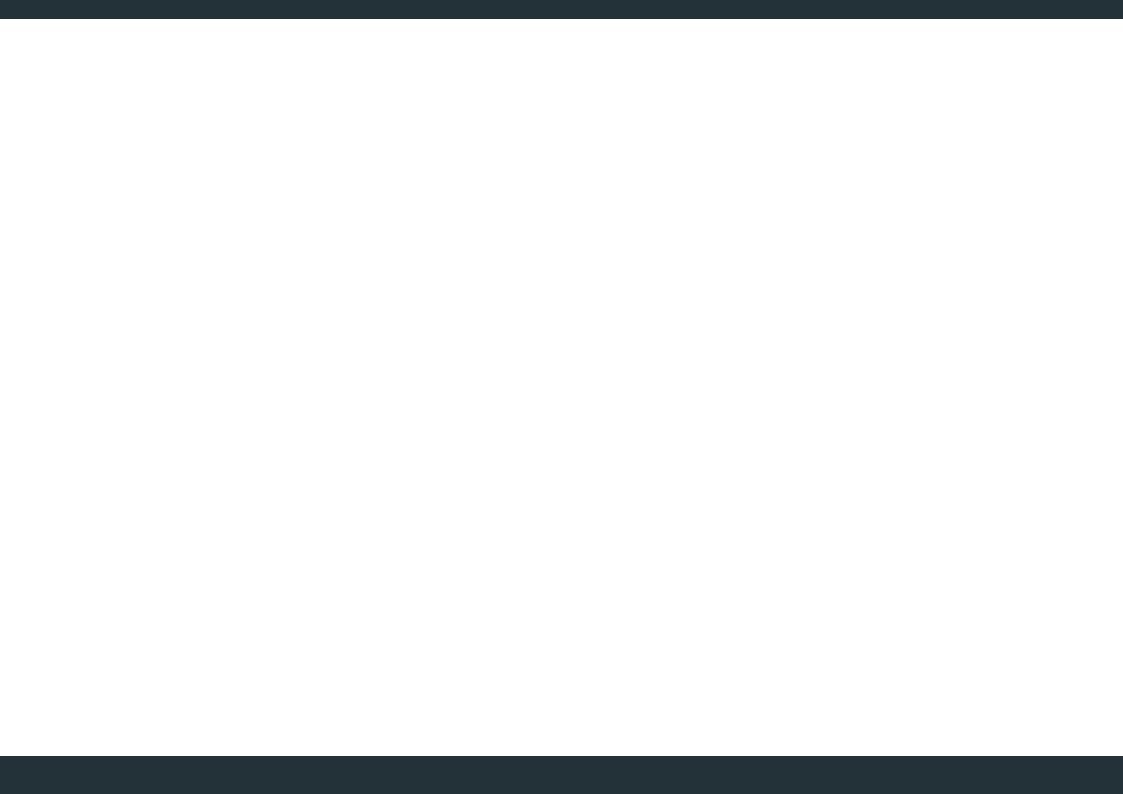


# Harvesting the results of safety

Motec camera systems for agricultural machinery



### Motec

# Systematic safety

Whether freight, rail traffic, industry, municipalities, logistics or agriculture – Motec has been one of the leading manufacturers of high-quality and intelligent camera monitoring systems for mobile applications for over 20 years. Our strength: Systems which we customise perfectly to your needs. High-grade components designed for continuous operation under the toughest conditions which function reliably in wind and rain.

Motec is a flexible and reliable partner for initial equipping. Our processes in the development, production and service are at OEM level and meet the industrial standards. Renowned international vehicle, machine and system manufacturers have been relying on our systems and components for years and trust in our solution expertise.

### Motec camera systems for agricultural machinery

Motec camera systems ensure safety when working with large and complex agricultural machinery. They make it possible for drivers to recognise persons and objects behind the vehicle in a timely manner and also support them in their work by providing, for example, a clear view of the discharge spout, the bale ejection or the transfer belt. This brochure contains a presentation of our selection of possible system solutions for your applications.

#### **Monitors**

- Top processing
- Easy installation
- High functionality
- Digital technology for the highest image quality
- Can be installed as modules

### Cables and plugs

- More than 600 cables and connectors – robust, waterproof, reinforced
- Customised assembly
- Individual tailoring
- Every connection possible
- High quality material mix

### **Cameras**

- Top processing
- Robust and resistant
- Suitable for high pressure cleaners (IP69K)
- Modern camera technology
- Can be installed as modules
- Automatically controlled camera heating

### **Certified quality**

Top quality at all levels – Motec is certified in accordance with ISO 9001 and ISO14001 and holds the AEO certificate as an "Authorised Economic Operator".



### Technical service

### Fast help guaranteed

Top quality also includes top service. We are also available to assist you with technical questions or problems. Our sales and technology divisions work closely together. You will benefit from short distances and efficient communication. Our service employees know your needs, can understand your processes and quickly find a solution.

#### **Associations**



### **Tractors**

### Safety and ergonomics



A camera attached to the cabin roof avoids a nonergonomic posture of the driver and a dangerous blind spot behind the tractor.

#### Allows the driver to see

- The hazard zone behind the tractor
- The work results of auxiliary equipment









### MD3052A-L

- Screen size 14.2 cm (5.6")
- Two switchable camera images
- Fits into every cabin
- Light protection hood
- Image mirroring



### MKW

- High-grade and robust system cable
- Waterproof connector
- With protective hose against mechanical damages
- Meets the highest requirements in accordance 
  With stainless steel with industrial standards



- Modern image electronics (CMOS-Chip)
- Adapts easily to changing lighting conditions
- Sharp images even in back-light
- mount

# **Tractors with baling presses**

Effective monitoring of the work areas



The bale ejection cannot be seen from the driver's seat. The MC7000 series cameras allow the driver to detect faulty operations in a timely manner.

#### Allows the driver to see

- Ejection of the compressed bales
- Knotting of the bales
- Faulty bales













### MD3052A-L

- Screen size 14.2 cm (5.6")
- Two switchable camera images
- Fits into every cabin
- Light protection hood
- Image mirroring

### MK232

- Trailer cable with robust plug (KSJ/13 pol.)
- With protective hose
- Available in various lengths and designs

- Stable and weatherproof housing
- High shock and vibration resistance
- Automatically con trolled window heating
- Automatic brightness compensation

# **Tractors with loader wagons**

### Safety when manoeuvring and reversing



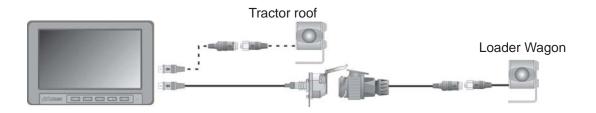
Large trailers are used wherever heavy loads are pulled. Complex loader wagons block the driver's view of the area behind the tractor/trailer pair.

#### Allows the driver to see

- Area behind the tractor/ trailer pair
- Persons and objects when manoeuvring and reversing









### MD3072B

- Screen size 17.8 cm
- Built-in video control element
- Connection of up to two cameras
- Image mirroring



### **MK84**

- Connection cable with robust FDJ/13pol coupling joint
- For frequent disconnection
- With integrated protective cover



- Modern image electronics (CMOS-Chip)
- Adapts easily to changing lighting conditions
- Sharp images even in back-light
- With stainless steel mount

### **Tractors with feed mixers**

### Effective work aid and rear area monitor



The large size and shape of feed mixers generally block the driver's rear view. The mounted mirrors do not offer an adequate field of vision for this.

#### Allows the driver to see

- The lateral clearances when driving through the stable
- The hazard zone behind the feed mixer







Rear area





- Screen size 14.2 cm (5.6")
- Two switchable camera images
- Fits into every cabin
- Light protection hood
- Image mirroring



### MK232

- Trailer cable with robust connector (KSJ/13 pol.)
- With protective hose
- Available in various lengths and designs



- Stable and weatherproof housing
- High shock and vibration resistance
- Automatically controlled defogger
- Automatic brightness compensation

### **Tractors with snowthrower**

### Safe driving on the road



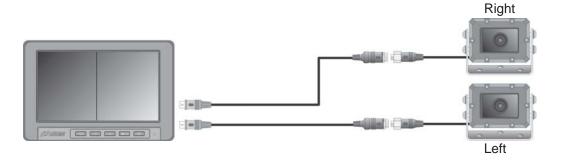
A least two cameras are installed on the front of the snowthrower to enable safe entry into intersections despite the long projection of the vehicle.

### Allows the driver to see

■ Cross-traffic when entering intersections















### MD3072B-Quad

- Direct connection of up to four cameras
- Split screen up to four images at one time
- Automatic camera selection
- Screen size 17.8 cm (7") Crystal clear images

### MKW

- High-grade and robust system cable
- Waterproof connector
- With protective hose against mechanical damages
- Meets the highest requirements in accordance with industrial standards

### MC3000A

- Robust housing of machined aluminium
- Extremely high chemical and mechanical resistance

### **Tractors with mowers**

### Safe driving and manoeuvring



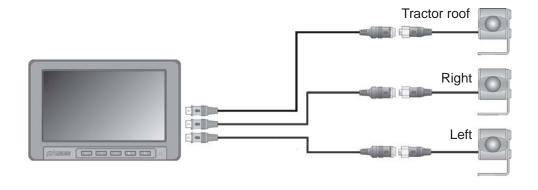
Attachments such as mowers often protrude far beyond the front and rear of the tractor and block the driver's view.

#### Allows the driver to see

- The cross-traffic when entering intersections
- The hazard zone behind the tractor













### MD3072B-Quad

- Direct connection of up to four cameras
- Split screen up to four images at one time
- Automatic camera selection
- Screen size 17.8 cm (7") Crystal clear images

### MKW

- High-grade and robust system cable
- Waterproof connector
- With protective hose against mechanical damages
- Meets the highest requirements in accordance 
  With stainless steel with industrial standards

- Modern image electronics (CMOS-Chip)
- Adapts easily to changing lighting conditions
- Sharp images even in back-light
- mount



### **Tractors with seed drills**

### Safety when reversing



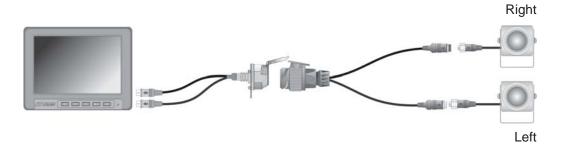
Large seed drills can obstruct the tractor driver's view of the area behind the tractor or the tractor/trailer pair.

#### Allows the driver to see

- Hazard zone behind the sowing machine
- Persons and objects when manoeuvring















### MD3052A-L

- Screen size 14.2 cm (5.6")
- Two switchable camera images
- Fits into every cabin
- Light protection hood
- Image mirroring

### MK232

- Trailer cable with robust plug (KSJ/13 pol.)
- With protective hose
- Available in various lengths and designs

- Stable and weatherproof housing
- High shock and vibration resistance
- Automatically con trolled window heating
- Automatic brightness compensation

### **Combine harvesters**

### Monitoring of rear and work areas



Cameras assist the driver in positioning the discharge spout directly on the accompanying vehicle and also in monitoring the returns auger and the rear area.

### Allows the driver to see

- Persons in the blind spot
- Congestion in the returns auger
- Fill level of the trailer
- Hitch, to ease coupling of a trailer













#### **Terminal**

- Connection of several cameras
- Precisely fitted adapter cable
- Operating data terminal

### MKW

- High-grade and robust system cable
- Waterproof connector
- With protective hose against mechanical damages
- Meets the highest requirements in accordance 
  With stainless steel with industrial standards

- Modern image electronics (CMOS-Chip)
- Adapts easily to changing lighting conditions
- Sharp images even in back-light
- mount



# Field choppers

### Efficient harvesting organisation



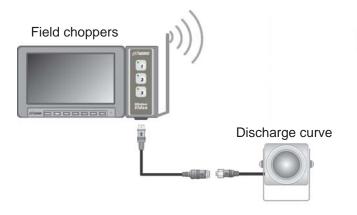
The drivers of additional tractors on the edge of the field can receive the camera image of the discharge curve and thus ensure an efficient transport chain.

#### Allows the driver to see

- Even/uneven filling of the trailer
- Fill level of the harvested crop















### MD3072B

- Screen size 17.8 cm
- Built-in video control element
- Connection of up to two cameras
- Image mirroring

### MVR6000

- Wireless transmitter and receiver
- Range: approx. 500 m
- 3 channels for troublefree transmission
- Frequency range 2.4 2.4835 GHz
- ISM Band

- Stable and weatherproof housing
- High shock and vibration resistance
- Automatically defogger
- Automatic brightness compensation

### **Beet harvesters**

### Safety when manoeuvring and efficient machine control



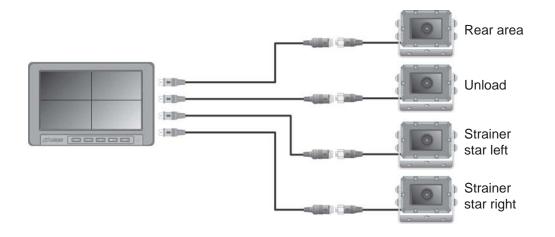
A camera system on beet harvesters consists of up to four cameras. They capture the area behind the machines and monitor the star strainers and conveyor belts inside.

#### Allows the driver to see

- Congestion in the operating process of the machine
- Persons and objects behind the machine













### MD3072B-Quad

- Direct connection of up to four cameras
- Split screen up to four images at one time
- Automatic camera selection
- Screen size17.8 cm (7")Crystal clear images

### MK347

- High-grade and robust system cable
- Waterproof connector
- Meets the highest requirements in accordance with the industrial standard

### MC3000A

- Robust housing of machined aluminium
- Extremely high chemical and mechanical resistance

### **Potato harvesters**

### Safe manoeuvring and work area monitoring



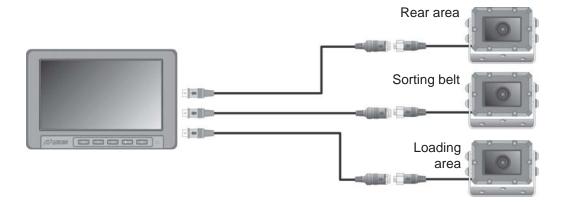
Up to four cameras supply images from the inside of the machine for monitoring the cutting mechanism, the transfer belt and the loading area.

#### Allows the driver to see

- The hazard zone behind the machine
- Congestion of harvested crop
- The fill level of the loading area













### MD3072B-Quad

- Direct connection of up to four cameras
- Split screen up to four images at one time
- Automatic camera selection
- Screen size 17.8 cm (7") Crystal clear images

### MKW

- High-grade and robust system cable
- Waterproof connector
- With protective hose against mechanical damages
- Meets the highest requirements in accordance with industrial standards

### MC3000A

- Robust housing of machined aluminium
- Extremely high chemical and mechanical resistance

# **Grape harvesters**

### Safety during the grape harvest



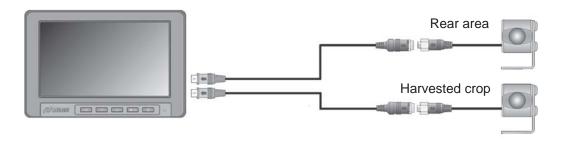
A rear-view camera increases the manoeuvring safety.
Additional cameras allow the driver to monitor the grape harvest in the machine.

#### Allows the driver to see

- Persons in the manoeuvring range
- Processing in the machine
- Transfer belt when unloading













### MD3072B-Quad

- Direct connection of up to four cameras
- Split screen up to four images at one time
- Automatic camera selection
- Screen size17.8 cm (7")Crystal clear images

### MKW

- High-grade and robust system cable
- Waterproof connector
- With protective hose against mechanical damages
- Meets the highest requirements in accordance with industrial standards

- Modern image electronics (CMOS-Chip)
- Adapts easily to changing lighting conditions
- Sharp images even in back-light
- With stainless steel mount

# Field sprayers

### Safe manoeuvring



The design of self-propelled field sprayers makes it very hard to see clearly. Persons and objects can quickly vanish in the hazard zone behind the machine.

#### Allows the driver to see

- Dangerous area behind the machine
- Spray nozzles in the blind angle of the vehicle
- Coupling procedure















### MD3052A-L

- Screen size 14.2 cm (5.6")
- Two switchable camera images
- Fits into every cabin
- Light protection hood
- Image mirroring

### MKW

- High-grade and robust system cable
- Waterproof connector
- With protective hose against mechanical damages
- Meets the highest requirements in accordance with industrial standards

- Stable and weatherproof housing
- High shock and vibration resistance
- Automatically con trolled window heating
- Automatic brightness compensation

# Self-propelled liquid manure spreaders

Safety when manoeuvring and driving in reverse



Due to the enormous size of self-propelled manure spreaders, the driver often lacks all-round visibility required to safely move the machine.

#### Allows the driver to see

- The hazard zone behind the machine
- Persons and objects















### MD3072B

- Screen size 17.8 cm
- Built-in video control element
- Connection of up to two cameras
- Image mirroring

### MKW

- High-grade and robust system cable
- Waterproof connector
- With protective hose against mechanical damages
- Meets the highest requirements in accordance with industrial standards

- Stable and weatherproof housing
- High shock and vibration resistance
- Automatically con trolled window heating
- Automatic brightness compensation

# **Forest graders**

### Safe driving on the road



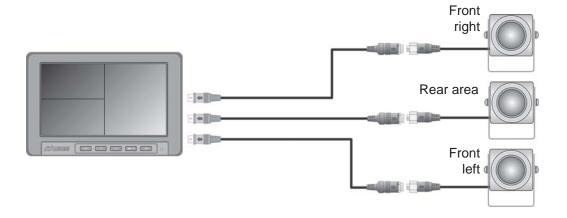
Graders are often used for roadwork in forest areas. Due to the machine design with its long front end, the entry onto busy streets poses a high risk of accidents.

#### Allows the driver to see

- The cross-traffic when turning into busy streets
- Persons and objects in the hazard area of the machine













### MD3072B-Quad

- Direct connection of up to four cameras
- Split screen up to four images at one time
- Automatic camera selection
- Screen size17.8 cm (7")Crystal clear images

### MKW

- High-grade and robust system cable
- Waterproof connector
- With protective hose against mechanical damages
- Meets the highest requirements in accordance with industrial standards

- Stable and weatherproof housing
- High shock and vibration resistance
- Automatically defogger
- Automatic brightness compensation

# **Logging machines**

### Safety when manoeuvring and reversing



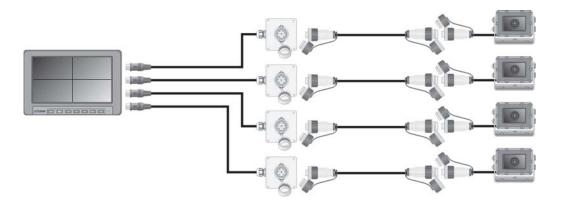
Due to the enormous machine size, the drivers of wood harvesters frequently lack a sufficient all-round view for safe manoeuvring.

#### Allows the driver to see

- The hazard zone behind the machine
- The side area concealed by the machine jib













### MD3072B-Quad

- Direct connection of up to four cameras
- Split screen up to four images at one time
- Automatic camera selection
- Screen size17.8 cm (7")Crystal clear images

### MK25-MA2

- Stable connection cable
- Suitable for winter road maintenance
- Coupling point for system change

### MC3000A

- Robust housing of machined aluminium
- Extremely high chemical and mechanical resistance

# **Telescopic handlers**

### Quick and safe handling of bales and pallets



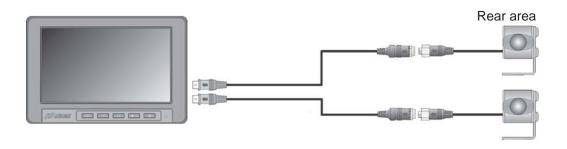
Cameras on the telescopic handler allow the driver a view of the hazard areas, while facilitating the handling of bales and pallets.

#### Allows the driver to see

- Persons and objects behind the machine
- The hazard zone behind the machine jib











### MD3072B

- Screen size 17.8 cm
- Built-in video control element
- Connection of up to two cameras
- Image mirroring



### MKW

- High-grade and robust system cable
- Waterproof connector
- With protective hose against mechanical damages
- Meets the highest requirements in accordance 
  With stainless steel with industrial standards



- Modern image electronics (CMOS-Chip)
- Adapts easily to changing lighting conditions
- Sharp images even in back-light
- mount

## Wheel loader for silo applications Safe reversing



Blind spots and concealed areas behind the machine pose a constant risk when using wheel loaders for silo work.

#### Allows the driver to see

Persons and objects behind the machine







Screen size 17.8 cm

Built-in video control

Connection of up to

two cameras Image mirroring

MD3072B

element



### MKW

- High-grade and robust system cable
- Waterproof connector
- With protective hose against mechanical damages
- Meets the highest requirements in accordance with industrial standards



- Stable and weatherproof housing
- High shock and vibration resistance
- Automatically con trolled window heating
- Automatic brightness compensation



# **Customised solutions for numerous additional sectors**System solutions



Construction machinery and cranes



Utility vehicles in freight traffic and communal use



Agricultural machinery



Forklifts and industrial applications



Industrial systems and vehicles



Armoured and all-terrain utility and transport vehicles



Track and railroad vehicles



Maritime and offshore applications



### **Motec GmbH**

Oberweyerer Straße 21 65589 Hadamar-Steinbach GERMANY Phone +49 (0) 6433 9145 0
Fax +49 (0) 6433 9145 45
E-Mail info@motec-cameras.com
Web www.motec-cameras.com

