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**Telescopic crane** 



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Straddle carrier

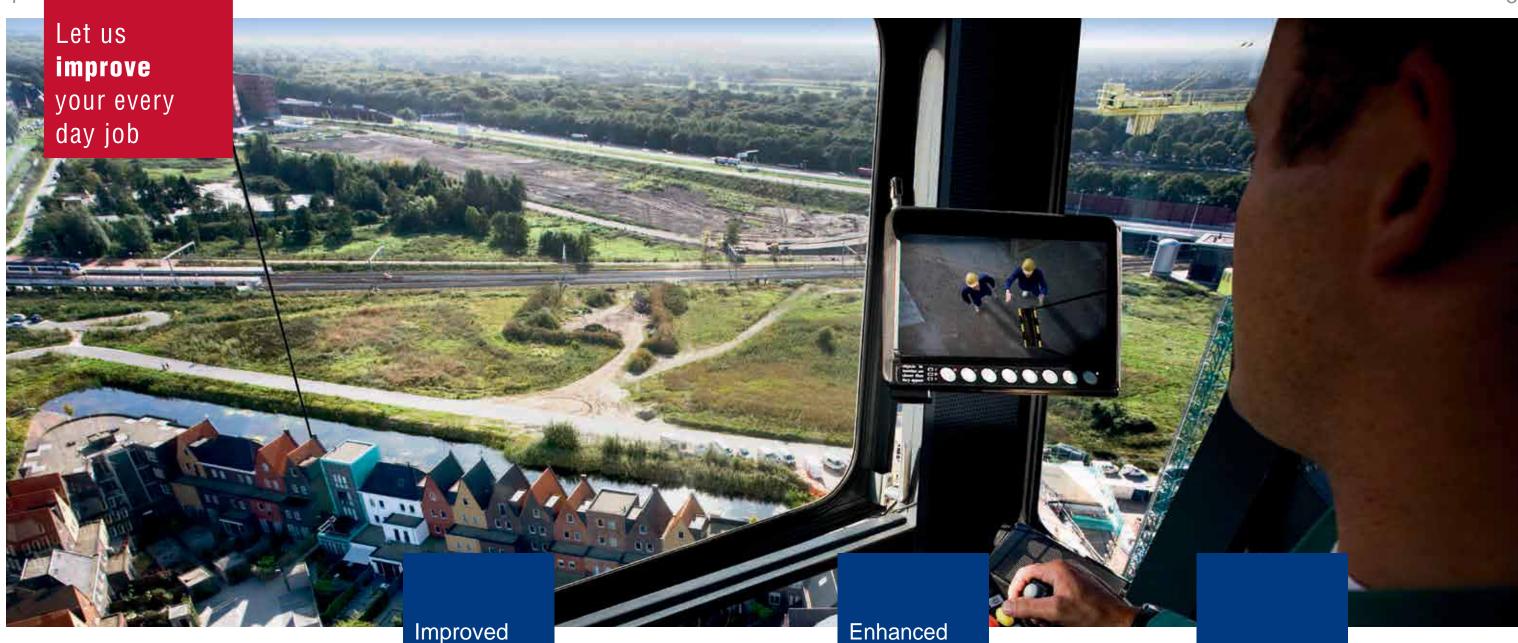
Ship to shore crane

**RTG** crane

#### Why Orlaco?

Welcome to the Orlaco product catalogue. We are personally committed to bringing you the best camera and monitor solutions possible. To help create safer and more secure workplaces around the world. Our professional team has spent over twenty-five years designing and manufacturing a variety of certified, reliable and complete camera display solutions that effectively eliminate the blind spots around vehicles, machinery and vessels. We are confident that the options offered in this catalogue will not only help you to improve the safety, security and efficiency of your fleet, but also to enhance the ergonomics and comfort for your operators. That is what Orlaco stands for. We invite you to share your ideas and experiences with us.







A crane camera not only enables its operator to work more efficiently, it could also largely contribute to job site safety. With an Orlaco vision system, a crane operator is more independent and not solely reliant on instructions from the signalman. The Orlaco vision system allows crane operators to verify the instructions received from the signalmen, virtually eliminating the age-old misunderstanding of "your left, or mine?" In fact, a recent study, done by an end-user, shows that tower cranes performing "blind" lifting operations work 21% faster and more efficiently while using an Orlaco vision system than cranes operating without the system. Orlaco solutions help to increase the all-round safety and efficiency of the crane and its operator – both on and off the job site.

Safety and

Efficiency

Modern cranes have become more comfortable. Their cabins are now air-conditioned and have air suspension seats. Even with these extra comforts, crane operators are often left unnaturally twisting and turning to keep track of the job site. This can lead to back and neck injuries, or even force an operator to stop working indefinitely. An Orlaco vision solution could help crane operators to maintain correct posture, to work in more comfort. And because Orlaco systems allow a crane operator to immediately see all around the crane without twisting and turning, damage to objects, people or even the crane itself could be greatly minimized. Prevention, ergonomics and comfort – a triple benefit!

**Ergonomics** 

and Comfort

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.

Certified

Quality

Why Orlaco Why Orlaco

Loadview

# Load moving sight solutions



page 50-51)

RadarEye setting: Transparent visualization of the radar-zones on the display. (standard preset setting)

CornerEye

PAGE 34

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.



position of the hook and load.

LV7010 / LV7025 - PAGE 22 / 23

A Loadcam provides images of the working area and is fitted on the

boom. It is positioned in such a way that it looks vertically downwards

on to the top of the hook and load. The monitor in the cabin ensures

that the operator has continuous view while hoisting, regardless of the

Loadview





ORLACO







RV7520 / HD - PAGE 30

Not only safe reversing, but also knowing what is happening behind the crane. The chance of an accident is greatly reduced by a Rearcam. Available in analog and digital version.







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.

12 Crawler crane



#### Winchview



WV7200 - PAGE 29

It is also possible to connect the Winchcam to the monitor. The crane operator is able to switch between the cameras by simply pushing on a button. On the larger types of crawler cranes, it is possible to extend the winch view system with additional cameras. Up to 4 cameras on the same monitor. Improve it with a Multiview box and the operator has continuously up to 4 cameras displayed at the same time on the screen.



Rearview





RV7520 / HD - PAGE 30

Not only safe reversing, but also knowing what is happening behind the crane. The chance of an accident is greatly reduced by a Rearcam. Available in analog and digital version.





Loadview



LV7050 / LV7055 - PAGE 25-26

A Loadcam provides images of the working area and is fitted on the boom. It is positioned in such a way that it looks vertically downwards on to the top of the hook and load. The monitor in the cabin ensures that the operator has continuous view while hoisting, regardless of the position of the hook and load.

Vision solutions

14 Drilling-Pilling crane Crane truck 15



Vision solutions

Vision solutions

16 Hydraulic port crane

Lattice harbour crane 17



Vision solutions

Vision solutions

18 Straddle carrier RTG crane 19

#### **HD Rearview**



Not only safe reversing, but also knowing what is happening behind the crane. The chance of an accident is greatly reduced by a HD Rearcam.







Not only safe reversing, but also knowing what is happening behind and near the crane. The chance of an accident is greatly reduced by a Sidecam. Another possible application is a camera for the positioning of containers. Time loss is thus reduced to the minimum.



#### **Positioning System**



This Positioning System for Straddle Carriers works independently from the STS Crane and enables a straddle carrier driver to position the container exactly in the middle of the crane by using two cameras mounted in the middle of the spreader and two monitors in the cabin.



#### Loadview



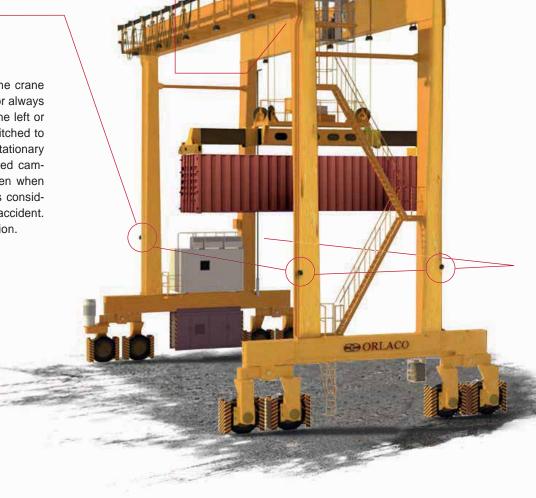
Good visibility when moving the containers. You have a good view of the operations behind and under the crane. How and where the Loadcam is placed depends on your needs.



#### **Driven-Direction-View**



Positioning compact cameras on the crane legs ensures that the crane operator always has a good view while moving to the left or right. The four cameras can be switched to a quad view when the vehicle is stationary and the views from the two required cameras can be shown in a split screen when moving to the left or the right. This considerably reduces the chances of an accident. Ask your dealer for further information.



#### **HD-IP SMARTVIEW SOLUTIONS**

Orlaco also offers HD-IP cameras that support the TCP/IP protocol. This enables streaming of high resolution video images via digital networks. With this technology you have the flexibility to connect the HD IP cameras to any location in your network and PC-monitors. Through a single network cable you have access to all camera images. Together with the Orlaco Smartview software, you have a complete view on operations. The cameras are compatible with other IP devices that also hold an Onvif protocol, for example Network Video Recorders.

20 Ship to shore crane



#### **ETHERNET VISION SOLUTIONS**

Our compact Ethernet camera EMOS gives you the best HD quality video images and withstand the toughest working conditions. Thanks to the Ethernet technology, this camera is ideal for integration into onboard computer systems. The camera is able to stream practically real-time in MJPEG or H.264 to any type of monitor.

The Rearcam ensures that the operator can see behind the STS on the working space at all times. A quick look at the monitor gives the operator an instant view of the area in which the container should be positioned.

**HD Rearview** 

Vision solutions

Vision solutions

#### Set Loadview Telescopic crane / RT-Crane (7" RLED - wireless) LV7010 (0402910)

1. AF-Zoom Camera PAL Serial

0103532 - page 38

**SETS** 

2. Monitor 7" RLED Serial, including bracket

0208632 - page 41

3. Spectrum Scanner LineMax 300

0004091 - page 49

4. Oil damped camera bracket

0701200 - page 53

5. Quick release set Weld

0910240 - page 54

6. Multi cable p7M-m7F 1m

0305040 - page 40

7. Multi cable m7M - p7F 1m 0305050 - page 40

8. Zoom Control box

0702100 - page 48

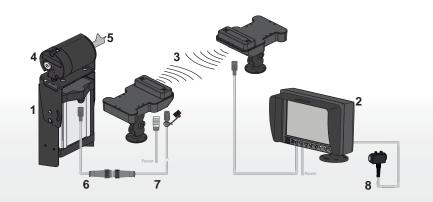
Optional: Extra weight 0910280 - page 54

Optional: Foot switch 0502630 - page 48

Optional: Multi cable 7p 16m

0304620 - page 39





#### Set Loadview Telescopic crane (12" RLED - wireless) LV7015 (0406700)

1. AF-Zoom Camera PAL Serial

0103532 - page 38

2. Monitor 12" RLED Serial, including bracket

0411130 - page 41

3. Spectrum Scanner LineMax 300

0004091 - page 49

4. Oil damped camera bracket

0701200 - page 53

5. Quick release set Weld

0910240 - page 54

6. Multi cable p7M-m7F 1m

0305040 - page 40

**7. Multi cable m7M - p7F 1m** 0305050 - page 40

8. Zoom Control box

0702100 - page 48

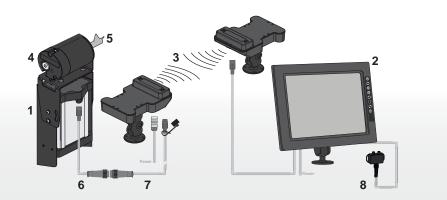
Optional: Extra weight 0910280 - page 54

Optional: Foot switch

0502630 - page 48

Optional: Multi cable 7p 16m 0304620 - page 39





# Set Loadview Telescopic crane **LV7020** (0402920)

1. AF-Zoom Camera PAL

Serial

0103532 - page 38

2. Monitor 7" RLED Serial,

including bracket

0208632 - page 41

3. Spring driven cable reel

50m

0710270 - page 42

4. Oil damped camera

bracket

0701200 - page 53

5. Quick release set Weld

0910240 - page 54

6. Multi cable p7M-m7F 1m

0305040 - page 40

7. Multi cable m7M - p7F 1m

0305050 - page 40

8. Zoom Control box

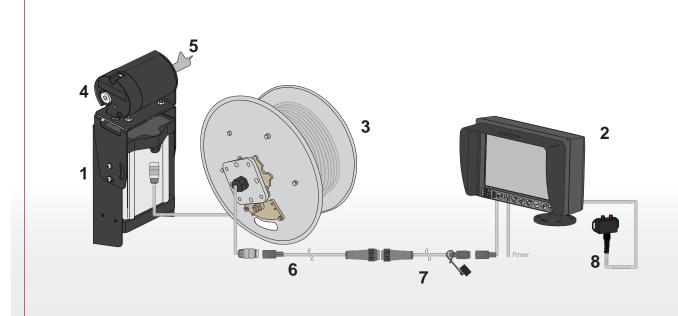
0702100 - page 48

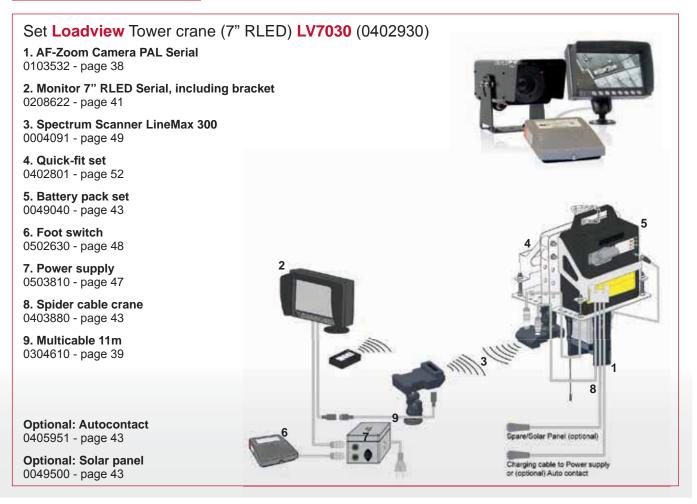


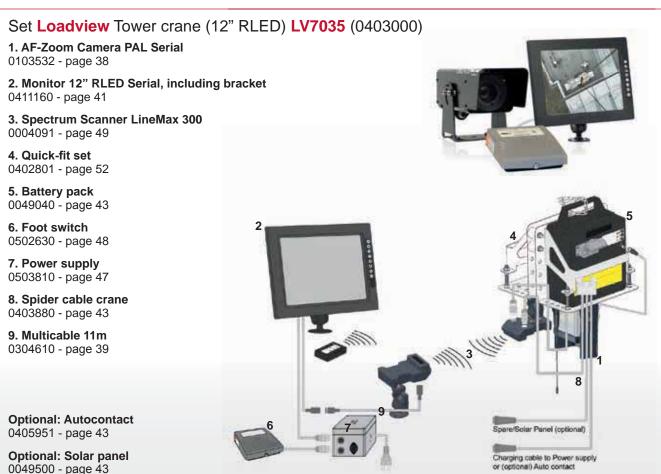
Optional: Extra weight 0910280 - page 54

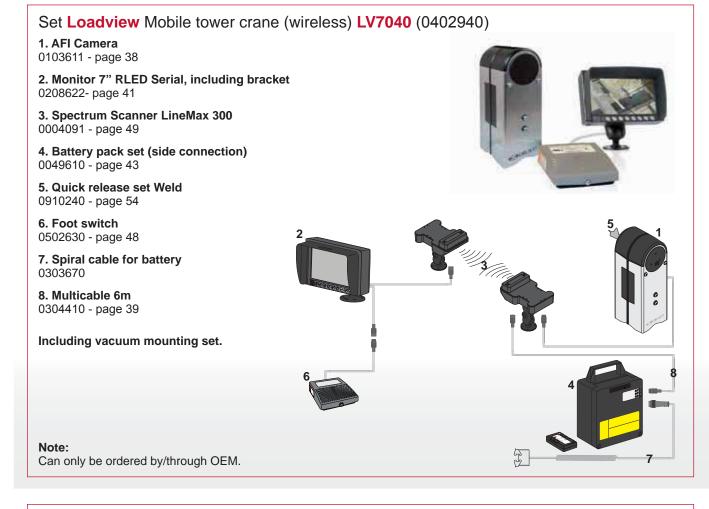
Optional: Foot switch

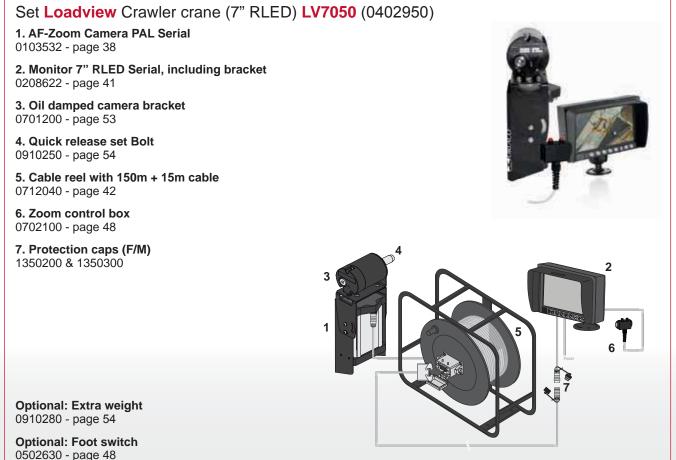
0502630 - page 48











#### Set Loadview Crawler crane (12" RLED) LV7055 (0403010)

1. AF-Zoom Camera PAL Serial

0103532 - page 38

2. Monitor 12" RLED Serial, including bracket

0411130 - page 41

3. Oil damped camera bracket

0701200 - page 53

4. Quick release set Bolt

0910250 - page 54

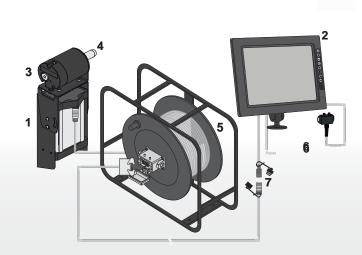
5. Cable reel with 150m + 15m cable

0712040 - page 42

6. Zoom control box 0702100 - page 48

7. Protection caps (F/M)

1350200 & 1350300



Optional: Extra weight 0910280 - page 54

Optional: Foot switch 0502630 - page 48

#### Set Loadview Lattice harbour crane (7" RLED) LV7060 (0402960)

1. AF-Zoom Camera PAL Serial

0103532 - page 38

2. Monitor 7" RLED Serial, including bracket

0208622 - page 41

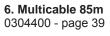
3. Oil damped camera bracket

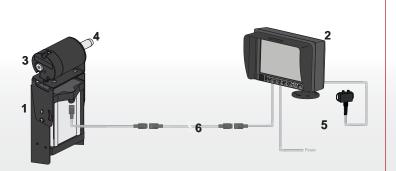
0701200 - page 53

**4. Quick release set Bolt** 0910250 - page 54

5. Zoom Control box

0702100 - page 48





Optional: Extra weight 0910280 - page 54

Optional: Foot switch 0502630 - page 48



1. AF-Zoom Camera PAL Serial

0103532 - page 38

2. Monitor 12" RLED Serial, including bracket

0411130 - page 41

3. Oil damped camera bracket

0701200 - page 53

4. Quick release set Bolt

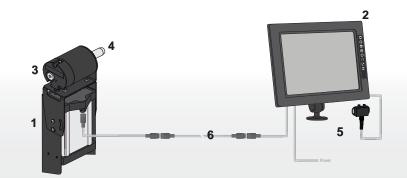
0910250 - page 54

5. Zoom Control box

0702100 - page 48

6. Multicable 85m

0304400 - page 39



Optional: Extra weight

0910280 - page 54

Optional: Foot switch 0502630 - page 48

Set Loadview Hydraulic port crane LV7070 (0402301)

1. Camera FAMOS 80°

0171030 - page 37

2. Monitor 7" RLED, including bracket

0208672 - page 41

Cables 4p

To be ordered separately, see page 39.



Optional: Protection cover 0402320 - page 53



#### Set **Loadview** Top crane (7" RLED) **LV7080** (0402980)

1. AF-Zoom Camera PAL Serial 0103532 - page 38

2. Monitor 7" RLED Serial, including bracket 0208622 - page 41

3. Oil damped camera bracket

0701200 - page 53

4. Quick release set Weld

0910240 - page 54

5. Power supply 0503810 - page 47

6. Foot switch 0502630 - page 48

7. Multicable 85m 0304400 - page 39

Optional: Suction cup mounting bracket 0401310 - page 52

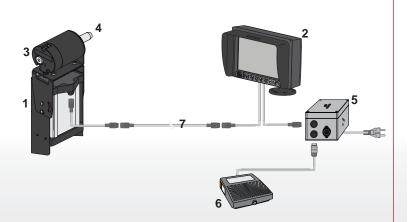
**Optional: Compact Joystick** 

0702000 - page 48

**Optional: Zoom Control box** 

0702100 - page 48





#### Set **Loadview** Top crane (12" RLED) **LV7085** (0406720)

1. AF-Zoom Camera PAL Serial

0103532 - page 38

2. Monitor 12" RLED Serial, including bracket

0411160 - page 41

3. Oil damped camera bracket

0701200 - page 53

**4. Quick release set Weld** 0910240 - page 54

5. Power supply

0503810 - page 47

6. Foot switch

0502630 - page 48

7. Multicable 85m 0304400 - page 39



0401310 - page 52

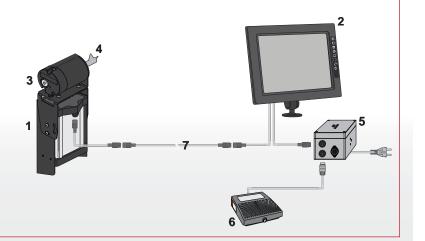
**Optional: Compact Joystick** 

0702000 - page 48

**Optional: Zoom Control box** 

0702100 - page 48









1. Camera FAMOS 60°

0171040 - page 37

2. Monitor 7" RLED, including bracket

0208603 - page 41

Cables 4p

To be ordered separately, see page 39.



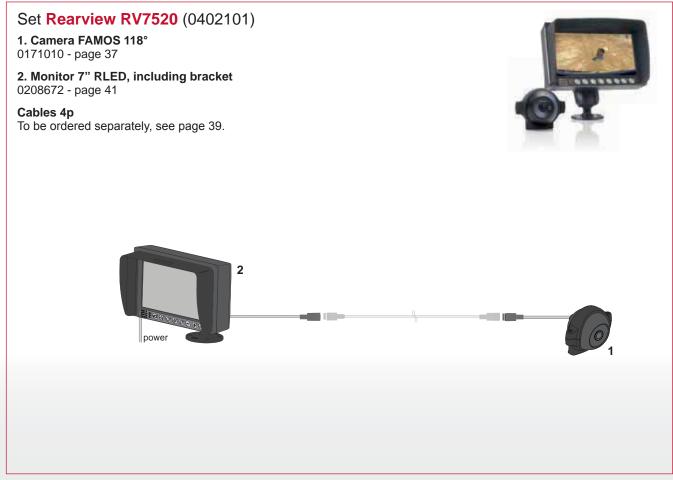
Optional: MultiView box II

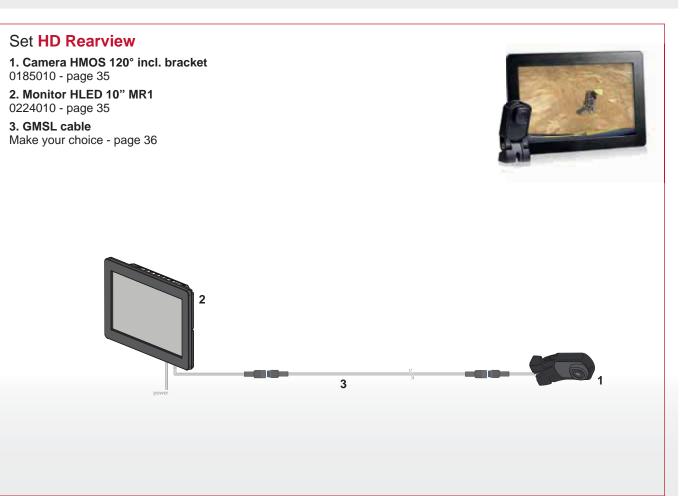
0405100 - page 46

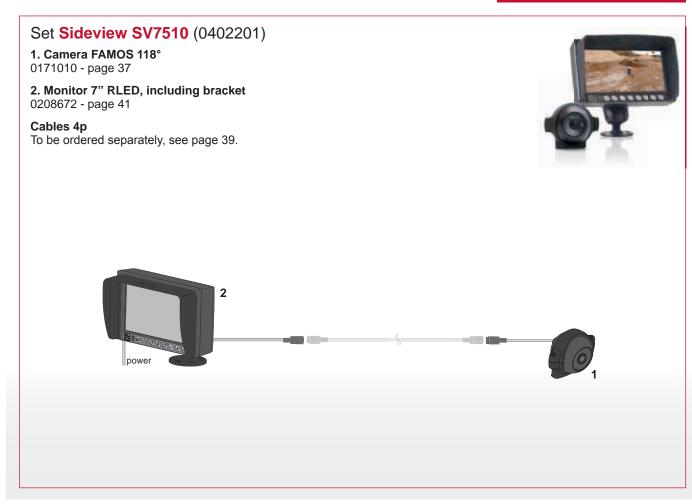
Optional: Camera FAMOS 80° IR LED

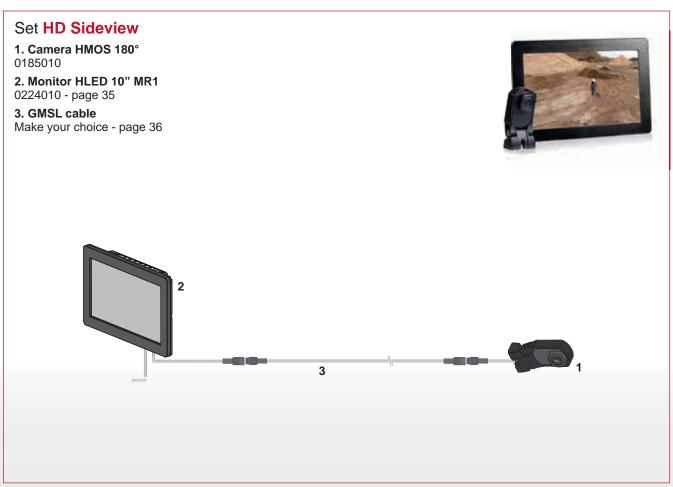
0171610 - page 37

Remark: Also available in digital version, see page 30 Rearview HD





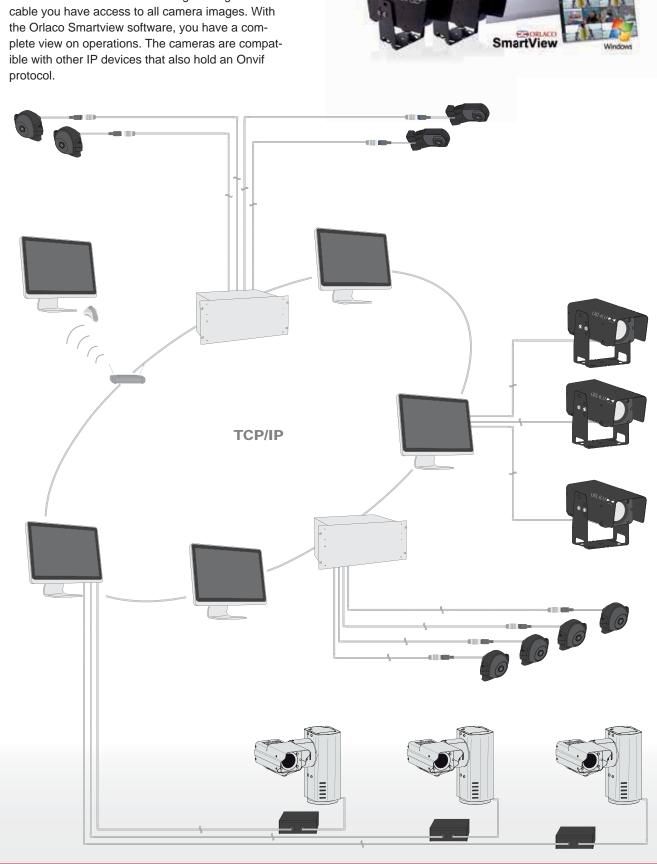




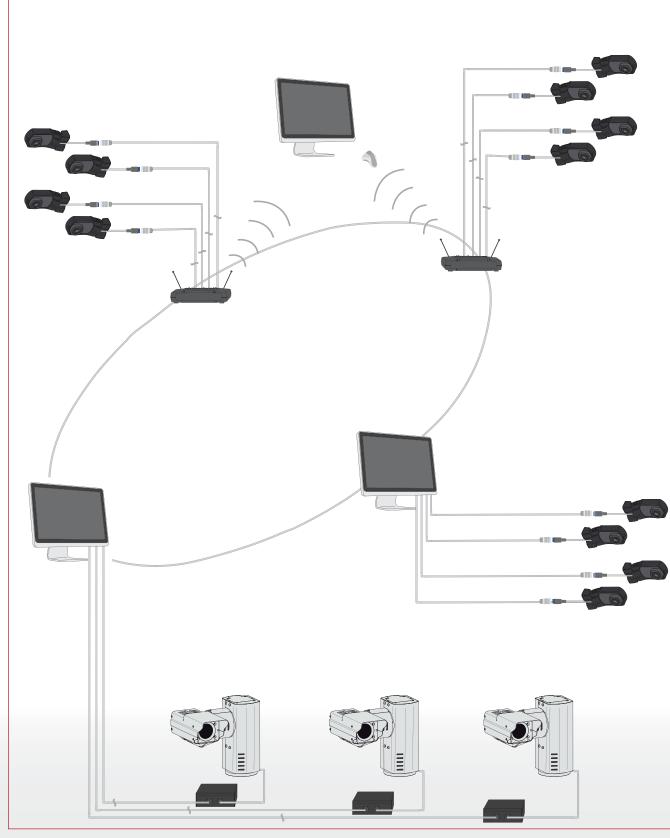
#### Set HD-IP

Orlaco's HD-IP cameras support the TCP/IP protocol. This enables streaming of high resolution video images via digital networks. You have the flexibility to connect the HD IP cameras to any location in your network and PC-monitors. Through a single network





## Set **EMOS** The EMOS compact camera gives you the best HD quality video images and can withstand the toughest working conditions. This camera is ideal for integration into onboard computer systems. The camera streams in MJPEG or H.264 to any type of monitor.



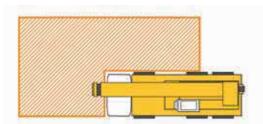
# **Set CornerEye (0400040)** 1. Set GMSL camera with CornerEye bracket 0185610 a. Camera HMOS 180° b. CornerEye Bracket 2. Monitor HLED 10" 0224000 - page 35 3. Monitor Bracket A pillar 0402610 4. GMSL cable Make your choice - page 36

#### CornerEye delivers a real-time field of vision of 270°



Get excellent view on blind spots around crane vehicles with the revolutionary CornerEye camera monitor system. Ultimate digital technology and an effective application deliver a unique vision solution. The system has a wide angle lens that, combined with the latest technology, delivers a field of vision of 270°. An ideal solution for rear or side view on a crane vehicle.

- 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





#### 0400040 Set CornerEye

• Including HMOS GMSL camera with bracket, 10" monitor with bracket and 3m GMSL cable.

#### The qualifications of our High Definition Digital Cameras

- High resolution CMOS rolling shutter Improved EMC-standards
- 1280 x 960 video image
- Light sensitivity 0.1 lux
- Excellent impact- and vibrationresistance
- · 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



Compact, industrial high definition GMSL camera.

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

- With 0,5m cable including a GMSL waterproof molded 4p male connector
- Including camera bracket



#### **Cameras EMOS**

Low latency, high definition ethernet camera specifically designed for onboard computer systems.

Туре	Art. no.
30°	0186040
60°	0186030
90°	0186020
120°	0186010
180°	0186000

- Image streaming in MJPEG or H.264
- Total system latency less than 100ms
- Communication according to ISO 17215 protocol + EMOS IR LED 0186100

#### **Camera EMOS IR LED**

Art. no. Type 120° 0186100 60° 0186100



#### **Monitor HLED**

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

0224010 Monitor 10" HLED MR1 0224000 Monitor 10" HLED

• Only applicable with CornerEye





#### **GMSL** cable

Designed for use with HMOS cameras.

#### **Including GMSL molded connectors:**

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



#### **GMSL** dynamic cable

0311440	0311420
0311400	0311430
0311410	

#### **Ethernet cable**

Designed for use with HD-IP AF-zoom and PTZ cameras.

1221340 Ethernet cable, open wired

#### The additional qualifications of our HD-IP zoom cameras

- HD Image CMOS Sensor
- · Chemically hardened lens
- 30x zoom

- Resolution: 1920 x 720 at 60 fps
- Video streaming over TCIP/IP
- Conform ONVIF-protocol
- Operating temperature between
- -40°C and +60°C
- Input Voltage 18...30V/DC



#### **AF Zoom HD-IP Cameras**

- Including 5m Ethernet cable, open wired
- · Watertight IP68 and IP69K

0103810 AF-Zoom HD-IP Camera Aluminium

0103820 AF-Zoom HD-IP Camera SSt



#### Pan & Tilt Zoom HD- IP Cameras

- Including 5m Ethernet cable, open wired
- Pan angle 340° (170° to left, 170° to the right) tilt angle 180° (90° up, 90° down)
- 32 presets for camera positions
- Watertight IP69K

0506810 PTZ HD-IP Camera Aluminium

0506820 PTZ HD-IP Camera SSt

#### 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

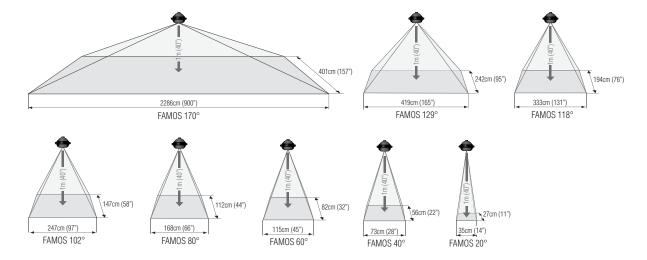
Whatever you select, the system can be easily installed and is plug-and-play.

**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
- Optimized impact- and vibrationresistance
- Scratch-resistance by chemically hardened lens
- Automotive molding-filled housing, watertight IP69K according to DIN 40050-9
- Improved EMC-standards
- Operating temperature between -40°C to +85°C
- Heated lens glass, therefore no problems with condensation or frost
- Fixed lens
- IP68 dust- and waterproof according to IEC 60529
- The camera has a 0,5m cable including a waterproof molded 4p connector male



#### **Cameras FAMOS**

Туре	Art. no. PAL	Art. no. NTSC
20°	0171060	0171160
40°	0171050	0171150
60°	0171040	0171140
80°	0171030	0171130
102°	0171020	0171120
118°	0171010	0171110
129°	0171000	0171100
170°	0171070	0171170



#### **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.

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

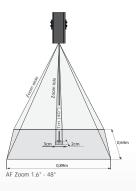
• UV-transparent front cover



Products Products

#### 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**

#### 0103532 AF-Zoom Camera Serial

- Including 6m multicable fitted with 7p connector (female)
- Power supply 12V 24V/DC when cable is <50m Power supply 18V - 24V/DC when cable is >50m
- 2,6kg
- Dimensions: 260x140x122mm (without bracket)



#### 0103611 AFI Auto Focus Insulated

Designed for usage on cranes to have a camera pointed downwards perpendicular.

- Power supply 12V 24V/DC when cable is <50m Power supply 18V - 24V/DC when cable is >50m
- · Damper absorbs sudden movements and procure stability
- Stainless steel mounting hardware
- Including 6m multicable fitted with 7p connector (female)

#### 0103621 AFI Auto Focus Insulated Arctic

• Operating temperature -50°C to +85°C



#### **Thermal Imaging Camera**

#### 0103732 TIC-camera 320 9Hz

- Thermal Imager Uncooled VOx microbolometer
- Including 6m multicable fitted with 7p connector (female)
- 25° lens (up to 450m detection)
- Operating temperature between -40°C to +80°C
- 12-30V/DC max 8W
- 2x and 4x zoom



**Products** 

#### Pan & Tilt Zoom Camera

- Pan angle 360° (180° to left, 180° to the right) tilt angle 180° (90° up, 90° down)
- Pan & tilt speed 12,5°/sec

#### 0506912 PTZ Camera Stainless steel

· Stainless steel housing

#### 0506953 PTZ Camera Aluminium

· Aluminium housing

#### The advantages of Orlaco cables

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

#### Armored cable especially for severe off-road conditions

This cable offers good protection against severe conditions. This is due to the additional internal galvanised braided steel wire armor. Attention: if cable is constantly moving as on a boom or hinged construction, please use the dynamic cable.

• For EMC 100V/m

#### Including 4p molded connectors:

moraamig +	p illolaca (	, oi ii i cotoi o.	
0303342	1,5m	0303352	3m
0303472	5m	0303362	7,5m
0303372	9m	0303482	11m
0303492	16m	0305021	20m
0305011	28m		



#### **Dynamic cable**

Designed for dynamic use.

• Soft cover with small bend radius

#### Including 4p molded connectors:

0304371	0,5m	0304281	1m
0305341	3,5m	0304341	5m
0304381	6m	0304391	8m
0304431	9m	0304441	10m
0301811	11m	0304451	12m
0301731	15m	0301831	20m

#### **Including 7p molded connectors:**

3m	0304470	4m
5m	0304490	8m
9m	0304570	10m
11m	0304590	17m
	5m 9m	5m 0304490 9m 0304570



#### 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	0304260	2m
0304410	6m	0304610	11m
0304620	16m	0305030	21m
0304400	85m		











• JIB cable p7M - p7F

0305060	2m	0305110	7m
0305120	9m	0305070	11m
0305130	13m	0305080	16m

• Multi cable p7M - m7F

0305040 1m 0305140 2m

• Multi cable m7M - p7F

0305050 0305090 1m 2m 0305150 3m 0305160 5m



#### **Cable per metre (without connectors)**

1220110	Multi cable 1x coax, 2x power, 1x data
1220170	Multi cable 1x coax, 5x wires

1220280 Multi cable armored 1x coax, 5x wires

1220350 Multi cable 2x coax, 5x wire

1220600 Dynamic cable 1x coax, 5x wire

1220900 Power cable 7x wire

1222000 Coax cable 75 OHM RG59

Any required connectors can be ordered separately. (page 40)



#### **Washer Wiper**

- Reservoir 8L with 6m rubber hose
- Wall mount reservoir housing h647 x w436 x d250mm
- Electrical pump activated
- Controlled by Orlaco SmartView or VCU System (not included)

#### 0405810 Washer Wiper Installation PTZ Camera

- Including mounting plate, nozzle and wiper stainless steel 316
- Only in combination with the stainless steel PTZ (0506912)

#### The possibilities offered by Orlaco LED monitors

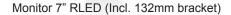
- Automotive TFT liquid crystal display module, LED backlight
- Operating temperature between -40°C to +85°C
- Impact and vibration resistance meet the stringent requirements
- Power protected against:
- Induction voltages

- Load dumps
- Over- and undervoltage
- Mirror image setting
- High resolution pixel WVGA 800xRGBx480
- Brightness automatically adjusts to the ambient light
- Option of a marker line per camera

on the screen for the optimum determination of distance

- Integrated sun visor
- IP67 according to IEC 60529
- Full On-Screen-Display (OSD) in 13 languages
- Watertight molded connectors







Monitor 12" RLED (Incl. 190mm bracket)

#### **Monitors RLED**

Туре	Video cable / connector	Power cable	Bracket	Art. no.
7"	2m / 4p female	2m open wired	132mm	0208603
7" 4Cam	2m Y-split / 4p female	2m open wired	132mm	0208612
7" Serial	6m / 7p female	6m / 8p male	132mm	0208622
7" Serial	6m / 7p female	6m open wired	132mm	0208632
7"	4m / 4p female	4m open wired	132mm	0208672
7" CAN SRD	6m / 7p female	6m open wired	132mm	02088717"
7" SP 12"	2m Y-split / 4p female 4m / 4p female	2m open wired 4m open wired	132mm 190mm	0223220 0411000
12" 4Cam	2m Y-split / 4p female	2m open wired	190mm	0411040
12" 4Cam Serial	2m Y-split / 4p female	2m open wired	190mm	0411170
12" Serial	6m / 7p female	6m open wired	190mm	0411130
12" Serial	6m / 7p female	6m / 8p male	190mm	0411160
12" CAN SRD	6m / 7p female	6m open wired	190mm	0411300

4Cam Cable can be used to easily extend your system to display two cameras on one monitor or up to four

cameras per monitor in combination with a Switcher.

**CAN SRD** Specially designed for RadarEye systems. (see page 50-51)

Serial For serial connection (Zoom cameras, PTZ-Cameras and MultiView box).



2291230 Sunmask 12" Monitor Horizontal ABS Sunmask specially designed for the 12" RLED Monitor.





#### Cable reels

#### 0712020 Cable reel

- Maximum capacity 150m cable 1220150
- Including 10p harting connectors

#### 0712040 Cable reel with 150m + 15m cable

- Including 150m multicable with 7p female connector
- Including 15m multicable with 10p female Harting connector
- Including mounting strips and pipe clamps

#### 0710270 Spring driven cable reel

- Including 55m cable 1220250 on reel with 7p female connector and 5m monitor cable with 7p male connector
- Holds the cable tight

#### 0712010 Cable reel

- Capacity up to 100m cable on reel with 10p male connector
- Holds the cable tight

#### 0710240 Cable reel spring driven

- · Holds the cable tight
- 7m cable (1220150) and 12m cable (1220600)
- Watertight connector straight (1310850 & 1312001)
- Operating temperature 0°C to +75°C

#### 0710280 Cable reel spring driven

 Specification identical to 0710240 except for: operating temperature -40°C to +75°C

#### **Orlaco Battery packs parts**

Suitable for Battery packs 0049040 and 0049610.

0502810 Rer 0502811 Rer

Remote control

Remote control 863,3 Mhz

0004160 Accu

• 12V / 18A

#### 2109350 Antenna with BNC

- CB Antenna, lenght 330mm
- · Power: 15 watt
- Frequency 26-28MHz
- · Cable length: 4m

#### 2109351 antenna 868 Mhz

with bnl

#### **Battery packs**

#### 0049040 Camera Control Unit + Battery

- Battery, 12VW, 18Ah
- Including spiral cable (length 7m) for charging the battery manually (0303670)
- Battery pack is IP 65 watertight
- Can be charged using a solar panel/ Auto-contact or charging cable
- Battery charge indicator line can be seen on monitor in the cabin
- Excluding Spider cable crane (0403880)



# 0049601 Camera Control Unit + Battery pack side connection Battery, 12VW, 18Ah Battery pack is IP 65 watertight

- Including remote control to operate the camera
- Can be charged using a solar panel/ auto-contact
- Battery charge indicator line can be seen on monitor in the cabin
- Suitable for charging solar panel/car jack
- Excluding cable set for spectrum scanner (0403860)



#### **Charging systems**

#### 0405951 Auto-contact (sliding contact)

- Tower crane battery loading system
- Operating temperature between -40°C and +85°C



#### 0049500 Solar Cell Panel

- Monocrystalline silicon cells
- Capacity 4,1A (nominal 3,75A)
- Dimensions 777 x 657mm
- Weight 6,7kg
- Including mounting frame



#### **Battery cables**

#### 0403880 Spider cable crane

Specially designed to connect the Battery pack to the Spectrum Scanner.

- 3,8m multicable including 8p female connector
- Two extra 1,4m charging cables (7p male)
- 10p Harting male connector







#### Connectors

1310841 Connector 4p female Gold Recommended for multicable (1220170)

1312001 Connector 4p male Gold Recommended for multicable (1220170)

1310850 Connector 4p female PG9 Gold Recommended for dynamic cable (1220600)

1312050 Connector 4p male PG9 Gold Recommended for dynamic cable (1220600)

1311201 Connector 7p female Gold Recommended for Multi cable (1220170)

1322401 Connector 7p male Gold Recommended for Multi cable (1220170)

1311250 Connector 7p female PG9 Gold Recommended for Dynamic cable (1220600)

1322450 Connector 7p male PG9 Gold Recommended for Dynamic cable (1220600)

1312021 Connector 8p male Gold Recommended for Dynamic cable (1220600)

1310870 Connector 8p male Gold



0357011 Bulkhead connector 4p Suitable for lead-through on bodywork

0357051 Bulkhead connector 7p Suitable for lead-through on bodywork





#### Cable disconnection sets

0351070 7p 0351130 13p

- Watertight
- With caps

0351100 10p Harting

- Watertight
- With caps

#### Adapter plugs

0357510 Adapter plug 4p male - 7p female

0357500 Adapter plug 7p male - 4p female

#### **Adapter cables**

0304000	Adapter cable 4p female - 4p female
0304050	Adapter cable 4p male - 4p male
0304210	Adapter cable 4p female - 7p male
0304220	Adapter cable 4p male - 7p female
0303860	Adapter cable 4p female - BNC
0303770	Adapter cable 4p female - Cinch

(if OEM monitor is used)



#### Split cable (2m)

0303781 Y-Split cable RLCD/RLED

- With two 4p female connectors (video) and open wire cable (power)
- For connections 2 to 4 cameras (with Switcher)

0304860 Y-Split cable 12" RLED

- With 4p and 7p female connectors (video) and open wire cable (power)
- For connections 2 to 4 cameras (with Switcher)

#### 0304840 Y-split cable 12" RLED

- With two 4p female connectors (video) and open wire cable (power)
- For connections 2 to 4 cameras (with Switcher)

#### **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
- Waterproof IP67 according to IEC 60529

#### 0404040 Switcher UNI

• 4p output for monitor

#### 0404080 Switcher UNI IP67

• 4p output for monitor

#### 0404061 Switcher Serial

- 7p output for monitor
- Only in combination with a Serial monitor
- Possibility to connect 1 serial Orlaco camera (AF Zoom)

0404240 Digital Switcher







#### **Multiview split**

- Stainless steel housing
- Serial Orlaco Monitor needed

0405100 MultiView box II

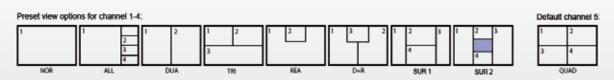
• 4 camera inputs (4x Compact Camera)

0405110 MultiView box II Serial

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

0405200 Multiview box dual mode (with adapter 4p)

0000250 DVR - Multiview - 128GB





#### 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



#### **Power supplies**

0504870 Junction box HD-IP Power supply for the HD-IP camera.

- Including power cable 230V/AC
- Maximum cable length 200m



# 0504880 Junction box HD-IP

Power supply for the HD-IP camera.

• 24V/DC



#### 0004601 Power supply 9-36V

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

#### 0504031 AC/DC unit

Power supply for the Compact Camera.

- Power input 110-230V/AC
- Power output 12V/DC
- Dimensions 100mm(d) x 100mm(w) x 27mm(h)



#### 0503810 Power supply 115-230V/24V

- 2 outputs: for loading battery and power supply for monitor
- Built in a IP65 watertight box
- Including connector 1312021 (8p)



#### **Video distributor**

0407001 Orlaco video distributor For connecting a second and third Orlaco monitor.

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



#### **Interface Control panel**

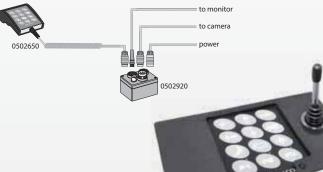
0502920 Interface Control panel Serial 2x7p

This interface is designed to connect the Handheld control AF to a Camera AF-Zoom or PTZ.

- Including 3,85m 8p power supply cable and connectors
- Can be connected to each type of third-party monitor

0502910 Interface Controlpanel serial





#### Control

0502620 Control panel mount

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

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

## 0502650 Handheld control AF 7p (serial)

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

- Zoom function
- Including 6,3m power supply cable

#### 0502610 Handheld control AF (serial)

Open wired



# (G (A (A

#### Infrared illuminator

0507300 IR-CIV870 Lamp

- 870nm IR light
- Max. 15W
- IP67
- Maximum range 80m



#### 0506500 Joystick

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



#### 0702000 Compact joystick

- Operating temperature between -30°C and +75°C
- To assemble on control column
- IP40
- 12V/24V



#### 0502630 Foot switch 5m

Zoom in and out



Zoom in and out



#### 8975760 Push button yellow

For manually switching between cameras.



#### 0702100 Zoom control box

Operating zoom in and out function of the camera AF-Zoom on a crane

- Including hardware, tyrap and locktape
- IP54

# **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)







#### **Orlaco IP SmartView**

#### 0060310 Licence Smartview software

View and control of cameras over TCP/IP or a local computer network.

- Support H.264 digital video codec
- Multiple display settings (full, split, quadviews, 8 and 16 cams on 1 screen)
- Individual camera presets and master presets for controlling multiple PTZ simultaneously
- Sequential camera switcher
- Motion detection
- Supplied on USB memory stick



#### Digital video recorder

Digital video recorder with one camera input and one video output

#### 0000300 DVR one channel

- Can be used with a compact camera (4p) or serial camera (7p)
- Video loop function
- 9-30V/DC
- Automatic timestamp
- Including 32GB SDHC-card for max 72 hours of storage and SD-card reader



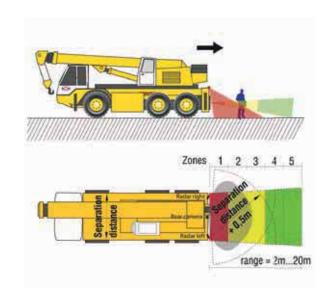
#### RadarEye unites visibility and active detection



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 driver's view. The radar system detects stationary as well as moving objects in a designated coverage area. With this view system the driver 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 driver can respond immediately. This prevents damage to the drivers truck 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 machines
- RadarEye is capable of visualizing the radar-zones on the display. As soon as an object 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 sized 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
- Can be connected to an Orlaco monitor or third party monitor with PAL/NTSC input
- RadarEye can be extended with multiple sensors 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 Interface box for existing monitors

0404700 SRD Interface Box with ext. speaker

The Interface Box is designed to connect the RadarEye components to a non-radar third party monitor (PAL/NTSC) or existing standard camera system.

- Set consists of: Interface box, external speaker, adapterplug and open wired multicable with 8p connector.
- 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.

0301151	2m	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.

0004004	0.05	0004004	4
0301081	0,25m	0301021	1m
0301031	4m	0301041	8m
0301091	16m		



#### **RadarEve 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





Products Products



#### **Mounting means**

#### 0402801 Quick-fit set Tower crane

- Including adjustable suction cup for quick mounting of the monitor on the cab window, magnet (with ball joint) for quick mounting of the monitor to the cab and 2x safety chains and mounting materials
- Stainless steel holder
- Operating temperature between -40°C to +85°C



Cover specially designed for the Compact Camera.

• Stainless steel housing



0401310 Suction cup with ball joint

For mounting the Orlaco monitor on the cab window.

2015700 Adjustable mounting bracket 3/8" UNC • Length 131mm

#### 2015500 Adjustable mounting bracket

• Length 132mm



#### 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 are not included

#### 2015600 Adjustable mounting bracket

• Length 190mm



0403400 Compact Camera magnet bracket For quick mounting of Compact Camera on steel profiles.

#### 0701200 Oil damped camera bracket

Designed for usage on cranes to have a camera permanently pointed verticaly downwards. The damper absorbs sudden movements and procures stability to all Orlaco cameras. Others have to be checked to determine the position of their centre of gravity.

- Adjustable damping
- Made entirely from Stainless Steel

If cranes have a tilting angle of >130° (e.g. Knuckle boom cranes) it is possible to connect 2 pieces 0701200 to achieve a tilting angle up to 260°.



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.





#### 0910280 Extra Weight for Zoomcam

- Stainless steel
- 1.09kg



#### 0910270 Suspension Tube Complete

- Stainless steel
- Including sketch plate
- Including lock pin



2013280 Adapter Pin for Release Set

Stainless steel



0910260 Mounting Bracket Set Additional

Stainless steel



0910240 Quick release set weld version

Stainless steel



0910250 Quick release set bolt version

Stainless steel



5200500 Magnet 80x18 M10 For quick mounting video receiver on steel profiles.

5200600 Magnet 100x22 M12

#### **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 compliancy.

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**.

