

# WIEGEL

Transport Equipment | Stokvis Group



VISIBILITY

## Emergency Vehicles Vision Solutions



**EMERGENCY VEHICLES  
VISION SOLUTIONS**

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ORLA010000\_004 A



## Waarom kiezen voor Wiegel en Orlaco?

De kwaliteit van Orlaco gecombineerd met de voorraad positie, technische kennis, advies en ondersteuning van Wiegel. Een uitstekende combinatie! Kiezen voor Orlaco betekent dat u bewust bezig bent met het voorkomen van ongelukken en het veiliger en prettiger werken, hetgeen zich vertaalt in minder schade, lager ziekteverzuim, minder tijdverlies en lagere verzekeringspremies. Zo bent u gegarandeerd van een optimaal functionerend kwaliteitsproduct en een veilige werkplek voor u en uw omgeving.

That's  
why!



Let us  
**improve**  
your every  
day job

Improved  
Safety and  
Efficiency



Emergency vehicles are complex machines that require clear vision which allows the operation to progress smoothly and safely. Especially when an emergency attracts a large audience and or press, maneuvering into a correct position is not an easy task. Drivers have minimal vision around the vehicle. It is essential to solve large blind spots in a professional matter. This is where Orlaco's camera monitor solutions will help to improve operational efficiency and safety. Together with our zoom and/or thermal imaging cameras on the basket, analyzing the overall situation will go much faster and efficient.





## Enhanced Ergonomics and Comfort

A driver of an emergency vehicle is required to follow what is occurring around his vehicle. Frequently he must maneuver into a contorted position. The vehicles are reversing repeatedly. The driver is obliged to turn his body to overview the operation, possibly leading to short or even long term ergonomic injuries. By viewing the Orlaco monitor located on the dashboard, the driver can maintain correct posture and work more comfortably. He feels safe, secure and in control of the vehicles' environment, reducing stress and providing comfort.

## Certified Quality

At Orlaco, quality is never taken lightly. We keep a clear and persistent focus on customer satisfaction. A focus that is maintained throughout the manufacturing process of our quality products, which are custom designed in various formats. We are able to uphold our level of quality by providing detailed servicing. To top it all off, we have secured the highest achievable automotive certification: TS16949. At Orlaco, we invest in continuous improvement in order to secure a long term, satisfied customer base. We believe that compatibility in products, systems, and operations is the key element to creating reliable partnerships. All our products are controlled and clearly documented to give our customers a zero-defect product with operation that works right, every time.

## Emergency sight solutions



### Cage-cam

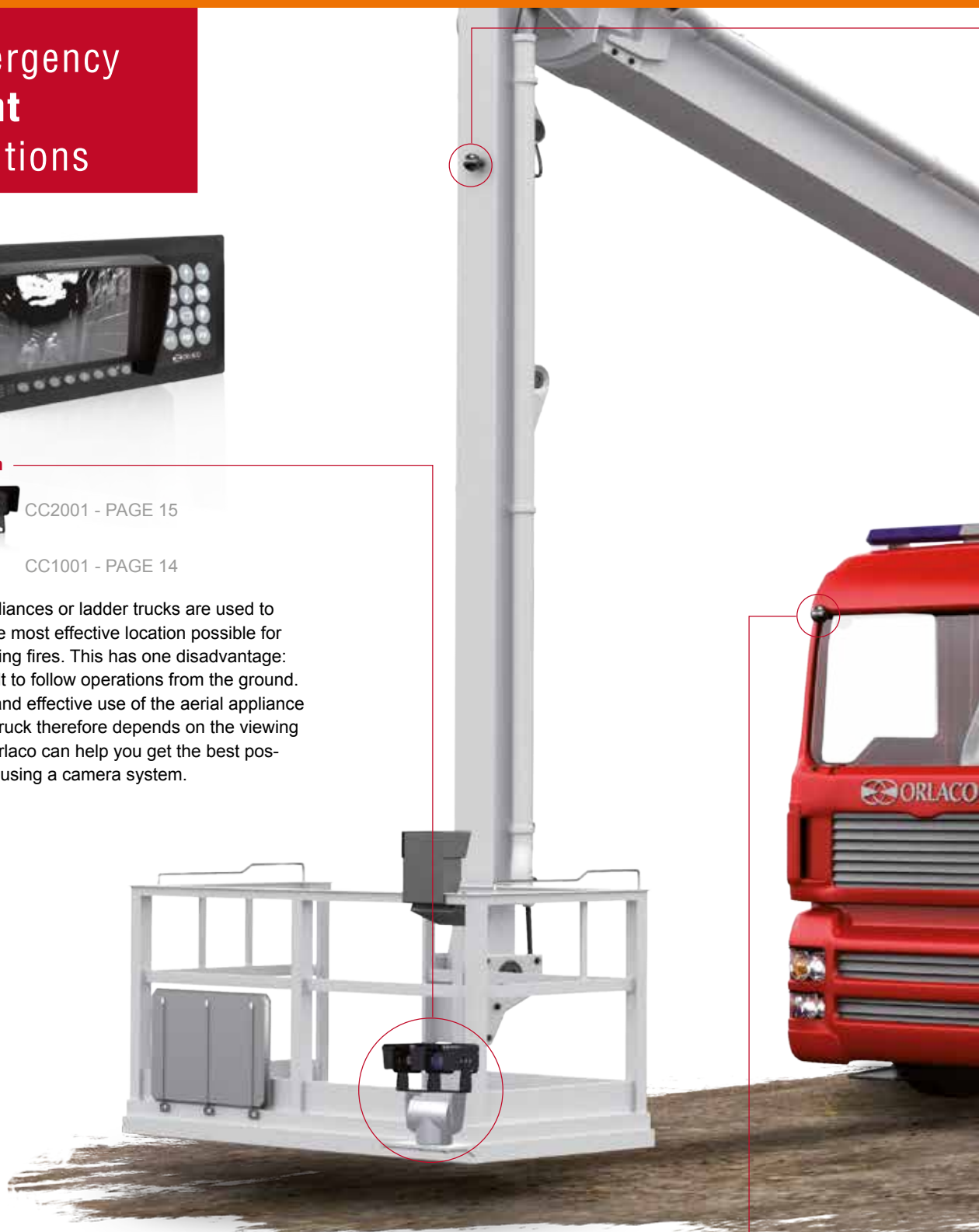


CC2001 - PAGE 15



CC1001 - PAGE 14

Aerial appliances or ladder trucks are used to provide the most effective location possible for extinguishing fires. This has one disadvantage: It is difficult to follow operations from the ground. The safe and effective use of the aerial appliance or ladder truck therefore depends on the viewing system. Orlaco can help you get the best possible view using a camera system.



### Frontview



FC1001 - PAGE 19

The new EU mirror directive came into force in 2006 and was extended in January 2007. It includes frontview mirrors for all new trucks in Europe. Only an approved camera system may replace the front view mirror. The front camera provides a perfect view of the blind spot in front of the cab. This makes it possible to notice cyclists and pedestrians in time.

## Mastcam

MC1101 - PAGE 14



Being able to see the people working in the basket cannot be taken for granted, especially if you are working above or behind high buildings or objects where the basket will be out of sight. With the mast camera, you will always be able to see them. That is a prerequisite for wellcoordinated collaboration and maximum safety.



## Rearview

RC1001 - PAGE 19



The rearview camera helps you get your vehicle into the correct position quickly and safely. Especially when reversing, you enjoy improved an increased field of view. This is more efficient for you and it can improve safety for bystanders. **Recommendation:** Add RadarEye to increase safety & efficiency. (see page 24-25)



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## Rearview



DEVS SETS - PAGE 16-17

The rearview camera lets you see the area immediately behind the crash tender. This is safer when you are on the way to the location and ideal when you are moving your vehicle into position.



## Sideview



DEVS SETS - PAGE 16-17

Given the dimensions of the crash tender and your position as the driver, adequate view is not something you can take for granted. The side cameras provide greater vision of the areas to the sides of the vehicle.



**Runway-cam**

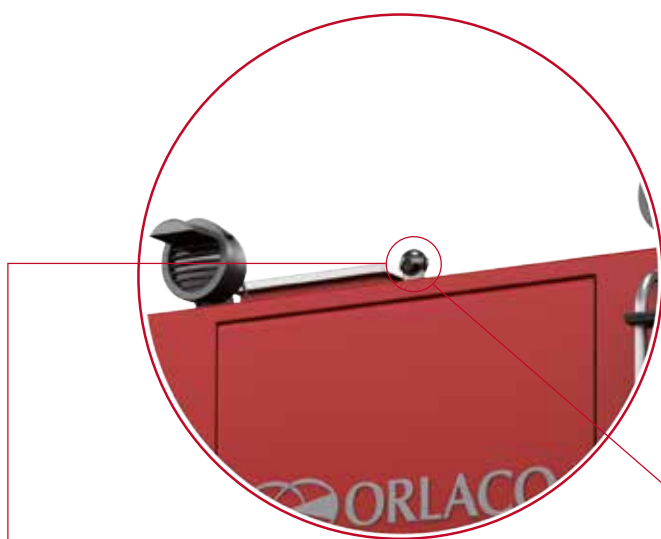
DEVS SETS - PAGE 16-17

With the camera system recommended by the Federal Aviation Administration (FAA) (AC No: 150/5210-19A), consisting of a thermal imaging camera and a zoom camera on the roof of the vehicle, you can fight fires more effectively as a result of your improved field of view. In addition, you can record these images digitally with the integrated recorder. That can be an important function when analyzing the disaster. This set is also fitted with rearview and sideview cameras.

**i Information**

Crash tenders are large, cumbersome vehicles. An Orlaco camera system is a welcome addition. You can easily combine this with a thermal imaging camera and a zoom camera. These DEVS (Driver's Enhanced Vision Systems) for ARFF (Aircraft Rescue and Fire Fighting) are recommended by the FAA. Two cameras are positioned on the Pan & Tilt unit. The zoom camera, capable of up to 432X zoom, lets you see the

location and brings objects into crystal-clear focus. The thermal imaging camera helps you see through the smoke to localize the seat of the fire. You can view the images from both the zoom and thermal imaging cameras and the side- and rearview cameras on the monitor in the cab.



## Rearview



FF1000 - PAGE 18

Orlaco equips your forest fire engine with a rearview camera. This camera provides you with a view of the area directly behind the vehicle. This allows you to reverse more safely, not only in traffic, but also in forest areas, which are often difficult to access.





Frontview- TIC

FF1000 - PAGE 18



Fighting a forest fire is a tough job. Accessibility is limited and unclear especially when combined with heavy smoke development. Using a thermal imaging camera on a Pan & Tilt unit on the front of the vehicle, together with a rearview camera, helps you to better overcome these obstacles.



## Rearview



RC1001 - PAGE 19

The rearview camera increases the safety of professional response personnel and bystanders. You can maneuver more easily because you can see the area behind the vehicle. The monitor in the cab automatically switches over to the rearview camera if you select reverse gear.

**Recommendation:** Add RadarEye to increase safety & efficiency. (see page 24-25)



## CornerEye



PAGE 19

CornerEye offers a complete and detailed view of 270° of the area around the cabin. The system delivers HD digital image quality in real time.







International responder



## Combination set

### Front- and Rearview

FR1001 - PAGE 20

#### **i** INFORMATION

The frontview mirror may be replaced by a front camera provided it meets, among others, the following requirements:

- Mandatory front vision at forward speeds of between 0 and 10km per hour.
- It must be possible to see the class VI field of vision. (2m in front of and 2m across the entire width of the cab)

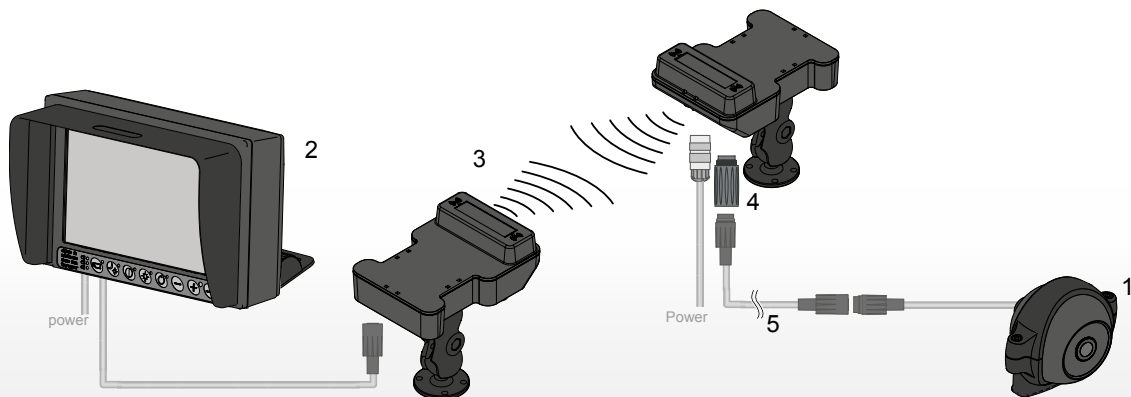
- The monitor may only display the class VI field of vision at forward speeds of between 0 and 30km per hour.
- The monitor and camera must meet all technical requirements.

The EG\*2003/97\*2005/27 directive describes the specifications that a truck's mirrors must comply with. Orlaco's front view system meets all these requirements.



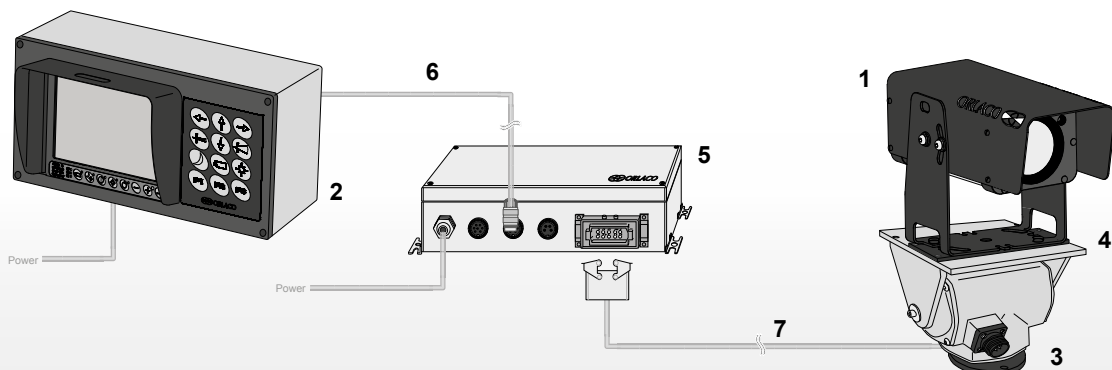
## Set **Mastcam Wireless** MC1101

1. Camera FAMOS 60°  
0171040 - page 28
2. Monitor 7" RLED Serial, including standard bracket  
0223100 - page 32
3. Spectrum Scanner RoundMax 150  
0004061 - page 41
4. Adapter plug 7pM 4pF  
0357510 - page 35
5. Multi cable 5m  
0301880 - page 34



## Set **Cage-cam Zoom PT** CC1001

1. AF-Zoom Camera PAL Serial  
0103531 - page 30
2. Monitor 7" RLED + Control  
0210501 - page 32
3. Pan & Tilt unit 24V/DC  
0507061 - page 42
4. Fastening plate  
0507100 - page 42
5. Smartbox Stainless steel  
0504730 - page 40
6. Multi cable 40m, cable per metre  
1220170 - Page 34
7. Special cable 3m + Connectors  
ORL-SC-GCH-0026-3m



## Set **Cage-cam Zoom TIC PT CC1501**

**1. Thermal Imaging Camera TIC 320 9Hz**  
0103732 - page 30

**2. Monitor 7" RLED + Control**  
0210501 - page 32

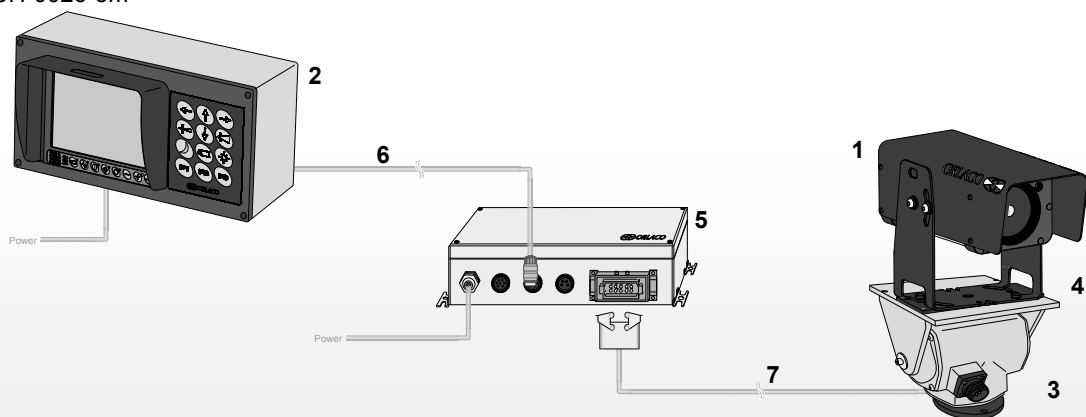
**3. Pan & Tilt unit 24V/DC**  
0507061 - page 42

**4. Fastening plate**  
0507100 - page 42

**5. Smartbox Stainless steel**  
0504730 - page 40

**6. Multi cable 40m, cable per metre**  
1220170 - Page 34

**7. Special cable 3m + Connectors**  
ORL-SC-GCH-0026-3m



## Set **Cage-cam Zoom & TIC PT CC2001**

**1. AF-Zoom Camera PAL Serial**  
0103531 - page 30

**2. Thermal Imaging Camera TIC 320 9Hz**  
0103732 - page 30

**3. Monitor 7" RLED + Control**  
0210501 - page 32

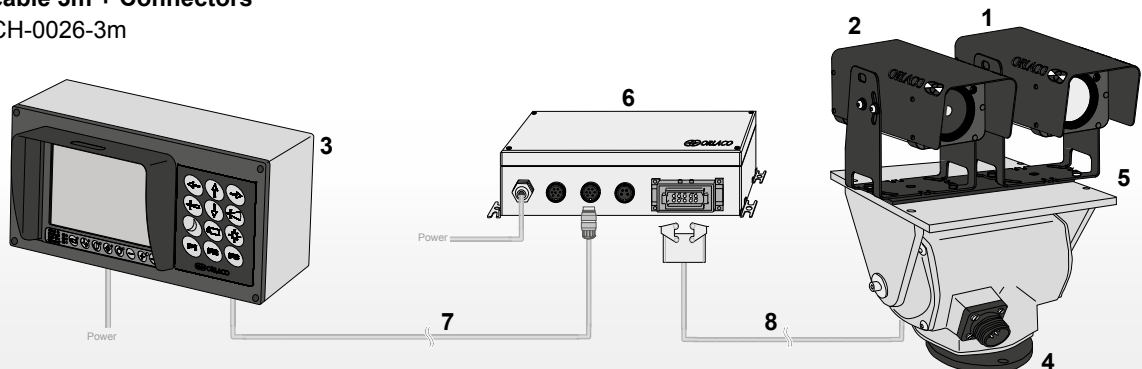
**4. Pan & Tilt unit 24V/DC**  
0507061 - page 42

**5. Fastening plate**  
0507100 - page 42

**6. Smartbox Stainless steel**  
0504730 - page 40

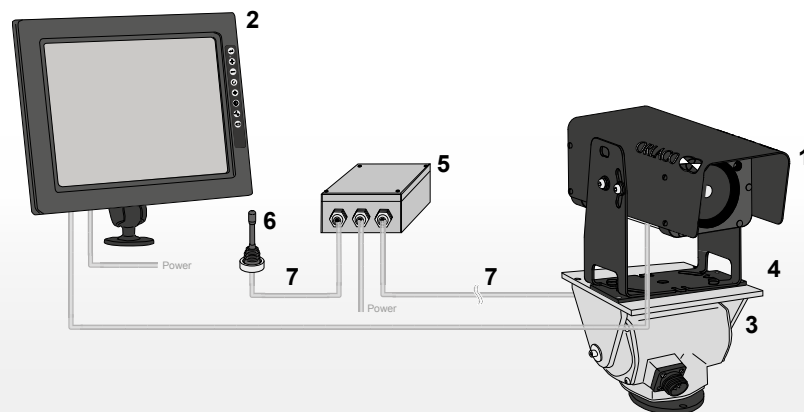
**7. Multi cable 40m, cable per metre**  
1220170 - Page 34

**8. Special cable 3m + Connectors**  
ORL-SC-GCH-0026-3m



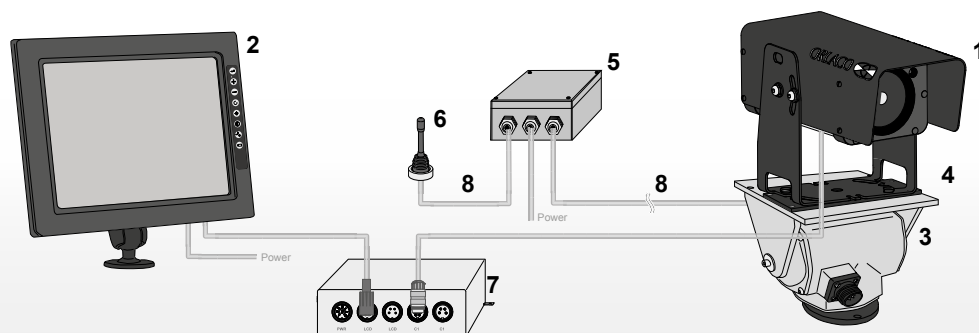
## Set **Crashtender** DEVS Basic CT1001

1. Thermal Imaging Camera TIC 320 9Hz  
0103732 - page 30
2. Monitor 12" RLED Serial  
0411130 - page 31
3. Pan & Tilt unit 24V/DC  
0507061 - page 42
4. Fastening plate  
0507100 - page 42
5. Control unit Pan & Tilt  
0503500 - page 42
6. Joystick  
0506500 - page 42
7. Power multi cable 5m, cable per metre  
1220900 - page 34



## Set **Crashtender** DEVS Basic + Recording CT1101

1. Thermal Imaging Camera TIC 320 9Hz  
0103732 - page 30
2. Monitor 12" RLED Serial  
0411130 - page 31
3. Pan & Tilt unit 24V/DC  
0507061 - page 42
4. Fastening plate  
0507100 - page 42
5. Control unit Pan & Tilt  
0503500 - page 42
6. Joystick  
0506500 - page 42
7. DVR one channel  
0000300 - page 39
8. Power multi cable 5m, cable per metre  
1220900 - page 34





## Set **Crashtender** DEVS Anti Terrorism CT1201

1. **AF-Zoom Camera PAL Serial**  
0103531 - page 30
2. **Thermal Imaging Camera TIC 320 9Hz**  
0103732 - page 30
3. **Monitor 12" RLED Serial**  
0411130 - page 31
4. **Pan & Tilt unit 24V/DC**  
0507061 - page 42
5. **Fastening plate**  
0507100 - page 42
6. **Smartbox Stainless steel**  
0504730 - page 40
7. **Keyboard handheld AF Serial 7pM**  
0502650 - page 42
8. **DVR one channel**  
0000300 - page 39
9. **Special cable 6m 7p**
10. **Special cable 5m + Connectors**  
ORL-SC-GCH-0026-5m



## Set **Crashtender** DEVS Safety CT1301

1. **AF-Zoom Camera PAL Serial**  
0103531 - page 30
2. **Thermal Imaging Camera TIC 320 9Hz**  
0103732 - page 30
3. **Camera FAMOS IR LED 118°**  
0171600 - page 28
4. **Monitor 12" RLED Serial**  
0411130 - page 31
5. **Pan & Tilt unit 24V/DC**  
0507061 - page 42
6. **Fastening plate**  
0507100 - page 42
7. **Smartbox Stainless steel**  
0504730 - page 40
8. **Keyboard handheld AF Serial 7pM**  
0502650 - page 42
9. **DVR one channel**  
0000300 - page 39
10. **Special cable 6m 7p**
11. **Multi cable 16m**  
0301920 - page 34
12. **Special cable 5m + Connectors**  
ORL-SC-GCH-0026-5m



## Set **Forest Fire** FF1001

### 1. Camera PT TIC Aluminium

0506972 - page 30

### 2. Monitor 12" RLED Serial

0411130 - page 31

### 3. Joystick

0506500 - page 42

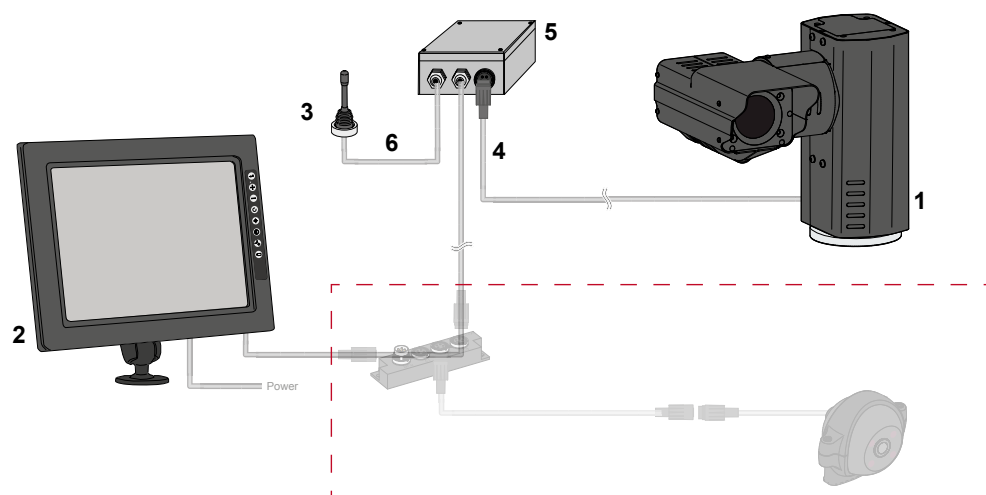
### 4. Multi cable 6m 7p

0304410 - page 34

### 5. Junction Box Special

### 6. Power multi cable 5m, cable per metre

1220900 - page 34



## Optional **Rearview**

### 7. Camera FAMOS IR LED 118°

0171600 - page 26

### 8. Switcher Serial

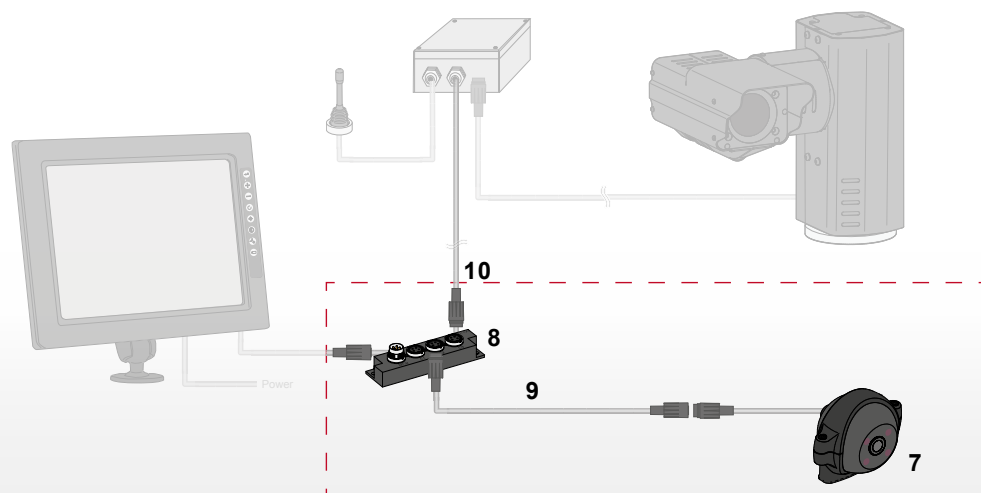
0404060 - page 38

### 9. Multi cable 16m

0301920 - page 34

### 10. Multi cable 6m 7p

0304410 - page 34



## Set **CornerEye** (0400040)

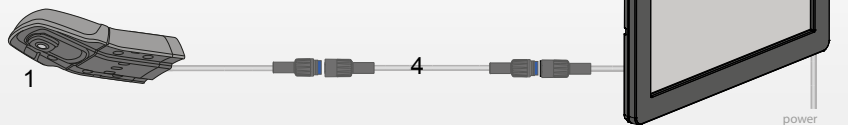
**1. Set HMOS camera with CornerEye bracket**  
0185610 - page 25

- a. Camera HMOS 180°
- b. CornerEye Bracket
- c. Extension Bracket

**2. Monitor HLED 10"**  
0224000 - page 26

**3. Monitor Bracket 105mm**  
0402610 - page 26

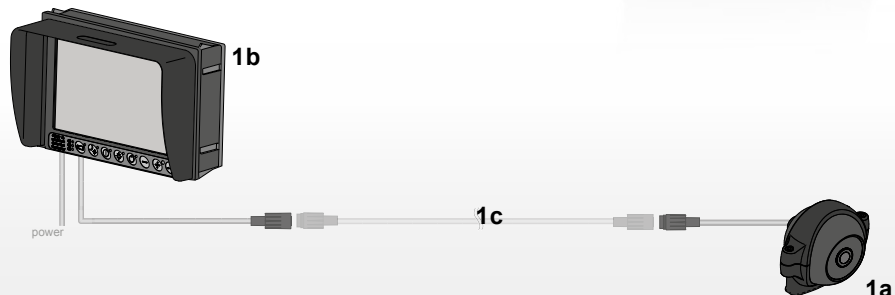
**4. Digicoax cable 3m**  
0311020 - page 26



## Set **Frontview** FC1001 / FC1011

**1. Frontview set**  
0400511 / 0400521

- a. Camera FAMOS 118° / 129°  
0171010 / 0171000 - page 28
- b. Monitor 7" LEDD  
0221000 - page 32
- c. Multi cable 5m  
0301880 - page 34



## Set **Rearview** RC1001

**1. Rearview set**  
0401861

- a. Camera FAMOS 102°  
0171020 - page 28
- b. Monitor 7" LEDD  
0221000 - page 32

**2. Multi cable 16m**  
0301920 - page 34





## Expansion set **Rearview on Rigid**

You can easily expand your Orlaco Frontview system with our Rearview expansion set.

### 1. Camera FAMOS 102°

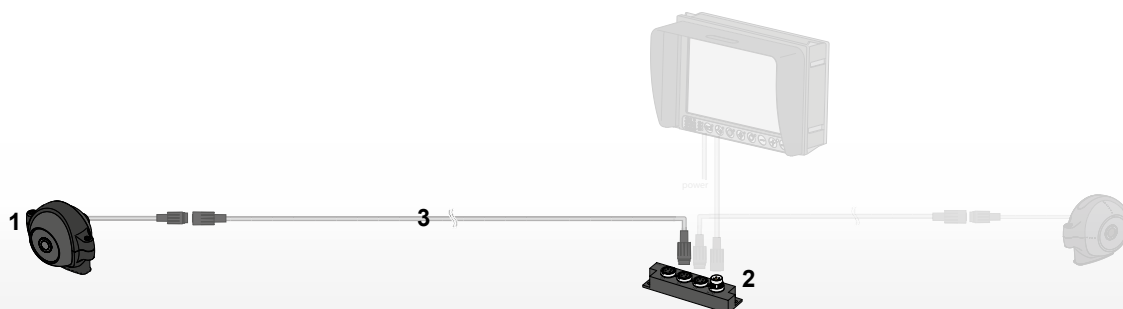
0171020 - page 28

### 2. Switcher UNI

0404040 - page 38

### 3. Multi cable 16m

0301920 - page 34



## Set **Frontview-Rearview** FR1001 / FR1011

### 1. Front- and Rearview set

0401971 / 0401981

#### a. Camera FAMOS 118° / 129°

0171010 / 0171000 - page 28

#### b. Camera FAMOS 102°

0171020 - page 28

#### c. Monitor 7" LEDD

0221000 - page 32

#### d. Switcher UNI

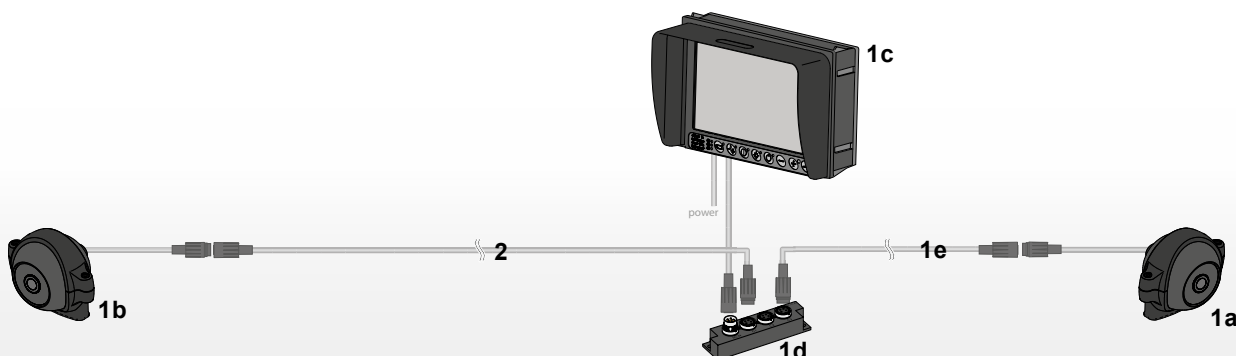
0404040 - page 38

#### e. Multi cable 5m

0301880 - page 34

### 2. Multi cable 16m

0301920 - page 34



## Set **Rearview + RadarEye** RR1000

### 1. Camera FAMOS 102°

0171020 - page 28

### 2. Monitor 7" LEDD CAN SRD

0208371 - page 32

### 3. RadarEye set corner rear

0403120 - page 24

#### a. SRD sensors (2x)

#### b. RadarEye corner brackets (2x)

#### c. RadarEye Terminator

### 4. RadarEye interface box with ext. speaker

0504820 - page 28

### 5. Multi cable 16m

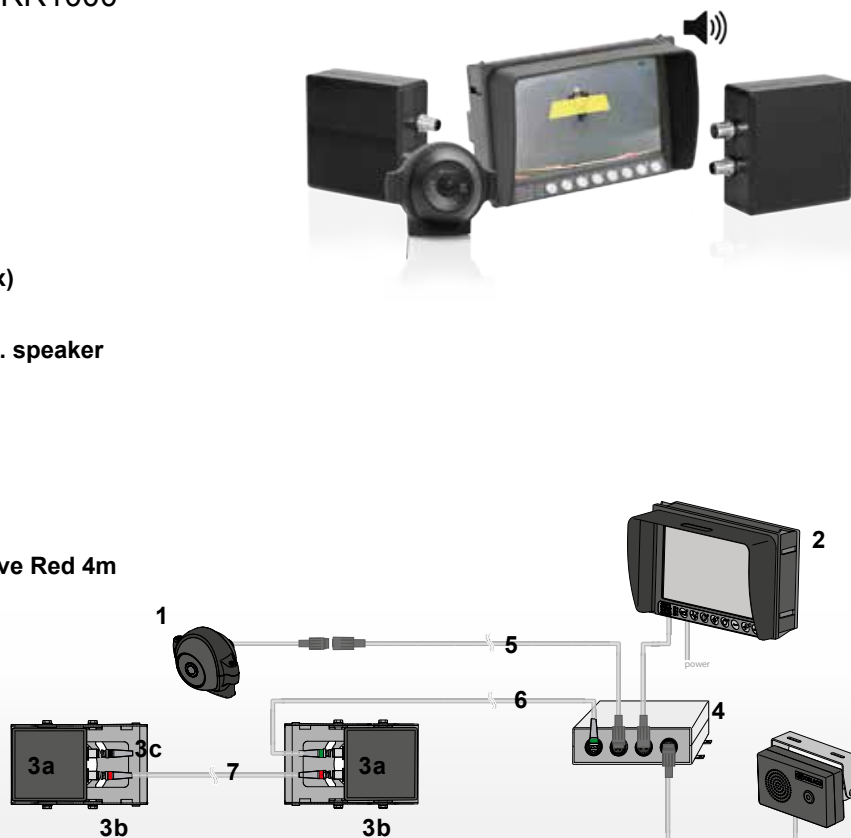
0301920 - page 34

### 6. RadarEye cable M12 Green 20m

0301121 - page 25

### 7. RadarEye cable M12 Master-Slave Red 4m

0301031 - page 25



## Set **General Multiview system**

### 1. Camera FAMOS

Make your choice - page 28

### 2. Monitor 7" LEDD Serial

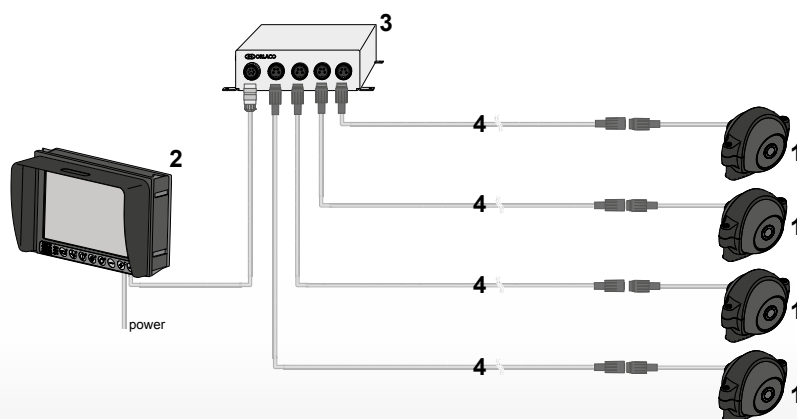
0208232 - page 32

### 3. MultiView box II

0405100 - page 36

### 4. Multi cable

Make your choice - page 34



**Note:** The front camera may not replace the front mirror!

## Set **Surround view**

**1. Camera FAMOS 129° (4x)**

0171000 - page 28

**2. Monitor 7" LEDD Serial**

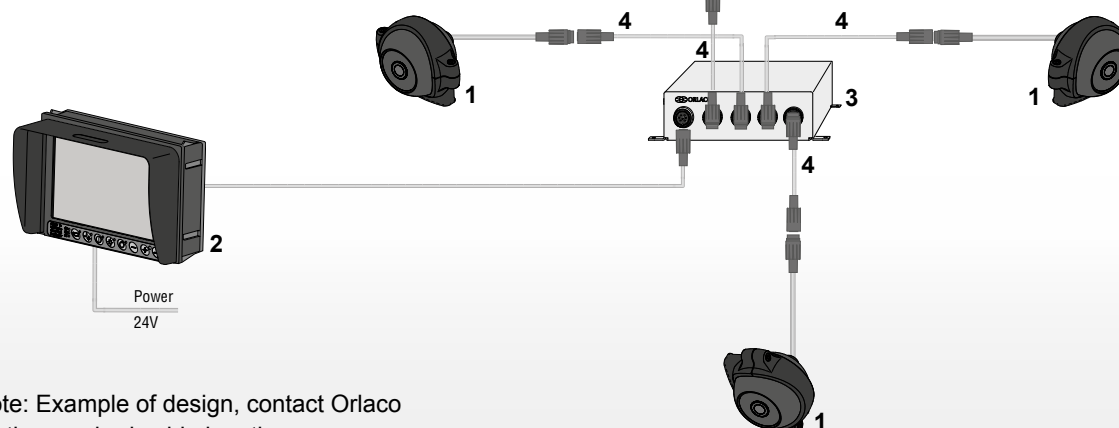
0208232 - page 32

**3. Multiview box II**

0405100 - page 38

**4. Multi cable 16m**

0301920 - page 34



Note: Example of design, contact Orlaco for the required cable lengths.

## Surround view



- Surround view can be applied on any type of vehicle.
- Increased view when manoeuvring in narrow spaces and crowded areas.
- Images available: 180°, 270° or 360°.
- Surround view offers an overview of objects and people around a vehicle. They are always visible, thanks to overlapping camera images.
- Suitable for both 7" and 12" Orlaco monitors.
- Operating temperature between -40° and +85°C.
- A maximum of four different overviews can be programmed.
- No time-consuming calibration of cameras.
- Surround view can be designed and programmed in accordance with the customer's wishes.
- Contact Orlaco for more information and advice.

The dimensions and design of emergency vehicles make it difficult for a driver to have a complete overview of the situation. Surround View gives a three hundred and sixty degrees field of view around the vehicle, enabling the driver to maneuver safely under the most difficult and hectic circumstances. The positioning of the vehicle is often essential in order to attend to emergency situations on time in a safe and efficient way. The system shows a maximum view of all four sides of the vehicle on one monitor. The camera images overlap, allowing the driver to have a complete overview at all times, without missing any obstacles. By providing the driver an immediate clear overview of the situation, Surround View significantly increases safety and efficiency.



Forward manoeuvring



Reverse mode

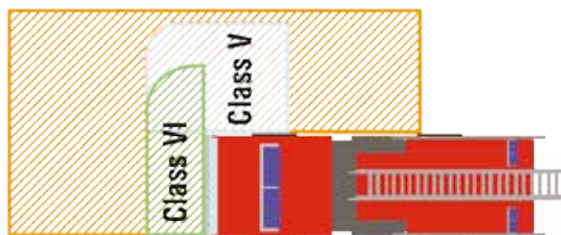


## CornerEye covers field of vision Class V & VI with one camera



- HD camera and 10" HD monitor
- 270° field of vision
- Real time: zero latency
- Shock and vibration proof
- Ruggedized design
- Designed to comply with automotive requirements
- Camera IP69K watertight
- Short mounting time
- Custom made bracket per brand on request

Get excellent view on blind spots around trucks with the revolutionary new CornerEye camera monitor system. Ultimate digital technology and effective application come together in this unique vision system. The system has a wide angle lens that, combined with the latest technologies, delivers a field of vision of 270°. CornerEye covers the obligatory Class V & VI and even beyond, increasing your vision.



[Check our CornerEye video on the Orlaco YouTube channel.](#)

### CornerEye Set

#### 0400040 Set CornerEye

- Including HMOS camera with bracket, 10" monitor with A pillar bracket and 3m digicoax cable.



### CornerEye Parts

#### 0185610 Set HMOS camera with bracket

- Including camera HMOS 180°



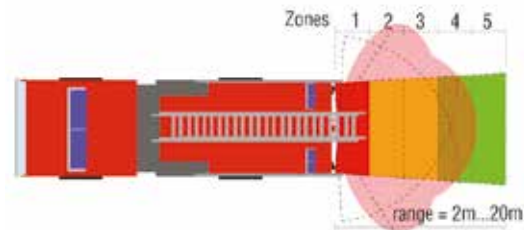
## RadarEye unites visibility and active detection



Orlaco has developed this radar unit in addition to the camera-monitor systems. By combining the vision solution with an active signaling system, RadarEye offers additional safety and efficiency.

RadarEye is an integrated active view system designed to detect and see objects in zones obscured from the operator's view. The radar system detects stationary as well as moving objects in a designated coverage area. With this view system the operator is actively warned with audible tones that increase in rate as objects come closer. When an object is detected it can be seen on the monitor and the operator can respond immediately. This prevents damage to the operators machine and any other equipment he may reverse into. The radar units have a rugged design, are shockproof, waterproof and is not influenced by the environment, such as snow, rain, mud and or temperature changes.

- RadarEye can be used on various trucks
- RadarEye is capable of visualizing the radar-zones on the display, as soon as a person enters the zone it will activate colored dots (default setting) or a transparent visualization (standard/custom preset settings) to make the driver aware of the potential danger
- 2...20m detection area, divided in 5 equally sizes segments
- Separation distance: 1-4m (configurable)
- Antenna beam horizontal: 70°(typ.), vertical: 11°(typ.)
- Operating temperature between -40°C to +85°C
- Obstacle reaction delay 50ms
- Orlaco Monitor CAN SRD is required
- RadarEye can be extended with multiple sensor and camera units for all around detection and visibility
- Please contact Orlaco for advice and installation



[Check our demo RadarEye videos on the Orlaco YouTube channel.](#)

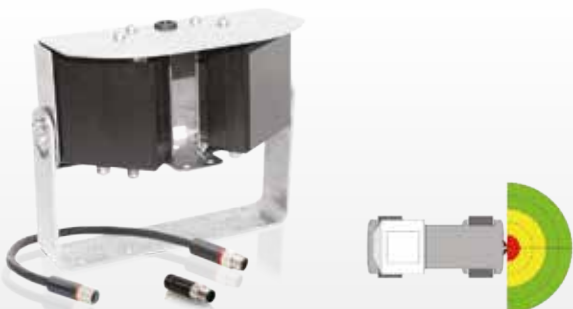


### RadarEye Sets

#### 0403120 Set SRD Corner Rear

Active Rearview system for corner mounting.

- Including SRD sensors, brackets and terminator
- Interface Box CAN/SRD/camera is required (0256010 or 0504820)
- Cables, camera and monitor CAN SRD are not included



#### 0403100 Set SRD Center Rear

Active Rearview system for center mounting.

- Including SRD sensors, bracket, cable master-slave (0301080) and terminator
- Interface Box CAN/SRD/camera is required (0256010 or 0504820)
- Cables, camera and monitor CAN SRD are not included

## RadarEye Interface boxes

### 0256010 Interface Box CAN/SRD/camera

The Interface Box is designed to connect SRD sensors to camera and CAN SRD monitor.

### 0504820 Interface Box with Ext. speaker CAN/SRD/camera

The Interface Box is designed to connect SRD sensors to a camera, CAN SRD monitor and external speaker.

- Set consists of: External speaker and Interface Box
- Sound pressure speaker: 85dB (+/-3dB) distance 1m



## RadarEye Cables

### Cable M12 Green

Connection cable between Interface box and master SRD sensor or connection cable between slave SRD sensor and next SRD sensor.

0301051	5m	0301061	10m
0301071	15m	0301121	20m
0301131	25m	0301141	30m

### Cable M12 Master-Slave Red

Connection cable between master SRD sensor and slave SRD sensor.

0301081	0,25m	0301021	1m
0301031	4m	0301041	8m
0301091	16m		



## RadarEye Brackets

### 0401330 Bracket SRD Sensor Corner Rear

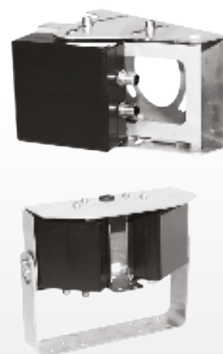
Mounting bracket for SRD Sensor for corner mounting.

- Stainless steel
- SRD sensor not included

### 0401320 Bracket SRD Sensor Center Rear

Mounting bracket for SRD Sensor for center mounting.

- Stainless steel
- SRD sensors not included



## RadarEye Parts

Please contact Orlaco for advice.

### 0004310 SRD sensor CAN Horizontal

Short Range Detection (SRD) sensor for integration in active view system (RadarEye).

- Connectors position: Side

### 0004320 SRD sensor CAN Vertical

Short Range Detection (SRD) sensor for integration in active view system (RadarEye).

- Connectors position: Top / Bottom

### 0350111 M12 Terminator 120 Ohm

120 Ohm resistor for terminating CAN bus.





## The qualifications of our Digital Cameras

- High resolution CMOS rolling shutter
- 1280 x 960 video image
- Light sensitivity 0.1 lux
- Excellent impact- and vibration-resistance
- Improved EMC-standards
- Automotive molding-filled housing, watertight IP69K according to DIN 40050-9
- Operating temperature between -40°C to +85°C
- IP68 dust- and waterproof according to IEC 60529
- The camera has a 0,5m cable including a digicoax waterproof molded 4p male connector



### Cameras HMOS

Compact, industrial high definition digicoax camera.

Type	Art. no.
30°	0185040
60°	0185030
90°	0185020
120°	0185010
180°	0185000

- Including camera bracket



### Monitor HLED

- Automotive TFT liquid crystal display module, LED backlight
- 1m multi cable (power) open wired, 1m multi cable (video) including 4p molded female digicoax connector
- 1280 x RGB x 800 video image

0224000 Monitor 10" HLED

- Suitable for CornerEye

0224010 Monitor 10" HLED MR1

0402610 Monitor Bracket 105mm

- Suitable for Monitor 10" HLED



### Digicoax cable

Designed for use with HMOS cameras.

0311000	1m	0311010	2m
0311020	3m	0311030	5m
0311040	7,5m	0311050	8m
0311060	9m	0311070	11m
0311080	16m	0311090	21m



### Digicoax switcher

Input and power supply for a maximum of 4 Digicoax HMOS cameras.

- Cameras can be switched over automatically with a HLED MR1 monitor

0404240 Switcher Digicoax - 4 channel

## Or design your system yourself

**Step 1:** Select your camera

**Step 2:** Select your desired cable

**Step 3:** Select your monitor

**Step 4:** Select the required options

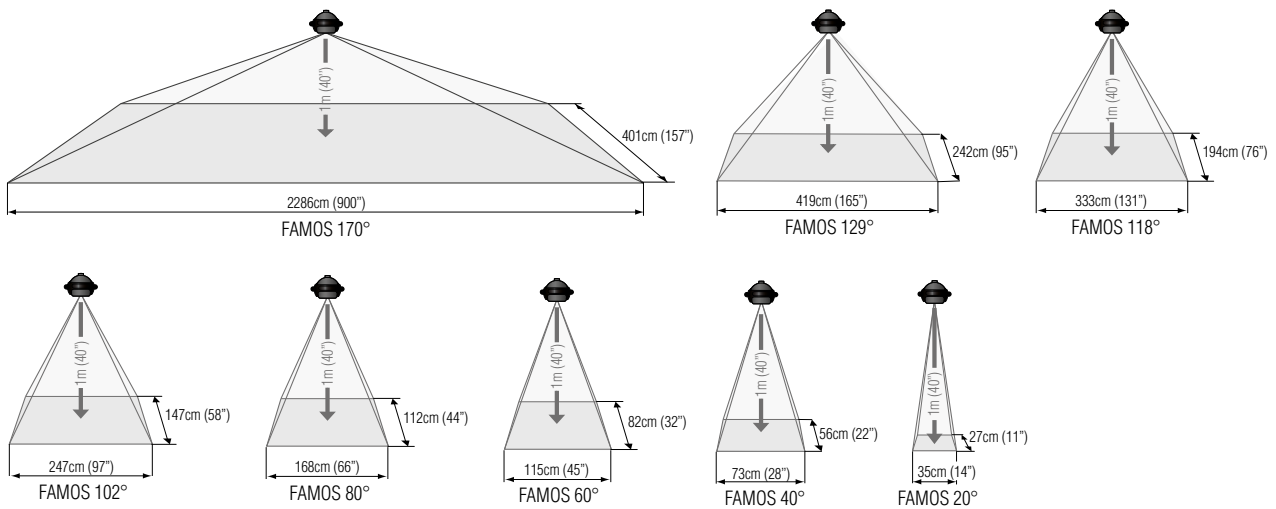
It is also possible to configure your system online on our website: [www.orlaco.com](http://www.orlaco.com)

Whatever you select, the system can be easily installed and is plug-and-play.

**Note:** For two or more cameras a switcher, 4Cam RLED Monitor or MultiView Box and additional cables are required. Contact us for support.

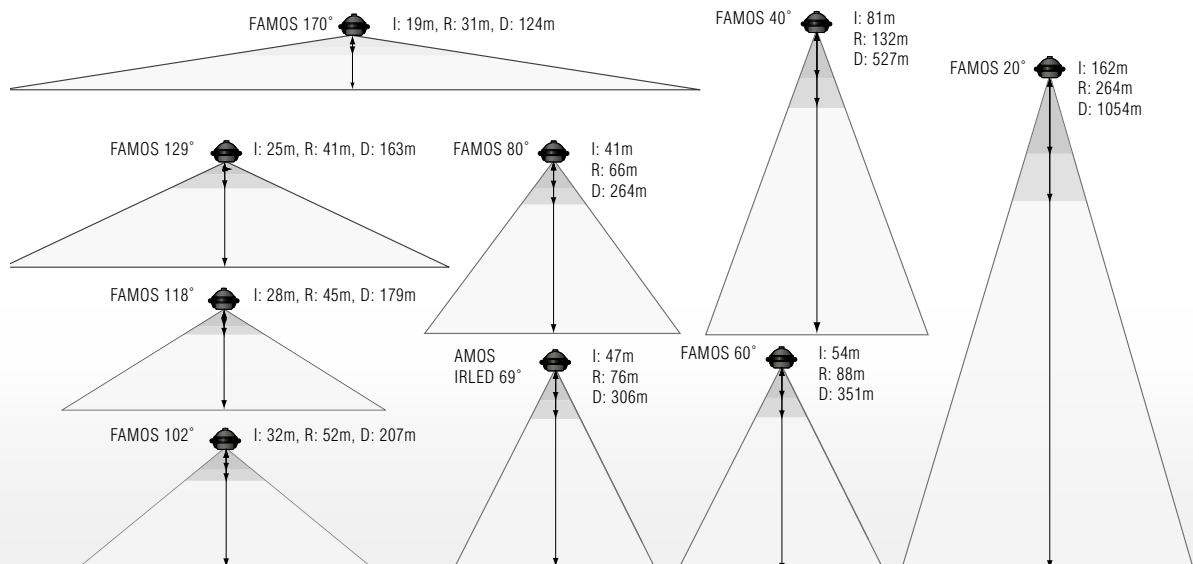
## The qualifications of our FAMOS Compact Cameras

- Next generation CMOS sensor
- Light sensitivity 0.05 lux
- Integrated *Safety ticker* to show that camera is running and active
- Operating temperature between -40°C to +85°C
- Heated lens glass, therefore no problems with condensation or frost
- IP68 dust- and waterproof according to IEC 60529
- The camera has a 0,5m cable including a waterproof molded 4p connector male
- Automotive molding-filled housing, watertight IP69K according to DIN 40050-9
- Improved EMC-standards
- Optimized impact- and vibration-resistance



## Johnson's Criteria

The Johnson's criteria defines what is meant by "seeing a target". The minimum required resolution according to Johnson's criteria are expressed in terms of image resolution across a target, in terms of several tasks: Detection (4px), Recognition (16px) and Identification (26px). The measurements are based on optimal conditions with an object size of 2.3m x 2.3m and are theoretical. Practical situations may deviate.





## Cameras FAMOS

Type	Art. no. PAL	Art. no. NTSC
20°	0171060	0171160
40°	0171050	0171150
60°	0171040	0171140
60° MIRROR	0171960	-
80°	0171030	0171130
102°	0171020	0171120
102° MIRROR	0171220	0171240
118°	0171010	0171110
118° MIRROR	0171210	0171230
129°	0171000	0171100
129° MIRROR	0171880	-
170°	0171070	0171170



## Camera FAMOS MIRROR SW1

Camera with mirrored image and guiding lines.

Type	Art. no. PAL	Art. no. NTSC
102° MIRROR	0171250	0171260



## Cameras FAMOS IR LED

Day-night camera including 4 High Power Infrared LEDs 850nm. The IR LED's are automatically activated. Based on the output of the CMOS sensor the IR illumination value is set to ensure the best possible image.

Type	Art. no. PAL	Art. no. NTSC
80°	0171610	0171630
118°	0171600	0171620
118° MIRROR	0171900	0171910

- UV-transparent front cover



## Mounting means

### 0402320 Protective cover

Cover specially designed for the Compact Camera.

- Stainless steel housing



### Camera extension brackets

Specially designed for the Compact Camera. Matches the hole pattern of the Compact Camera bracket.

- Stainless steel

### 0402250 Camera extension 155mm

### 0402270 Camera extension 250mm



### 0401270 Camera bracket

Compact bracket specially designed for the Compact Camera.

- Cap can be resprayed in the color of the vehicle
- Including mounting kit
- Compact Camera is not included



### 0403310 Shock-absorbers for Compact Camera

In situations where shock absorption plays a major role, we recommend that the specially developed shock absorbers are used when installing the Compact Camera.



### 0403400 Magnet Bracket Compact Camera

For quick mounting of Compact Camera on steel profiles.



### 2015500 Adjustable mounting bracket

- Length 132mm

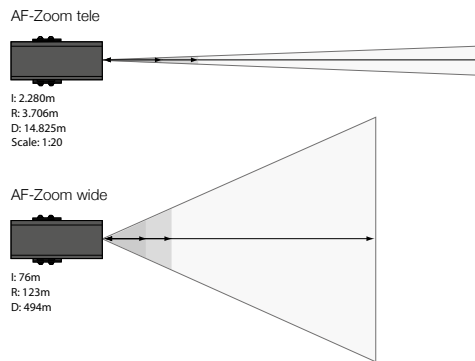
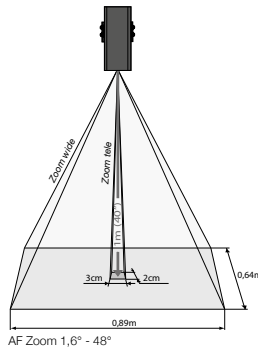
### 2015600 Adjustable mounting bracket

- Length 190mm



## The qualifications of our zoom cameras

- Operating temperature between -40°C to +85°C
- Built-in brightness function to ensure better view on dark areas
- 480x zoom, 1,6° to 48° horizontal opening angle
- Built-in night vision function (0 lux mode)
- Nitrogen-filled housing, 100% watertight (IP 69K)
- Heated lens glass, therefore no problems with condensation or frost
- Shock and vibration resistant



### AF-Zoom Cameras

- Power supply 12V - 24V/DC when cable is <50m  
Power supply 18V - 24V/DC when cable is >50m
- 2,6kg
- Dimensions: 260x140x122mm (without bracket)

#### 0103531 AF-Zoom Camera Serial

- Including 6m multi cable fitted with 7p connector (female)

#### 0103512 AF-Zoom Camera Hard wired

- Including 10m multi cable (1220250)



### Thermal Imaging Camera

- Thermal Imager Uncooled VOx microbolometer
- 25° lens (up to 450m detection)
- 12-30V/DC max 8W
- 2x and 4x zoom

#### 0103732 TIC-camera 320 9Hz

- Including 6m multi cable fitted with 7p connector (female)

## The qualifications of our Pan & Tilt Zoom Cameras (PTZ)

- Operating temperature between -40°C to +85°C
- Built-in brightness function to ensure better view on dark areas
- 40x optical zoom, 1,6° to 48° horizontal opening angle
- Built-in night vision function ( 0 lux mode)
- Nitrogen-filled camera housing, 100% watertight (IP 69K)
- Heated lens glass, therefore no problems with condensation or frost
- Shock and vibration resistant
- Dimensions: HxWxD 284x307x141mm
- Including 5m cable with 7p connector
- 6 presets for camera positions
- Pan angle 360° (180° to left, 180° to the right)
- tilt angle 180° (90° up, 90° down)
- Pan & tilt speed 12,5°/sec
- Power supply 18V to 30V/DC

### Pan & Tilt Zoom Camera

- Aluminium housing
- Weight: 5kg (including 5m cable)

0506953 PTZ Camera Aluminium PAL

0506962 PTZ Camera Aluminium NTSC

### Pan & Tilt Thermal Image Camera

0506972 PT TIC Camera Aluminium PAL

- Weight: 6,8kg (including 5m cable)



## The possibilities offered by Orlaco LED monitors

- Automotive 7inch TFT liquid crystal display module, LED backlight
- Operating temperature between -40°C to +85°C
- Impact and vibration resistance meet the stringent requirements
- High resolution pixel WVGA 800xRGBx480
- Power protected against:
  - Induction voltages
  - Load dumps
  - Over- and undervoltage
- Mirror image setting
- Brightness automatically adjusts to the ambient light
- Integrated sun visor
- Option of a marker line per camera on the screen for the optimum determination of distance
- IP67 according to IEC 60529
- Full On-Screen-Display (OSD) in 12 languages
- Watertight molded connectors
- Open wired power cable

### Monitors RLED 12"

Art. no.	Type	Video cable / connector	Power cable	Bracket
0411000	12"	4m / 4p fem.	4m	190mm
0411130	12" Serial	6m / 7p fem.	6m	190mm
0411300	12" CAN SRD	6m / 7p fem.	6m	190mm

Serial	For serial connection (Zoom- & TIC cameras or MultiView box)
CAN SRD	Specially designed for RadarEye systems. (see page 24-25)





Standard bracket



## Monitors RLED 7"

- Input Voltage 18...30V/DC +/-10%

Art. no.	Type	Video cable / connector	Power cable	Bracket
0223000	7"	2m / 4p female	2m open wired	132mm
0223100	7"	4m / 4p female	4m open wired	standard

- Input Voltage 12...60V/DC +/-10%

Art. no.	Type	Video cable / connector	Power cable	Bracket
0208603	7"	2m / 4p female	2m open wired	132mm
0208632	7" Serial	6m / 7p female	6m open wired	132mm
0208691	7" Serial	6m / 7p female	6m open wired	standard
0208871	7" CAN SRD	6m / 7p female	6m open wired	132mm

## Monitors LEDD 7"

- For double DIN slide opening in the dashboard
- Input Voltage 18...30V/DC +/-10%

Art. no.	Type	Video cable / connector	Power cable	Bracket
0221000	7"	2m / 4p female	2m open wired	-

- Input Voltage 12...60V/DC +/-10%

Art. no.	Type	Video cable / connector	Power cable	Bracket
0208203	7"	2m / 4p female	2m open wired	-
0208232	7" Serial	6m / 7p female	6m open wired	-
0208371	7" CAN SRD	6m / 7p female	6m open wired	-

Serial For serial connection (Zoom- & TIC cameras or MultiView box)

CAN SRD Specially designed for RadarEye systems. (see page 24-25)



## 0210501 Monitor 7" LEDD Serial + Keyboard

- Aluminium/stainless steel housing
- 10p Harting connection



## Mounting means - LEDD monitor

Brand	Model	DDIN slot	Necessary mounting brackets
DAF	Euro 5 CF/XF	Yes	None
DAF	Euro 6 CF/XF/LF	Yes	None
Iveco	<i>All models</i>	No	0400610 or 0400600
MAN	<i>All models</i>	No	0400610 or 0400600
Mercedes-Benz	Actros Euro 5	Yes	0400610 or 0400600
Mercedes-Benz	Actros Euro 6	No	0400610 or 0400600
Mercedes-Benz	<i>Other models</i>	No	0400610 or 0400600
Renault	Euro 5 Premium / Euro 6 Renault T	Yes	0400610 or 0400600
Renault	Magnum	Yes	0400630
Renault	<i>Other models</i>	No	0400610 or 0400600
Scania	Long dashboard: Euro 5 / Euro 6	Yes	None
Volvo	Euro 5 FM / FE	Yes	None
Volvo	Euro 5 FH	No	0400680
Volvo	Euro 6 FM	Yes	None
Volvo	FL	No	0400610 or 0400600

### 0400610 Monitor mounting bracket

For assembly of the Monitor 7" LEDD.

- ABS + aluminium



### 0400600 Monitor mounting bracket flexible

For flexible assembly of the Monitor 7" LEDD.

- ABS + aluminium



### 0400680 DDIN Adapter

For fitting the monitor to a Volvo dashboard (FH/FM /FE).

- ABS



### 0400630 DDIN Adapter

For fitting the monitor to the dashboard of a Renault Magnum.

- ABS



## The advantages of Orlaco cables

- All cables are specially developed by Orlaco
- Special cables are available for various circumstances such as severe off-road conditions
- Resistant to oil and petrol
- Watertight cable connectors
- Operating temperature -40°C to +85°C

### Multi cable standard

This standard cable can be used if no special requirements like mechanical protection or dynamic movement of the cable is needed.

#### Including 4p molded connectors:

0301960	1m	0301870	2m
0301890	3m	0301880	5m
0301910	7,5m	0301930	8m
0301950	9m	0301900	11m
0301920	16m	0301940	21m
0301990	40m		

#### Including 7p molded connectors:

0304420	0,5m	0302820	1m
0304260	2m	0304410	6m
0304610	11m	0304620	16m
0305030	21m		



### Cable per metre (connectors not included)

1220170	Multi cable 1x coax + 5x wire
1220250	Multi cable 1x coax, 12x wires PUR
1220280	Multi cable armored 1x coax, 5x wire
1220350	Multi cable 2x coax + 5x wire PUR
1220900	Power Multi cable 7x wire AWG20
1222000	Coaxcable 75 Ohm RG50

Any required connectors can be ordered separately (page 31).



## Connectors

### 1310841 Connector 4p female Gold

- Recommended for multi cable

### 1312001 Connector 4p male Gold

- Recommended for multi cable

### 1310850 Connector 4p female PG9 Gold

- Recommended for dynamic and armored cable

### 1312050 Connector 4p male PG9 Gold

- Recommended for dynamic and armored cable

### 1311201 Connector 7p female Gold

- Recommended for multi cable

### 1322401 Connector 7p male Gold

- Recommended for multi cable

### 1311250 Connector 7p female PG9 Gold

- Recommended for dynamic and armored cable

### 1322450 Connector 7p male PG9 Gold

- Recommended for dynamic and armored cable

### 1310861 Connector 8p female Gold

- Recommended for dynamic and armored cable



## Adapter plugs

### 0357500 Adapter plug 4p male - 7p female

### 0357510 Adapter plug 4p female - 7p male



## Adapter cables

### 0304000 Adapter cable 4p female - 4p female

### 0304050 Adapter cable 4p male - 4p male





0303770



0304990



0308400



0306980



0306680

## Interface cables

To connect an Orlaco MIRROR Compact Camera to a third party monitor.

**Note:** with sideview camera always use adapter cable in combination with 0404300 Switcher 4Cam. Visit [www.orlaco.com](http://www.orlaco.com) for a complete overview.

- 0303770 Adapter cable 4pF - Cinch / power wires**  
(Iveco Connect rearview, Alpine, Pioneer, Kenwood, JVC, Trimble, TomTom, Garmin Fleet 670V)
- 0303860 Adapter cable 4pF - BNC**
- 0304060 Adapter cable 4pF - 3,5mm Jack plug**  
(Snooper 7000/8000/8500, Mercedes Telematics-Fleet board dispo pilot II, TomTom Bridge pro 827x)
- 0308430 Adapter cable b4F - 2,5mm Jack plug**  
(Snooper 5700/5800/6400/6800/8100)
- 0304990 Adapter cable m4F**  
(Volvo FH 4 / FM 4 SID High, Renault T 6YR02)  
(1 adapter cable per camera, up to 4 camera's possible)
- 0303090 Adapter cable 4pF - Bosch**  
(MAN/DAF/SCANIA) radio
- 0304870 Adapter cable m4F - r4M MAN MMT Monitor**  
(For vehicles with camera preparation 351LZ)
- 0308400 Adapter cable MAN MMT.2 / 2016 - r4M m4**  
(For vehicles with camera preparation 351 MA/MC/ME/MF)
- 0308410 Adapter cable MAN MMT.2 / 2016 - r4M RA m4F**  
(For vehicles without camera preparation)
- 0306980 Adapter cable r4F - m4F Scania Premium**  
radio next generation
- 0308440 Adapter cable b4F - 3,5mm Jack plug**  
(Garmin Truck navigation DEZL770 LMT)

## Mercedes interface cables

**Note:** The monitor automatically switches to rearview when reversing. Additional cameras require manual switching (on steering wheel or radio) from navigation to camera view.

- 0304660 Adapter cable 4pF - Mercedes-Benz**  
radio/navigation  
(For 7" multimedia system without camera preparation)
- 0306680 Adapter cable b4F - HMI Fakra Male b4F**  
(For vehicles with camera preparation J9J in combination with an instrument-display or multimedia system)



## Cable disconnection sets

0351070 7p

0351130 13p

- Watertight
- With caps



0351100 10p harting

- Watertight
- With caps



## Interconnection cables

0304020 Cab cable

- 1 x coax + 5 x wire PVC Ex
- Including 4p molded male connector & 10p harting female
- Operating temperature between -40°C to +85°C



0303630 Spiral interconnection

3,5m spiral cable between tyre carrier and adjustable bumper.

- Oil and petrol resistant
- With double coax
- Including 10p harting plugs



0303740 Cable trailer

- 25m multi cable
- Including 4p molded female connector
- Including 10p harting male



## Multiview boxes

The MultiView box II is an advanced video imaging system for up to 4 cameras. There are many possibilities of different split views in 5 selectable video channels.

- Stainless steel housing
- A MultiView box II can only be connected to an Orlaco Serial Monitor. Or via the Serial Cable 6m (8976330) when a non-serial monitor is used



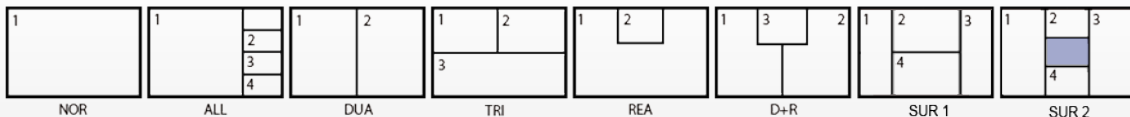
### 0405100 MultiView box II

- 4 camera inputs (4x Compact Camera)

### 0405110 MultiView box II, serial

- 4 camera inputs (3x Compact Camera 1x AF-Zoom Camera)

Preset view options for channel 1-4:



Default channel 5:



## Switchers

Input and power supply for three cameras and in combination with a Y-split cable: four cameras.

- Cameras can be switched over automatically or manually

### 0404040 Switcher UNI

- Waterproof IP54 according to IEC 60529
- 4p output for monitor

### 0404080 Switcher UNI IP67

- Waterproof IP67 according to IEC 60529
- 4p output for monitor



### 0404060 Switcher Serial IP67

- Waterproof IP67 according to IEC 60529
- 7p output for monitor
- Only in combination with a Serial monitor

## 0404300 Switcher 4Cam

This video switcher for third party monitors has 4 video inputs and 1 video output

- Connect up to 4 cameras (PAL or NTSC) to a third party monitor (only applicable for third party monitors)
- Including 3,85m power cable



## Digital video recorder

### 0000300 DVR one channel

Digital video recorder with one camera input and one video output

- Can be used with a compact camera (4p) or serial camera (7p)
- Video loop function
- Automatic timestamp
- Including 32GB SDHC-card for max 72 hours of storage and SD-card reader



### 0000250 DVR Multi view

Digital video recorder with four camera inputs and one video output with multiview options.

- Suitable for compact cameras (4p)
- Automatic timestamp
- Including 128GB 80 MB/s SDXC-card for max 72 hours of storage



### 0000260 DVR 4CAM

Digital video recorder with four camera inputs and four video outputs.

- Suitable for compact cameras (4p)
- Including 128GB 80 MB/s SDXC-card for max 72 hours of storage



## Video distributors

- For connecting a second monitor.



### 0407070 Video distributor 1 in - 2 out

- Including 0,2m cables and 4p connectors

### 0407090 Video distributor 1 in - 2 out, Serial

- Including 0,2m cables and 7p connectors



### 0407001 Video distributor 1 in - 3 out

For connecting a second and third Orlaco monitor.

- 7-32 V/DC
- Cables and connectors are not included



### 0407050 Video distributor 4 in - 12 out

- Cables and connectors are not included



## Video control unit

### 0504730 Orlaco Smartbox

For connect and control the Orlaco AF-Zoom camera, Pan & Tilt and TIC camera.

- IP67
- Stainless steel housing



## Spectrum Scanner wireless video transmitter & receiver

- Including powercable and two adjustable brackets for transmitter and receiver
- 8 video channels
- Full On Screen Display (OSD) functionality for system settings
- Please contact your dealer for further advice



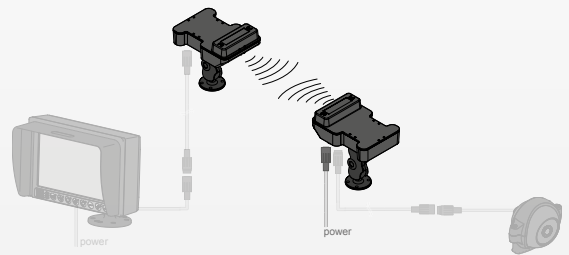
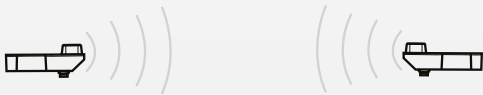
### 0004061 RoundMax 150

- Omnidirectional antenna with horizontal orientation
- Maximum range 150m (dependent on surroundings)



### 0004091 LineMax 300

- Directional antenna with vertical orientation
- Maximum range 300m (dependent on surroundings)



## Junction Box

### 0504840 Junction Box AF-Zoom/PTZ

- For use with AF-Zoom and Pan & Tilt cameras
- 10p



## Power supply

### 0004601 Power supply 9-36V

- Maximum cable length 200m
- Power input 9-36V/DC
- Power output 12V/DC





## Pan & Tilt

### 0507061 Pan & Tilt max 6kg

- IP68
- Aluminium housing
- 24V/DC
- Weight 2,3kg
- Pan speed 30° per sec, tilt speed 10° per sec



### 0507040 Pan & Tilt max 12kg

- IP68
- Aluminium housing
- 24V/DC
- Weight 6,5kg
- Pan speed 32° per sec, tilt speed 12° per sec

### 0507100 Fastening plate

For quick mounting of camera on Pan & Tilt unit.



## Control

### 0503500 Control unit Pan & Tilt

Power supply and control for Pan & Tilt unit (0507061).

- Joystick (0506500) is required
- Power input 24V/DC
- Aluminium housing



### 0506500 Joystick

- Built-in
- Operating temperature between -30°C to +75°C
- IP40
- Telemanique



### 0502650 Handheld control AF (serial)

For activating of the Pan & Tilt / AF-Zoom / TIC camera.

- 7 pins
- Zoom function
- Including 5m power supply cable



### 0502620 Control panel mount

Built-in keyboard for activating of the Pan & Tilt / AF-Zoom / TIC camera.

- Joystick (0506500) are not included
- Power input 24V/DC
- Dimensions: 140x116x80mm

# Certifications

## ISO Certifications

All Orlaco products are manufactured according to the latest Quality Management System Standards:

**ISO/TS 16949 : 2009**

**ISO 9001 : 2008**

Additionally, all Orlaco products are manufactured according to the latest *Environmental Management System Standard*:

**ISO 14001 : 2004**



## Type-Approval Certifications

**Regulations 10 and 46** are used to determine the Type-Approval for **EMC** and **Indirect Vision** (Mirror Directive). **R46** describes mirror specifications for truck compliance. Orlaco Frontview systems meet all these requirements. **R10** describes the **EMC** behavior of the Orlaco Camera and Monitor systems.

## TÜV Automotive Certifications

The European Agreement concerning the International Carriage of Dangerous Goods by Road (**ADR**) demands additional equipment. Orlaco Camera and Monitor systems and connection cables comply with these regulations.

## Compliance

Our Camera and Monitor systems are produced entirely in line with the **CE-marking** and the most recent applicable directives and product standards (e.g. **EMC, FCC, Machinery, R&TTE**). Orlaco products are compliant with **RoHS** and **REACH**.





## Liertechniek

- Hijslieren
- Treklieren
- Afstandsbedieningen
- Kabels
- Montagesets



## Verlichtingssystemen

- Lichtbalken
- Zwaailampen
- Sirenes
- Zoeklampen
- Werkverlichting



## Energietechniek

- Omvormers en acculaders
- Monitoren en bedieningen
- Omvormer-lader combinaties
- Generatoren
- Accu's



## Camerasystemen

- Monitoren
- Camera's
- Kabels
- Switchers
- Recorders



## Laad- en lossystemen

- Laadkranen
- Laadliften
- Rolzeilaandrijvingen



## Afstandsbedieningen

- Draadloze sets
- Besturingen
- Specials en maatwerk



## Tanktransportsystemen

- Compressoren
- Complete kits
- Vloeistofpompen
- Hydraulische koelers



## Aandrijftechniek

- Tractiemotoren
- Pompmotoren
- AC synchroonmotoren en besturingen



# WIEGEL

Transport Equipment | Stokvis Group



## Service

Met haar vestigingen in Nederland, België en Duitsland is Wiegel in staat snel service te verlenen waar en indien nodig.