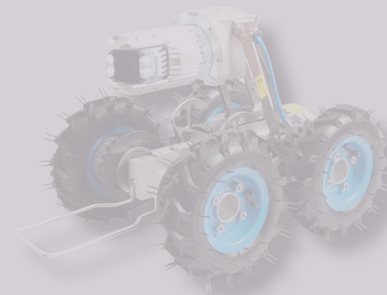# Video Inspection Systems for Pipes & Wells

Catalogue 2019

- Push-rod Cameras
- Manhole Camera
- Robotic Inspection systems
- Vertical Camera
- Well Cameras
- Pipe Detectors

ForBest

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CE FC

OUR STRENGTH

30 Years of Expertise

Manufacturer of inspection equipment since 30 years, FORBEST has gained its reputation as a reliable partner thanks to its products of high quality, competitive prices as well as quick and humane after-sales services. Each year, more than 10 000 cameras FORBEST are sold throughout the world.
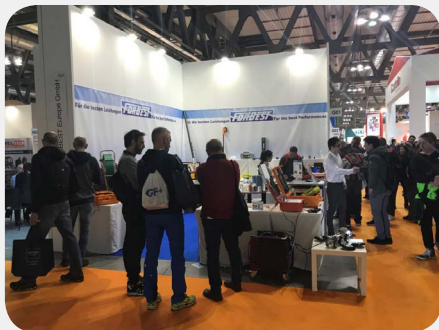
Strong Innovation and Evolution Capacities

FORBEST follows with attention the evolution of our customers' needs. Thanks to its R&D team and factory, FORBEST innovates constantly its products while being endowed with a strong capacity to respond to its customers' specific demands. FORBEST works with a dozen of brands in the world under OEM or ODM partnerships.

Rapid and Humane After-Sales Services

FORBEST Europe as well as its distributors in Europe take care of maintenance and repairs of FORBEST products in case of needs. We endeavour to guarantee your equipment is repaired or maintained in a short delay under humane conditions.

INTERNATIONAL

FORBEST Canada

FORBEST Europe

FORBEST US

FORBEST China

PUSH-ROD CAMERA

3

MANHOLE CAMERA

10

ROBOTIC CAMERA

11

VERTICAL CAMERA

15

WELL CAMERA

16

PIPE DETECTOR

22

APPENDIX 1

23

Model:

ELEGAM 10

Pipe Inspection System
Portable Push-rod Camera

- DN50 to DN125 pipes, 40 m cable
- Intelligent design: easy to carry around and operate
- Axial camera, meter counting; 512 Hz transmitter in option

C25

C25T

Packing List
Accessories: 1 × DVR remote control, 1 × charger/AC adaptor, 1 × connecting cable, 1 × centralizer, 1 × EVA camera protection, 1 × built-in Li-Ion battery, 1 × notice
Weight & dimensions: 9 kg, 33 × 30 × 29 cm

Order codes

Codes	Specifications
PIC31X-C25-40MC (standard)	Without 512 Hz transmitter
PIC31X-C25T-40MC (in option)	512 Hz transmitter integrated

Parameters

Camera Head	
	Models: C25, C25T and other models in option (Refer *to Appendix 1*)
	Diameter range of service: DN50 - DN125
	Dimensions: Φ 25 × 27 mm
	Passage of elbows: C25 ≥ 35 mm, C25T ≥ 65 mm
	512 Hz transmitter in option
	Materials: housing in stainless steel, lens in sapphire crystal
	Focal length: 10 to 20 cm, fixed
	Resolution: 0.4 mega-pixel
	Lighting: 12 LEDs
	Waterproof: IP68, 1 bar Max.
	Operating temperature: -20°C to 55°

Cable Reel	
	Cable: fibre glass, 40 m long
	Power supply: by the control station
	Built-in meter counting
	Operational temperature: -28°C to 50°C
	Protection rating: splash-proof

Control Station	
	Screen: 7" TFT 800 × 480 pixel resolution
	Autonomy: ≥ 4 h
	Power supply: 220 VAC / rechargeable Li-ion battery
	Photo/video formats: JPEG / AVI
	Storage onto USB / SD
	Operational temperature: -28°C to 50°C
	Case: ABS, splash-proof

Model:
ELEGAM 20

Pipe Inspection System
Portable Push-rod Camera

- DN50 to DN125 pipes, 60 m cable
- Intelligent design: easy to carry around and operate
- Axial camera, built-in self-leveling and meter counting functions; 512 Hz transmitter in option
- Keyboard integrated for text input

C26

C26T

Packing List

Accessories: 1 × DVR remote control, 1 × charger/AC adaptor, 1 × connecting cable, 1 × centralizer, 1 × EVA camera protection, 1 × built-in Li-Ion battery, 1 × notice
Weight & dimensions: 16 kg, 51x44x50 cm

Order codes

Codes	Specifications
PIC41X-C26-60MC (standard)	Without 512 Hz transmitter
PIC41X-C26T-60MC (in option)	512 Hz transmitter integrated

Parameters

Camera Head

Model: C26 (Without transmitter), C26T (With transmitter), and other models in option (Refer to Appendix 1)
Diameter range of service: DN50 - DN125
Dimensions: Φ 26 × 64 mm
Passage of elbows: ≥ 65 mm
Built-in self-leveling function
512 Hz transmitter in option
Materials: housing in stainless steel, lens in sapphire crystal
Focal length: 10 to 20 cm, fixed
Resolution: 0.5 mega-pixel
Lighting: 15 LEDs
Waterproof: IP68, 1 bar Max.
Operational temperature: -20°C to 55°

Cable Reel

Cable: fibre glass, 60 m long
Power supply: by the control station
Built-in meter counting
Operational temperature: -28°C to 50°C
Protection rating: splash-proof

Control Station

Screen: 10" TFT, 800 × 480 pixel resolution
Autonomy: ≥ 4 h
Power supply: 220 VAC / rechargeable Li-ion battery
Photo/video formats: JPEG / AVI
Storage onto USB / SD
Operational temperature: -28°C to 50°C
Case: ABS, splash-proof

PUSH-ROD CAMERA 5
MANHOLE CAMERA 10
ROBOTIC CAMERA 11
VERTICAL CAMERA 15
WELL CAMERA 16
PIPE DETECTOR 22
APPENDIX 1 23

Model:
KAMI

Pipe Inspection System
Portable Push-rod Camera

- DN20 to DN50 pipes, 10 m / 20 m / 30 m / 40 m cable
- Compact design: highly adapted to narrow or difficultly accessible areas

C12B

Accessories
1 × DVR remote control, 1 × charger/AC adaptor, 1 × connecting cable, 1 × centralizer, 1 × built-in Li-Ion battery, 1 × notice

Order codes

Codes	Specifications
CST7M-C12B-CR12-20M	Portable reel, 20 m cable (standard)
CST7M-C12B-CR12-30MC	Portable reel, 30 m cable, meter counting (standard)
CST7M-C12B-CR12-10M	Portable reel, 10 m cable (in option)
CST7M-C12B-CR12-30M	Portable reel, 30 m cable (in option)
CST7M-C12B-CR12-40M	Portable reel, 40 m cable (in option)
CST7M-C12B-CR12-40MC	Portable reel, 40 m cable, meter counting (in option)

Parameters

Camera Head C12B

Model: C12B
Diameter range of service: DN20 - DN50
Dimensions: Φ 12 × 22 mm
Passage of elbows: ≥ 35 mm
Materials: housing in stainless steel, lens in sapphire crystal
Focal length: 5 to 15 cm, fixed
Resolution: 0.4 mega-pixel
Lighting: 8 LEDs
Waterproof: IP68, 1 bar Max.
Operational temperature: -20°C to 55°
Weight: 45 g

Cable Reel CR12

Cable material: fibre glass
Diameter & length: Φ 4.8 mm & 10 m / 20 m / 30 m / 40 m
Meter counting: in option for 30 m and 40 m cables
Power supply: by the control station
Protection rating: splash-proof
Operational temperature: -28°C to 50°C
Dimensions: 32 × 32 × 11 cm

Control Station CST7M

Screen: 7" TFT, 800 × 480 PX resolution
Autonomy: ≥ 4 h
Power supply: 220 VAC / rechargeable Li-ion battery
Photo / video(JPEG / AVI) / audio recording
Ports: 1 × USB, 1 × SD, 1 × video input
Case: small, ABS, splash-proof
Weight & dimensions: 2,5 kg, 27 × 22 × 10 cm

PUSH-ROD CAMERA

6

MANHOLE CAMERA

10

ROBOTIC CAMERA

11

VERTICAL CAMERA

15

WELL CAMERA

16

PIPE DETECTOR

22

APPENDIX 1

23

Model:
VISIO 360

Pipe Inspection System
Push-rod Camera

- Large diameter range from DN70 to DN450; 512 Hz transmitter and built-in meter counting
- Camera head: PAN 360° / TILT 180°, adjustable focal length, 18 strong LEDs
- Multifunction control station: keyboard for text input, Joysticks for camera head rotation, audio / video / photo recording, storage onto USB / SD

Standard centralizers

Camera protection

Accessories

1 × DVR remote control
1 × charger/AC adaptor
1 × connecting cable
1 × standard centralizer
2 × acrylic domes
1 × camera protection in steel
1 × Li-Ion battery
1 × notice

Order codes

Codes	Specifications
MTCST10B-C60T- 60MC (standard)	60 m cable
MTCST10B-C60T- 100MC(in option)	100 m cable

Parameters

Camera Head C60

Diameter range & passage of elbows: DN70 -450 & ≥ 100 mm	
Dimensions & weight: Φ 60 × 120 mm & 344 g	
Lens: 1/3" Sony CCD sensor, 480 TVL	
Materials: housing in aluminium, lens in sapphire crystal, dome in acrylic	
View angle: PAN 360° / TILT 180°	
Focal length: 10 to 20 cm, adjustable	
Resolution: 0.5 mega-pixel	
Lighting: 18 LEDs strong, adjustable	
Waterproof: IP68, 1 bar Max.	
Operational temperature: -20°C to 55°	

Cable Reel CR36

Cable material: fibre glass
Diameter & length: Φ 9 mm & 60 / 100 m
Meter counting and 512 Hz transmitter integrated
Power supply: by the control station
Protection rating: splash-proof
Operational temperature: -28°C to 50°C
Dimensions: 77 × 36 × 83 cm

Control Station MTCST10B

Multifunctions: keyboard for text input, video / photo / audio recording, Joysticks
Screen: 10" TFT, 800 × 600 PX resolution
Autonomy: ≥ 4 h
Power supply: 220 VAC / Li-Ion battery
Photo/video formats: JPEG / AVI
Ports: 1 × USB, 1 × SD, 3 × video input
Case: ABS, splash-proof
Weight & dimensions: 5 kg & 33 × 23 × 15 cm

Model:
OXLUS 10
OXLUS 20

Pipe Inspection System
Portable Push-rod Camera

- DN50 to DN125 pipes, 20 m / 30 m / 40m cable
- All-in-one design: easy to carry around
- Rich choices of camera heads

C23

C23T

CD23

CD23T

C25

C25T

C26

C26T

OXLUS 10

OXLUS 20

Accessories

1 × DVR remote control, 1 × charger/AC adaptor, 1 × connecting cable, 1 × centralizer (except for the camera head C25), 1 × camera head protection in EVA, 1 × built-in Li-Ion battery, 1 × notice

Parameters

OXLUS 10 - CST7S

Screen: 7" TFT, resolution 800 × 480 PX
Autonomy: ≥ 4 h
Power supply: 220 VAC / Li-Ion battery
Photo/video formats: JPEG / AVI
Audio recording
Ports: 1 × USB, 1 × SD, 1 × video input
Case: all-in-one, ABS, splash-proof
Weight & dimensions: 7,5 kg, 51 × 43 × 18 cm

OXLUS 20 - CST10S

Screen: 10" TFT, resolution 800 × 600 PX
Autonomy: ≥ 4 h
Power supply: 220 VAC / Li-Ion battery
Photo/video formats: JPEG / AVI
Audio recording
Ports: 1 × USB, 1 × SD, 1 × video input, 1 × video output
Case: all-in-one, ABS, splash-proof

Cable Reel CR31

Cable material: fibre glass
Diameter & length: Φ 5.2 mm & 20 m / 30 m /40 m
Meter counting: in option
Power supply: by the control station
Protection rating: splash-proof
Operational temperature: -28°C to 50°C
Dimensions: 32 × 32 × 11 cm

Parameters - Camera Heads

Model	Φ×L (mm)	Diameter range (mm)	Passage of elbows (mm)	512 Hz transmitter	Self-leveling	Materials	Focal length	Resolution	Lighting
C23	Φ23 × 75	DN50-DN125	≥ 65	No	No			0.4 MP	12 LEDs
C23T	Φ23 × 75	DN50-DN125	≥ 65	Yes	No			0.4 MP	12 LEDs
CD23	Φ23 × 42	DN50-DN125	≥ 40	No	Yes			0.5 MP	9 strong LEDs
CD23T	Φ23 × 42	DN50-DN125	≥ 40	Yes	Yes	Housing in stainless steel; lens in sapphire crystal	10 - 20 cm, fixed focal length	0.5 MP	9 strong LEDs
C25	Φ25 × 27	DN50-DN125	≥ 35	No	No			0.4 MP	12 LEDs
C25T	Φ25 × 62	DN50-DN125	≥ 65	Yes	No			0.4 MP	12 LEDs
C26	Φ26 × 64	DN50-DN125	≥ 65	No	Yes			0.5 M	15 LEDs
C26T	Φ26 × 64	DN50-DN125	≥ 65	Yes	Yes			0.5 M	15 LEDs

Order codes

Control Station

Code	Description
CST7S	Control station OXLUS 10
CST10S	Control station OXLUS 20

Camera Head

Code	Description
- C23	Φ23 mm camera head
- C23T	Φ23 mm camera head, 512 Hz transmitter
...	
- C26T	Φ26 mm camera head, 512 Hz transmitter, self-leveling function

Cable Reel

Code	Description
- CR31-20M	Portable reel, 20 m cable
...	
- CR31-40MC	Portable reel, 40 m cable, meter counting
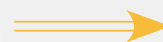
Standard Products

Codes	Description
CST7S - C23 - CR31-20M	Control station OXLUS 10 + Camera head C23 + Portable reel of 20 m cable
CST10S - C25T - CR31-40MC	Control station OXLUS 20 + Camera head C25T + Portable reel of 40 m cable, meter counting

PUSH-ROD CAMERA
8
MANHOLE CAMERA
10
ROBOTIC CAMERA
11
VERTICAL CAMERA
15
WELL CAMERA
16
PIPE DETECTOR
22
APPENDIX 1
23

PUSH-ROD CAMERA

9

MANHOLE CAMERA

10

ROBOTIC CAMERA

11

VERTICAL CAMERA

15

WELL CAMERA

16

PIPE DETECTOR

22

APPENDIX 1

23

Model: LUMINO 10

Pipe Inspection System Push-rod Camera

- DN70 to DN150 pipes, 60 m cable
- Excellent lighting thanks to 30 LEDs

C40BT

Accessories

1 × DVR remote control, 1 × charger/AC adaptor, 1 × connecting cable, 1 × centralizer, 1 × built-in Li-Ion battery, 1 × notice

Order codes

Codes	Specifications
CST10S-C40BT-60MC (standard)	Reel with 60 m cable, meter counting, 512 Hz transmitter

Parameters

Camera Head C40BT

Model: C40BT
Diameter range of service: DN70 - DN150
Dimensions: Φ 40 × 42 mm
Passage of elbows: ≥ 70 mm
512 Hz transmitter: built-in
Materials: housing in stainless steel, lens in sapphire crystal
Focal length: 10 to 20 cm, fixed
Resolution: 0.5 mega-pixel
Lighting: 30 LEDs
Waterproof: IP68, 1 bar Max.
Operational temperature: -20°C to 55°
Weight: 154 g

Cable Reel CR33

Cable material: fibre glass
Diameter & length: Φ 8 mm & 60 m
Meter counting: built-in
Power supply: by the control station
Protection rating: splash-proof
Operational temperature: -28°C to 50°C
Weight & dimensions: 14,9 kg, 52 × 28 × 61 cm

Control Station CST10S

Screen: 10" TFT, 800 × 600 PX resolution
Autonomy: ≥ 4 h
Power supply: 220 VAC / Li-Ion battery
Photo / video (JPEG / AVI) / audio Recording
Ports: 1 × USB, 1 × SD, 1 × video input, 1 × video output
Case: standard in ABS, splash-proof
Weight & dimensions: 2.5 kg, 27 × 22 × 10 cm

PUSH-ROD CAMERA

3

MANHOLE CAMERA

10

ROBOTIC CAMERA

11

VERTICAL CAMERA

15

WELL CAMERA

16

PIPE DETECTOR

22

APPENDIX 1

23

Model:
RAPIDOS 10

Wireless Manhole HD Camera

- High quality images with a Full HD camera and a HD screen
- Rapid video inspection of a distance up to 80 m
- Multifunctions: video / photo recording, text input, built-in pressure sensor, high precision distance detection by laser, highly suitable for report making

Introduction

The **RAPIDOS 10** manhole cameras are designed to deliver rapid video inspections and diagnosis of pipes, industrial tanks and vessels. It transmits signals to the controller via wifi. Through a touch screen, users can carry out all operations such as taking photos or videos, inputting texts, editing photos, etc..

Applications

RAPIDOS 10 are perfectly adapted for the following areas:
- Pipe inspection before cleaning or any other work, or quality check after construction;
- Tanks or vessel inspection;
- Tank-vehicle inspection;
- Boiler diagnosis;
- Inspection of vehicle underside;
- Rescue in disasters
- Archaeological searches
- ...

Parameters

Moniteur	Touch screen: 10.1" HD, 1920 × 1080 pixels, 1000 cd/m²
	Functions: photo & video taking, text input, photo editing, data saving...
Camera Head	System: 8 cores CPU, 4 G cache, 64 G memory (256 G Max.)
	Camera: 1/2,8" sensor, resolution 1920 × 1080 pixels; 240 x zoom (20x optical, 12x digital), 0 - 90° electric tilt
	Lighting: 4 strong adjustable LEDs
	Autonomy: ≥ 6 h (3 rechargeable batteries)
	10 m wireless distance + 7 m telescopic carbon fibre rod (9 m and 12 m in option), for an inspection distance up to 80 meters
	Built-in software for recording and controlling
	Built-in pressure sensor
	High precision laser range finder: 0 - 100 m (± 3 mm)

PUSH-ROD CAMERA

3 MANHOLE CAMERA

10 ROBOTIC CAMERA

11 VERTICAL CAMERA

15 WELL CAMERA

16 PIPE DETECTOR

22 APPENDIX 1

23

Model:
VEGA 10 /20/30/40

Custom-Made Products

Smart Crawler Robotic Inspection Systems

- Highly accessible robotic cameras in terms of budget
- DN150 to DN1000 pipes, 120 m cable by default, other lengths in option
- Easy to operate thanks to a multifunctional control station

VEGA 10

VEGA 20

VEGA 30

VEGA 40

Applications

The **VEGA 10/20/30/40** series of robotic cameras have been designed to meet a strong demand for robotic cameras easy to operate and accessible in terms of budget.

With a simple and compact structure, the **VEGA 10/20/30/40** can be used in all kinds of zones too dark or inaccessible to push-rod cameras.

The applications include water pipes, petrol pipes, venting pipes, water tanks, electricity set-up, civil engineering, etc...

MTCST10B

CR215

CF360

Parameters

VEGA 10

- Service diameter: DN150 - DN1000; waterproof: IP68
- Creeping speed: 6 - 20 m / min, 6 × 6 drive wheels
- 2 motors, turns to right and to left
- 3 sizes of wheels: Φ 100 / 150 / 200 mm
- Built-in 512 Hz transmitter, fixed subsidiary lighting
- Dimensions with a camera: 520 × 120 × 130 mm

VEGA 20

- Service diameter: DN180 - DN1000; waterproof: IP68
- Creeping speed: 6 - 20 m / min, 6 × 6 drive wheels
- 2 motors, turns to right and to left
- 3 sizes of wheels: Φ 100 / 150 / 200 mm
- Built-in 512 Hz transmitter, fixed subsidiary lighting
- Dimensions with a camera: 320 × 150 × 130 mm

VEGA 30

- Service diameter: DN150 - DN1000; waterproof: IP68
- Creeping speed: 6 - 20 m / min, 6 × 6 drive wheels
- 1 motor, without function of turns to right or left
- 3 sizes of wheels: Φ 100 / 150 / 200 mm
- Built-in 512 Hz transmitter, removable subsidiary lighting
- Dimensions with a camera: 520 × 120 × 130 mm

VEGA 40

- Service diameter: DN180 - DN1000; waterproof: IP68
- Creeping speed: 6 - 20 m / min, 6 × 6 drive wheels
- 2 motors, turns to right and to left
- 3 sizes of wheels: Φ 100 / 150 / 200 mm
- Built-in 512 Hz transmitter, fixed subsidiary lighting
- Integrated mechanical arm
- Dimensions with a camera: 370 × 150 × 345 mm

Camera Head CF360

- Dimensions: 160 mm × 78 mm
- Materials: housing in aluminium, lens in sapphire crystal
- PAN360° / TILT 180°
- Focus: automatic / manual (20 mm to ∞)
- Zoom: 12 × optical
- Resolution: 9760H× 504V, 0.5 mega-pixels
- Video: PAL/NTSC
- Lighting: 6 LEDs, adjustable
- Waterproof: IP68, 1 bar Max.
- Operational temperature: -20°C to 55°

Cable Reel CR215

- Cable material: fibre glass
- Diameter & length: Φ 9 mm & ≥ 120 m
- Built-in meter counting
- Power supply: Li-Ion battery or AC
- Protection rating: splash-proof
- Operational temperature: -28°C to 50°C
- Dimensions: 47 × 47 × 51 cm

Control Station MTCST10B

- MultiFunctions: keyboard for text input, audio, screen-shot during video-taking, Joysticks to control the camera and the robot
- Screen: 10'' TFT, resolution 800 × 600 pixels
- Autonomy: ≥ 4 h
- Power supply: 220 VAC / Li-Ion battery
- Photo/video formats: JPEG / AVI
- Ports: 1 × USB, 1 × SD, 3 × video input
- Case: ABS, splash-proof
- Weight & dimensions: 5 kg, 33 × 33 × 15 cm

PUSH-ROD CAMERA

3

MANHOLE CAMERA

10

ROBOTIC CAMERA

12

VERTICAL CAMERA

15

WELL CAMERA

16

PIPE DETECTOR

22

APPENDIX 1

23

PUSH-ROD CAMERA

3

MANHOLE CAMERA

10

ROBOTIC CAMERA

13

VERTICAL CAMERA

15

WELL CAMERA

16

PIPE DETECTOR

22

APPENDIX 1

23

Model:
VEGA SUP

Custom-Made Products

Smart Crawler Robotic Inspection Systems

- Report software & multifunctions: GPS localisation, slope calculation, video recording, screen-shots, defect grading, text input, etc..

- High quality pictures and excellent lighting: Sony HD lens, rotation 360°/270°, auto-focus, 120 x zoom, strong adjustable LEDs, 14'' screen

- Reinforced security: IP68 in a depth of 10 m under water, multi-parameters to detect in direct robot status - atmosphere pressure, robot inclination, 3D position of the robot in pipes, highly sensible sensor against roll-overs, emergency stop

Applications

The **VEGA SUP** series have been designed specially for video inspections in all kinds of zones too dark or inaccessible for push-rod cameras. They are highly suitable for a large range of applications:
- Water pipes
- Petrol pipes
- Victim rescue in disasters
- Venting pipes
- Water tanks
- Electricity setup
- Civil engineering
- ...
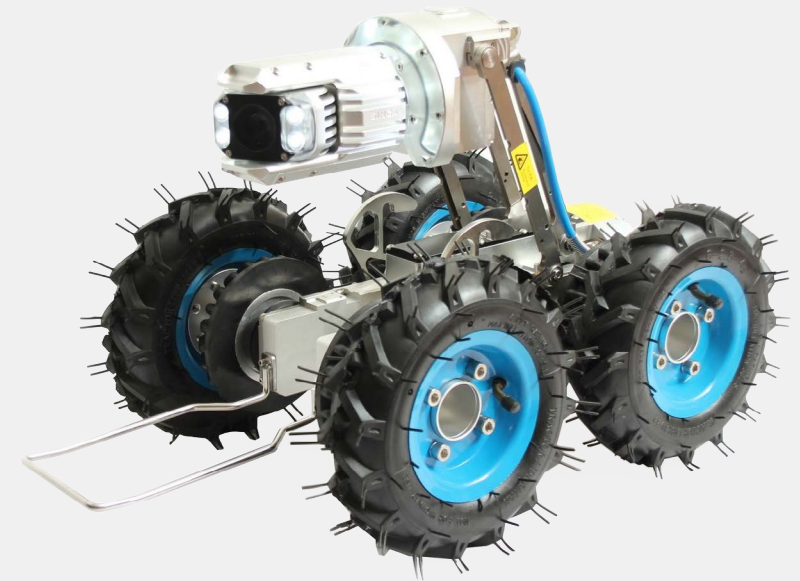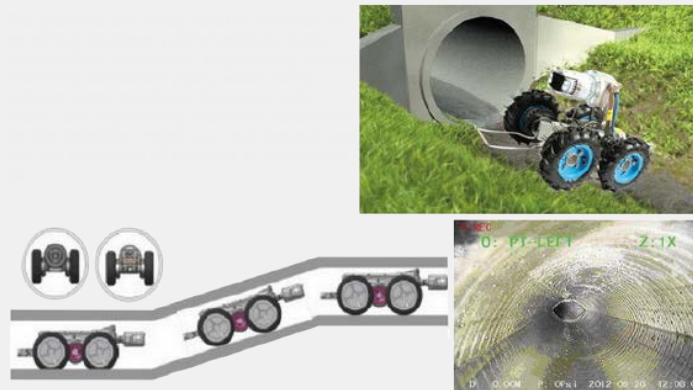
Cable Reel

Control Station

Parameters

Front Camera Head

Sensor: 1/4 CCD Sony, resolution 530 TVL

Rotation: PAN 360°/ TILT 270°

Zoom: 120 × (10 × optical, 12 × digital)

Strong LEDs + additional lighting

Protection: IP68

Back Camera Head

In option

Sensor: 1/4 CCD Sony, resolution 480 TVL

Strong LEDs

Protection: IP68

Crawler

Diameter range of service: DN200 to DN2000

Electric lifting function

Max. output power: 160 W

Climbing capacity: 45°

Creeping speed: 0 - 35 m / min

4 drive wheels

2 sizes of wheels: Φ 210 / Φ 130 mm

Double motors for turns to left and to right

Remote Control

Wireless control distance: 10 m

Controlled functions: robot (forward, back, left, right, speed and lifting), camera (zoom, rotation, reset, light, switching)

Power supply: built-in Li-Ion battery

Cable Reel

Power supply: 48 V CC or CA

Meter counting

Universal wheels with breaking function

Cable: Kevlar, 120 m standard, 220 m max. in option

Control Station

Control station of industrial level: 15" screen

Memory: 256 G

Language of the report software: English

Controlled functions: turns to left and right, forward, back, rotation of camera head, light adjusting, lifting, zoom, robot creeping speed

Display: ambient pressure, robot speed, distance, inclination degree, lifting status

Photo and video taking

Wincam software in option

PUSH-ROD CAMERA

3

MANHOLE CAMERA

10

ROBOTIC CAMERA

14

VERTICAL CAMERA

15

WELL CAMERA

16

PIPE DETECTOR

22

APPENDIX 1

23

PUSH-ROD CAMERA

3

MANHOLE CAMERA

10

ROBOTIC CAMERA

11

VERTICAL CAMERA

15

WELL CAMERA

16

PIPE DETECTOR

22

APPENDIX 1

23

Model:
V-KA

Vertical Inspection Camera

- Adapted for chimneys or vertical pipes from DN70 to DN450
- Portable reel of 60 m of soft cable
- Multi-functional control station: video / photo / audio recording, keyboard for text input

Accessories
1 × DVR remote control, 1 × charger/AC adaptor, 1 × video cable, 2 × acrylic dome, 1 × camera protection in steel, 1 × built-in Li-Ion battery, 1 × notice

Order codes

Codes	Specifications
MTCST10B-C60-CRS-40M	40 m cable
MTCST10B-C60-CRS-60M	60 m cable

Parameters

Camera Head C60

Model: C60
Diameter range & passage of elbows: DN70 - 450 & ≥ 100 mm
Dimensions & weight: Φ 59 × 135 mm, 344 g
Lens: 1/3" Sony CCD colour, 900 TVL
Materials: housing in aluminium, lens in sapphire crystal, dome in acrylic
Focal length: 10 to 20 cm, adjustable
Resolution: 976 × 496 pixels
Lighting: 18 strong LEDs, adjustable
Waterproof: IP68, 1 bar (10 m)
Operational temperature: -20°C to 55°

Cable Reel CRS

Cable: fibre glass, soft
Diameter & length: Φ 7 mm & 40 m / 60 m
Manual winding & unwinding
Cable breaking function: manual
Protection rating: splash-proof
Operational temperature: -28°C to 50°C
Dimensions (H × l × L): 41 × 25 × 32 cm

Control Station MTCST10B

Multifunctions: keyboard for text input, audio, screen-shot during video-taking, Joysticks for controlling the camera head
Screen: 10" TFT, resolution 800 × 600 PX
Autonomy: ≥ 4 h
Power supply: 220 VAC / Li-Ion battery
Photo/video formats: JPEG / AVI
Ports: 1 × USB, 1 × SD, 3 × video input
Case: ABS, splash-proof
Weight & dimensions: 5 kg, 33 × 33 × 15 cm

PUSH-ROD CAMERA

3

MANHOLE CAMERA

10

ROBOTIC CAMERA

11

VERTICAL CAMERA

15

WELL CAMERA

16

PIPE DETECTOR

22

APPENDIX 1

23

## Model: DIPKA Lite

Custom-Made Products

Well Camera

- Adapted for wells or conduits from DN50 to DN400
- Depth : 0 - 500 m under water
- Large diameter range of applications: drilling, petrol or water wells, rescues, under water farming or supervision

Applications

The **DIPKA Lite** series have been designed to detect damaged surfaces, cracks, or hollows in deep wells. They are also widely used in underwater farming or supervision. Photos and videos can be saved directly.
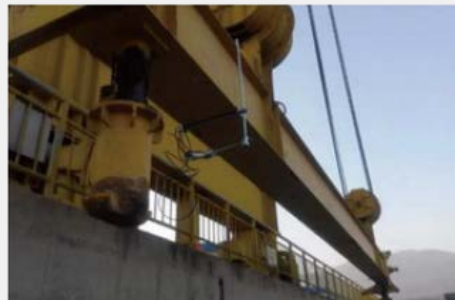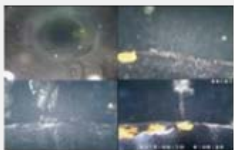
Parameters (to be continued)

Camera Head

Types	Pan / Tilt
Model	PTZ
Dimension	Φ 45 mm x 300 mm
Diameter range	DN50 to DN400
Material	Chromium plated
Pressure	100 bar (1000 m under water)
Operating temperature	-20°C to 50°C
Lighting	9 strong LEDs, adjustable
Lens	1/3" HD CCD colour
View angle	PAN 360° / TILT 180°
Zoom	10 × optical
Focal length	100 to 600 mm, adjustable
Resolution	976 × 582 pixels, 820 TVL

Packing List

1 × camera head PAN 360° / TILT 180°

1 × control station, 1 × tripod, 1 × reel, 1 × notice

1 × 10-pin connecting cable, 1 × 4-pin connecting cable

1 × charger/AC adaptor, 1 × built-in 120 G hard disk

Parameters

Control Station

Screen: 10" LCD, brightness 250 cd/m²; contrast:
400:1; resolution: 640 × 480 pixels (compatible 1024 × 768)

Recording: photo / video / audio

Keyboard integrated for text input

Joystick to control the camera head

Built-in 160G HD hard disk

Power supply: 110 to 220 VAC / 12 VCC

Service temp.: -20°C to 55°C / humidity: 5 - 95%

Autonomy: ≥ 4 h

Service life: 500 000 h

Case: ABS, 265 × 213 × 42 mm

Electric Reel

Materials: reel in aluminium, cable in PE

Functions: up, down, speed, stop

Descent speed: 8 m / min. Max.

Power supply: 12 VCC

Cable: Φ 8mm, 6 wires

Cable length: 100 m to 500 m in option

Meter counting: built-in, with an accuracy of ±0.5%

Power: 250 W

Protection rating: IP63

Operational temperature: -28°C to 50°C

Dimensions (H × l × L): 41 × 25 × 32 cm

Order codes

Reel	
Codes	**Description**
-EW	Motorised reel
-MW	Manual reel
Cable length	
Codes	**Description**
-100	100 m cable
-200	200 m cable
-300	300 m cable (standard)
...	
-500	500 m cable

Ex: DIPKA Lite-EW-500 means a product with a Pan/Tilt camera head, equipped with a motorised reel of 500 m cable.

Pan/TILT Camera Head PTZ

PUSH-ROD CAMERA
3
MANHOLE CAMERA
10
ROBOTIC CAMERA
11
VERTICAL CAMERA
15
WELL CAMERA
17
PIPE DETECTOR
22
APPENDIX 1
23

PUSH-ROD CAMERA

3 MANHOLE CAMERA

10 ROBOTIC CAMERA

11 VERTICAL CAMERA

15 WELL CAMERA

18 PIPE DETECTOR

22 APPENDIX 1

23
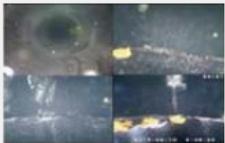
Model:

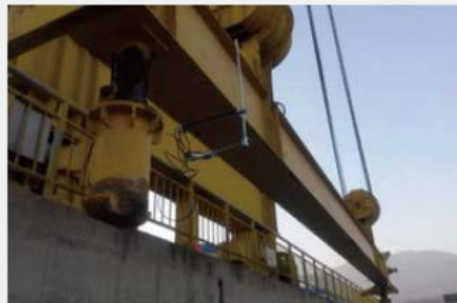# DIPKA VISIO

Custom-Made Products

Well Camera

- Adapted for wells or conduits from DN50 to DN400
- Depth: 0 - 1000 m under water
- Large diameter range of applications: well, petrol or water wells, rescues, under water farming or supervision

Applications

The **DIPKA VISIO** series have been designed to detect damaged surfaces, cracks, or hollows in deep wells. They are also widely used in underwater farming or supervision. Photos and videos can be saved directly.
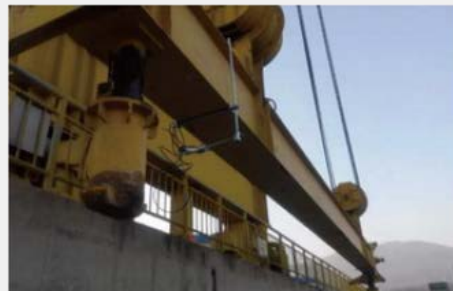
Parameters

Camera Head

Types	
	Pan / Tilt

Model	PTZ
Dimension	Φ 45 mm x 300 mm
Diameter range	DN50 to DN400
Material	Chromium plated
Pressure	100 bar (1000 m under water)
Operating temperature	-20°C to 50°C
Lighting	9 LEDs strong, adjustable
Lens	1/3" HD CCD colour
View angle	PAN 360° / TILT 180°
Focal length	100 to 600 mm, adjustable
Resolution	976 × 582 pixels, 820 TVL

Packing List

1 × PAN 360° / TILT 180° camera head

1 × control station, 1 × tripod, 1 × reel, 1 × notice

1 × 10-pin connecting cable, 1 × 4-pin connecting cable

1 × charger/AC adaptor, 1 × built-in 120 G hard disk

Parameters (suite)

Control Station

Screen: 10" LCD, brightness de 250 cd/m²; contrast: 400:1; resolution: 640 × 480 pixels (compatible 1024 × 768)	
Recording: photo / video / audio	
Keyboard integrated for text input	
Joystick to control the camera head	
Built-in 160G HD hard disk	
Power supply: 110 to 220 VAC / 12 VCC	
Service temp.: -20°C to 55°C / humidity: 5 to 95%	
Autonomy: ≥ 4 h	
Service life: 500 000 h	
Case: ABS, 265 × 213 × 42 mm	

Electric Reel

Materials: reel in aluminium, cable in PE	
Functions: up, down, speed, stop	
Descent speed: 8 m / min. Max.	
Power supply: 12 VCC	
Cable: Φ 8mm, 6 wires	
Cable length: 100 m to 1000 m in option	
Power: 250 W	
Protection rating: IP63	
Operational temperature: -28°C to 50°C	
Dimensions (H × l × L): 41 × 25 × 32 cm	

Tripod

Material: stainless steel	
Manual operation	
Digital meter counting: 0 to 999.99 m with an accuracy of ± 0.01 m	
Mechanical meter counting: 0 to 999.99 m, with an accuracy of ± 0.05 m	

Order codes

Reel	
Codes	**Description**
-EW	Motorised reel
-MW	Manual reel

Cable length	
Codes	**Description**
-100	100 m cable
-200	200 m cable
-300	300 m cable (standard)
...	
-1000	1000 m cable

Ex: DIPKA VISIO-EW-1000 means a product with a PAN/TILT camera head, equipped with a motorised reel of 1000 m cable.

Tripod

Reel

PUSH-ROD CAMERA 3
MANHOLE CAMERA 10
ROBOTIC CAMERA 11
VERTICAL CAMERA 15
WELL CAMERA 19
PIPE DETECTOR 22
APPENDIX 1 23

PUSH-ROD CAMERA

3

MANHOLE CAMERA

10

ROBOTIC CAMERA

11

VERTICAL CAMERA

15

WELL CAMERA

20

PIPE DETECTOR

22

APPENDIX 1

23

DIPKA SUP
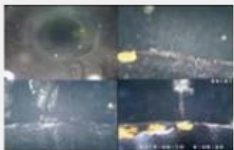
Custom-Made Products

Well Camera

- Adapted for wells or conduits from DN40 to DN400
- Depth: 0 - 2000 m under water
- Large diameter range of applications: well, petrol or water wells, rescues, under water farming or supervision

Applications

The **DIPKA SUP** series have been designed to detect damaged surfaces, cracks, or hollows in deep wells. They are also widely used in underwater rescues or supervision. Photos and videos can be saved directly.

Parameters

Camera Head

Types	Panoramique	4-picture
Model	PAN	4P
Diameter range	DN40 to DN400	DN100 to DN400
Material	Chromium plated	Chromium plated
Pressure	200 - 300 bar (2000 m under water)	200 bar (1000 m under water)
Operating temperature	-20°C to 60°C	-5°C to 55°C
Lighting	9 strong LEDs	21 strong LEDs
Lens	1/3" HD CCD colour	1/4" HD CCD colour
View angle	TILT 170°	TILT 170°, 120°on the sides
Resolution	795 × 596 pixels, 820 TVL	795 × 596 pixels, 820 TVL
Diameter	Φ 35, Φ 50, Φ 75, Φ 80, Φ 100 mm	Φ 80 mm

Packing List

1 × panoramic or 4-picture camera head

1 × control station, 1 × tripod, 1 × reel, 1 × notice

1 × 10-pin connecting cable, 1 × 4-pin connecting cable

1 × charger/AC adaptor, 1 × built-in 120 G hard disk

Parameters (continuation)

Control Station

Screen: 10" LCD, brightness de 250 cd/m^2; contrast: 400:1; resolution: 640 × 480 pixels (compatible 1024 × 768)
Recording: photo / video / audio
Built-in 160G HD hard disk
Power supply: 110 to 220 VAC / 12 VCC
Service temp.: -20°C to 55°C / humidity: 5 to 95%
Autonomy: > 4 h
Service life: 500 000 h
Dimensions: 265 × 213 × 42 mm

Electric reel

Materials: reel in aluminium, cable in PE
Functions: up, down, speed, stop
Descent speed: 8 m / min. Max.
Power supply: 12 VCC
Cable: Φ 8mm, 6 wires
Cable length: 100 m to 2000 m in option
Power: 250 W
Protection rating: IP63
Operational temperature: -28°C to 50°C
Dimensions (H × l × L): 41 × 25 × 32 cm

Tripod

Material: stainless steel
Manual operation
Digital meter counting: 0 to 999.99 m With an accuracy of ± 0.01 m
Mechanical meter counting: 0 to 999.99 m

Order codes

Camera Head

Codes	Description
-PAN35	Panoramic camera head Φ 35 mm
-PAN50	Panoramic camera head Φ 50 mm
-PAN75	Panoramic camera head Φ 75 mm
-PAN80	Panoramic camera head Φ 80 mm
-PAN100	Panoramic camera head Φ 100 mm
-4P	4-picture camera head, Φ 80 mm

Reel

Codes	Description
-EW	Motorised reel
-MW	Manual reel

Cable length *

Codes	Description
-100	100 m cable
-200	200 m cable
-300	300 m cable (standard)
...	
-2000	2000 m cable

Ex: DIPKA SUP-PAN35-EW-1200 means a product with a panoramic camera head of Φ 35 mm, equipped with a motorised reel of 1200 m cable.

*: Lengths > 1000 m are compatible only with panoramic camera heads.

Pipe Detector & 512 Hz transmitter

- Frequency of 512 Hz
- Detector adapted to detect a camera head or a robot with a built-in 512 Hz transmitter
- High precision thanks to constantly adjustable sensibility

Pipe Detector & Multi-frequency transmitter

- Multi-frequencies
- Detector adapted to detect a camera head or a robot with a built-in 512 Hz transmitter
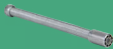- To generate the pipeline drawing automatically thanks to a built-in GPS

Detector R12

- Frequency: 512 Hz
- Power supply: 6 × AA
- Current: < 55 mA
- Operation modes: NORM / NOISE
- Sensibility: NEAR / FAR
- Sensibility adjustment: constant
- Output intensity: LCD 15 levels
- Operating temperature: -10°C to 50°C
- Dimensions: 100 × 10 × 10 cm
- Weight: 1 kg

Transmitter T1

- Frequency: 512 Hz
- Pressure: 5 m under water
- Distance: 8 m in air, 7 m for PVC pipes, 6 m for cast iron pipes
- Power supply: AAA 1.5 V
- Service current: < 120 mA
- Operating temperature: 0°C to 50°C
- Pressure: 0.5 bar
- Connection thread: M15 × 1
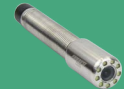- Dimensions: Φ28 × 76 mm
- Weight: 60 g

Detector R13A

- Frequencies: 512, 1 k, 33 k, 83 k Hz
- Screen: 3.5" back-light LCD
- Built-in GPS to generate autocratically a pipeline drawing
- Detection distance: 6 m
- Power supply: built-in Li-Ion battery, 7.4 V

Transmitter T3

- Frequencies: 128, 512, 1 k, 2 k, 8 k, 33 k, 65 k, 83 k Hz
- Screen: back-light LCD
- Large band: 10 W
- Power supply: built-in Li-Ion battery, 14.8 V

PUSH-ROD CAMERA

3

MANHOLE CAMERA

10

ROBOTIC CAMERA

11

VERTICAL CAMERA

15

WELL CAMERA

16

PIPE DETECTOR

22

APPENDIX 1

23

Appendix 1: Spare parts - Camera heads for push-rod cameras (to be continued)

	Models	C12B	C23	C23T	CD23	CD23T	C25	C25T
Applications	Diameter range	DN20 to DN50	DN50 to DN125	DN50 to DN125	DN50 to DN125	DN50 to DN125	DN50 to DN125	DN50 to DN125
	Passage of elbows	≥ 35 mm	≥ 65 mm		≥ 40 mm		≥ 35 mm	≥ 65 mm
	Compatible models	KAMI	OXLUS, ELEGAM					
General Parameters	Dimensions (Φ × L)	Φ 12 × 22 mm	Φ 23 × 75 mm		Φ 23 × 42 mm		Φ 25 × 27 mm	Φ 25 × 62 mm
	Weight	45 g	65 g	120 g	120 g	210 g	85 g	122 g
	Materials	Housing in stainless steel + lens in sapphire crystal						
	Water-proof	IP68 to 1 bar Max.						
	Operational temperature	-20 °C to 55 °C						
Technical Parameters	Self-leveling		×		•		×	
	Focal length	5 - 15 cm, fixed Focal length	10 - 20 cm, fixed Focal length					
	Zoom	×						
	Tilt	×						
	Rotation angle	×						
	Lighting	8 LEDs	12 LEDs		9 LEDs (strong)		12 LEDs	
	Resolution (mega-pixel)	0.4 MP			0.5 MP		0.4 MP	
	512 Hz transmitter	×	×	•	×	•	×	•

Note: × Without   • With   ○ In option

PUSH-ROD CAMERA
3
MANHOLE CAMERA
10
ROBOTIC CAMERA
11
VERTICAL CAMERA
15
WELL CAMERA
16
PIPE DETECTOR
22
APPENDIX 1

Appendix 1: Spare parts - Camera heads for push-rod cameras

	Models	C26	C26T	C40BT	CF50	C60
Applications	Diameter range	DN50 to DN125		DN70 to DN150		DN70 to DN450
	Passage of elbows 90°	≥ 65 mm		≥ 70 mm	≥ 100 mm	
	Compatible models	ELEGAM, OXLUS		LUMINO	VISIO 360	VISIO 360. V-KA
General Parameters	Dimensions (Φ × L)	Φ 26 × 64 mm	Φ 26 × 64 mm	Φ 40 × 42 mm	Φ 50 × 95 mm	Φ 60 × 120 mm
	Weight	135 g	182 g	154 g	334 g	344 g
	Materials	Housing in stainless steel + lens in sapphire crystal				Housing in aluminium + lens in sapphire crystal+ dome in acrylic
	Water-proof	IP68 to 1 bar Max.				
	Operational temperature	-20 °C to 55 °C				
Technical parameters	Self-leveling	•				
	Focal length	10 - 20 cm, fixed focal length			Auto-focus	10 - 20 cm, adjustable
	Zoom	×			12 × optical	×
	Tilt	×				-90° to 90°
	Rotation angle	×				360° endless
	Lighting	15 LEDs	15 LEDs	30 LEDs	22 LEDs (strong)	18 LEDs (strong)
	Resolution (mega-pixel)	0.5 MP				
	512 Hz transmitter	×		•	×	×

Note: × Without   • With   ○ In option

PUSH-ROD CAMERA

3

MANHOLE CAMERA

10

ROBOTIC CAMERA

11

VERTICAL CAMERA

15

WELL CAMERA

16

PIPE DETECTOR

22

APPENDIX 1

Where to buy?

You can find our products in our e-shop: <u>www. forbesteurope.eu.</u>, or you can as well send us your demands by email or by telephone.

Contact

Email: info@forbest-online.com
Tel.: + 33 (0)7 83 93 80 43 (English or French),
+ 49 (0) 721 9649 6810 (English or German)

Hours

9 h to 17 h, from Monday to Friday, except national holidays.

Shipping within 48 h

We guarantee a delivery within 2 work days upon receiving payments for all our standard push-rod cameras.

Rapid & Humane After-Sales Services

FORBEST (Europe) as well as our distributors in Europe take care of maintenance or repairs of your products. Thanks to our technician team, your cameras can be maintained or repaired in a very short delay in order to spare your precious time.