06**

The steering mode can be fixed by locking the pin (pull the pin out, and turn it to the left to lock).

5.5 Converting the steering rod operating from the front to the back side



Picture **07**

Loosen the bolts of the pan bar.



Picture **08**

Loosen both of the bolts.



Picture **09**

Pull and turn the locking pin of the steering rod to unlock it.



Picture **10**

Pull the pan bar upwards to separate it from its anchoring.

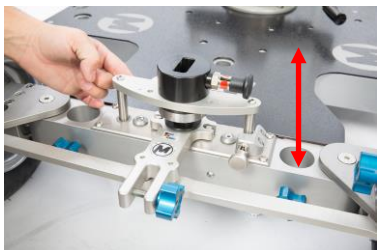


Picture **11**

Mount the steering rod in the opposite position.

Firmly tighten the bolts to fix the steering rod.

5.5 Converting the steering mode from the front to the back side



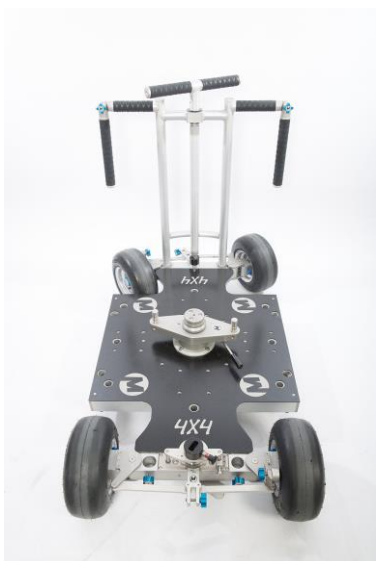
Picture 12

The steering mode can be switched by lifting or lowering the switching gear.



Picture 13

Open or close the locking pin of the gearbox for changing the respective switching stage



Picture 14

Mode 1)
2-wheel
steering



Picture 15

Mode 2)
4- wheel
steering

5.6 Mounting of the additional platform



Picture 16

The additional platform can be mounted toolless to extend one side of the platform.



Picture 17

An additional platform can be fixed vertically to use the 4x4 Dolly as a transport trolley.

5.7 Mounting of the turnstile mount / clamp bolt



Picture **18**

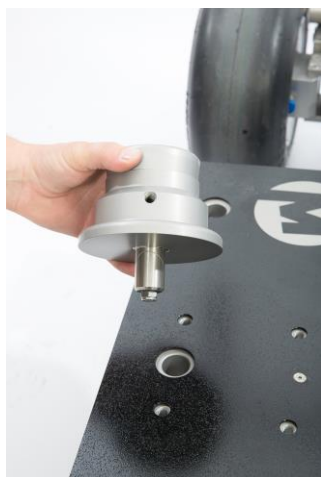
The turnstile mount can be fixed with an Allen key size „8“, from above.



Picture **19**

The clamp bolt N200-1000 and also the Euromount-adaptor can be mounted with an Allen key size „6“.

5.8 Mounting Euromount



Picture **20**

Insert the Euromount, for ex. N100-6, in the 25mm hole.



Picture **21**

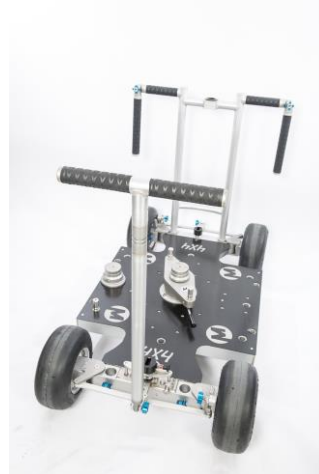
Fix it with an allen key size „6“.

5.9 Mounting steering rod as drawbar



Picture 22

The steering rod can also be used as drawbar. For using this function, bolt the steering rod as displayed on the image.



Picture 23

This mounting position with the steering rod as drawbar is suited in particular when the 4x4 Dolly is used as a transport trolley.

6. Wheel switch-process



Picture 24

Pull the bolt on the side of the wheel converter to disconnect the wheel part.



Picture 25

Remove the wheel and exchange it with a track wheel.

6.1 Mounting of the track wheel



Picture 26

After removing the pneumatic wheel, mount the track wheel until the security bolt is locked.



Picture 27

Version 2 of the track wheels: Speed wheels

6.2 Mounting of the levelling legs



Picture **28**

The levelling legs can be mounted at the same position as the track wheels.

Picture **29**

Unscrew the black covering cap and pan the crank arm for elevation adjusting. Adjust the platform at the required height with the crank arm and then counter in the opposite way using screw nuts.

6.3 Brakes



Picture **30**

The 4x4 dolly provides two brakes which atcs on the air wheels.

List of Risks Considered and Identified not to be Relevant

Hazard Sequence: Scissors (Mechanical Hazards)

Hazard Sequence: Cutting, Cutting-off (Mechanical Hazards)

Hazard Sequence: Grasping (Mechanical Hazards)

Hazard Sequence: Pulling-in, Catching (Mechanical Hazards)

Hazard Sequence: Puncture, Incision (Mechanical Hazards)

Hazard Sequence: Rubbing, Abrasion (Mechanical Hazards)

Hazard Sequence: Penetration of Fluids under Pressure (Mechanical Hazards)

Hazard Sequence: Suffocation (Mechanical Hazards)

Hazard Sequence: Slipping, Tripping, Falling (Mechanical Hazards)

Hazard Sequence: Burning (Electrical Hazards)

Hazard Sequence: Chemical Reaction (Electrical Hazards)

Hazard Sequence: Fatal Electric Shock (Electrical Hazards)

Hazard Sequence: Falling, being Flung Out (Electrical Hazards)

Hazard Sequence: Fire (Electrical Hazards)

Hazard Sequence: Spraying Out of Molten Parts (Electrical Hazards)

Hazard Sequence: (electric) Shock (Electrical Hazards)

Hazard Sequence: Effect on Medical Implants (Electrical Hazards)

Hazard Sequence: Burning (Thermal Hazards)

Hazard Sequence: Scalding (Thermal Hazards)

Hazard Sequence: Dehydration (Thermal Hazards)

Hazard Sequence: Discomfiture (Thermal Hazards)

Hazard Sequence: Freezing (Thermal Hazards)

Hazard Sequence: Injury from Radiation from Heat Sources (Thermal Hazards)

Hazard Sequence: Discomfiture (Noise Hazards)

Hazard Sequence: Unconsciousness (Noise Hazards)

Hazard Sequence: Loss of Balance (Noise Hazards)

Hazard Sequence: Permanent Loss of Hearing (Noise Hazards)

Hazard Sequence: Tinnitus (Buzzing in Ears) (Noise Hazards)

Hazard Sequence: Stress (Noise Hazards)

Hazard Sequence: All Other (for example mechanical, electrical) Problems as a Result of Disturbance to Voice Communication (Noise Hazards)

Hazard Sequence: Exhaustion (Noise Hazards)

Hazard Sequence: Diseases of the Lower Spine (Vibration Hazards))

Hazard Sequence: Joint Bone Damage (Vibration Hazards))

Hazard Sequence: Spinal Injury (Vibration Hazards))

Hazard Sequence: Discomfiture (Vibration Hazards))

Hazard Sequence: Arterial Disease (Vibration Hazards))

Hazard Sequence: Neurological Disease (Vibration Hazards))

Hazard Sequence: Burning (Radiation Hazards)

Hazard Sequence: Effects on Reproductive Capability (Radiation Hazards)

Hazard Sequence: Genetic Mutation (Radiation Hazards)

Hazard Sequence: Headache, Sleeplessness etc. (Radiation Hazards)

Hazard Sequence: Eye and Skin Damage (Radiation Hazards)

Hazard Sequence: Breathing Difficulty, Suffocation (Material and Substance Hazards)

Hazard Sequence: Cancer (Material and Substance Hazards)

Hazard Sequence: Corrosion (Material and Substance Hazards)

Hazard Sequence: Effects on Reproductive Capability (Material and Substance Hazards)

Hazard Sequence: Genetic Mutation (Material and Substance Hazards)

Hazard Sequence: Explosion (Material and Substance Hazards)

Hazard Sequence: Fire (Material and Substance Hazards)

Hazard Sequence: Infection (Material and Substance Hazards)

Hazard Sequence: Sensitisation (Material and Substance Hazards)

Hazard Sequence: Poisoning (Material and Substance Hazards)

Hazard Sequence: Discomfiture (Ergonomic Hazards)

Hazard Sequence: Exhaustion (Ergonomic Hazards)

Hazard Sequence: Disturbance of the Muscular-skeletal System (Ergonomic Hazards)

Hazard Sequence: Stress (Ergonomic Hazards)

Hazard Sequence: all other (for example Mechanical, Electrical) Problems as a Result of Human Errors (Ergonomic Hazards)

Hazard Sequence: Burning (Hazards in Connection with the Location Environment of the Machine)

Hazard Sequence: Slight Illness (Hazards in Connection with the Location Environment of the Machine)

Hazard Sequence: Slipping, Falling (Hazards in Connection with the Location Environment of the Machine)

Hazard Sequence: All other Problems Arising as a Result of the Effects of the Hazard Sources of the Machine or the Components of the Machine (Hazards in Connection with the Location Environment of the Machine)

Hazard Sequence: Suffocation (Hazards in Connection with the Location Environment of the Machine)

Hazard Sequence: Combustible / Inflammable Materials (Hazards through Fire or Explosion)

Hazard Sequence: Explosive Atmosphere (Hazards through Fire or Explosion)

Hazard Sequence: Electrical Ignition Sources (Hazards through Fire or Explosion)

Hazard Sequence: Mechanical Ignition Sources (Hazards through Fire or Explosion)

Hazard Sequence: Other Ignition Sources (Hazards through Fire or Explosion)

Hazard Sequence: Breakdown / Disturbance of the Control System (Unexpected Start-up, Unexpected Overrun)

Hazard Sequence: Reconnecting the Energy Supply (Unexpected Start-up, Unexpected Overrun)

Hazard Sequence: External Influences on Electrical Components (Unexpected Start-up, Unexpected Overrun)

Hazard Sequence: Other Influences such as Gravity, Wind etc. (Unexpected Start-up, Unexpected Overrun)

Hazard Sequence: Software Errors (Unexpected Start-up, Unexpected Overrun)

Hazard Sequence: Operating Errors (Unexpected Start-up, Unexpected Overrun)

Hazard Sequence: Switching Off, EMERGENCY STOP

Hazard Sequence: Changes in the Revolution Speed

Hazard Sequence: Loss of the Energy Supply

Hazard Sequence: Loss of the Control or the Regulation Circuits

Hazard Sequence: Faulty Assembly

Hazard Sequence: Breakage During Operation

Hazard Sequence: Ejected Objects or Fluids

Hazard Sequence: Loss of Stability

Hazard Sequence: Slipping, Tripping or Falling of People

Service Address:

MovieTech AG

Martin-Kollar-Str. 9

D-81829 München

Germany

info@movietech.de

www.movietech.de



Die MovieTech AG mit Hauptsitz in München und Tochtergesellschaften in Mailand und Prag produziert und vermarktet als einer der führenden Hersteller Produkte und Lösungen für die Film- und Fernsehindustrie.

Die Produktpalette von MovieTech konzentriert sich auf die Bereiche: Kamerakräne, Dollies, Lichtsysteme, Remote Heads und entsprechendes Zubehör.

Ziel der Movie Tech AG ist die Herstellung von professionellem Filmequipment, das die Arbeit der Anwender am Set oder im Studio wesentlich erleichtert und die Umsetzung der kreativen Ideen ermöglicht.

The MovieTech AG is based in Munich with subsidiaries in Milan and Prague. As one of the leading manufacturers in its field, it produces and markets products and solutions for the film industry.

The MovieTech product range concentrates on the areas of: Camera cranes, dollies, remote heads and corresponding accessories, as well as studio and stage techniques.

The MovieTech mission is the manufacture of professional film equipment that not simplifies the work of those using it on the set or in the studio, but also facilitates the implementation of creative ideas.



www.movietech.de



Dollies – Cranes – Remote Heads



www.abc-products.de



Steadycam systems – Light dollies – Light cranes



www.mts-germany.com



Pantographs – Hoists – Telescopes – Trolleys



www.lastro.de



Rail systems – Studio and stage engineering

MovieTech AG (Germany)

Martin-Kollar-Str. 9 • 81829 München • Tel: +49 (0)89-43 68 91 3 • Fax: +49 (0)89-43 68 91 55 • E-Mail: info@movietech.de

MovieTech S.r.l. (Italia)

Viale Edison 318 • 20099 Milano • Tel: +39 (0)2 22 47 00 43 • Fax: +39 (0)2 24 41 01 63 • E-Mail: k.shore@movietech.de