

# MFE INSPECTION SOLUTIONS



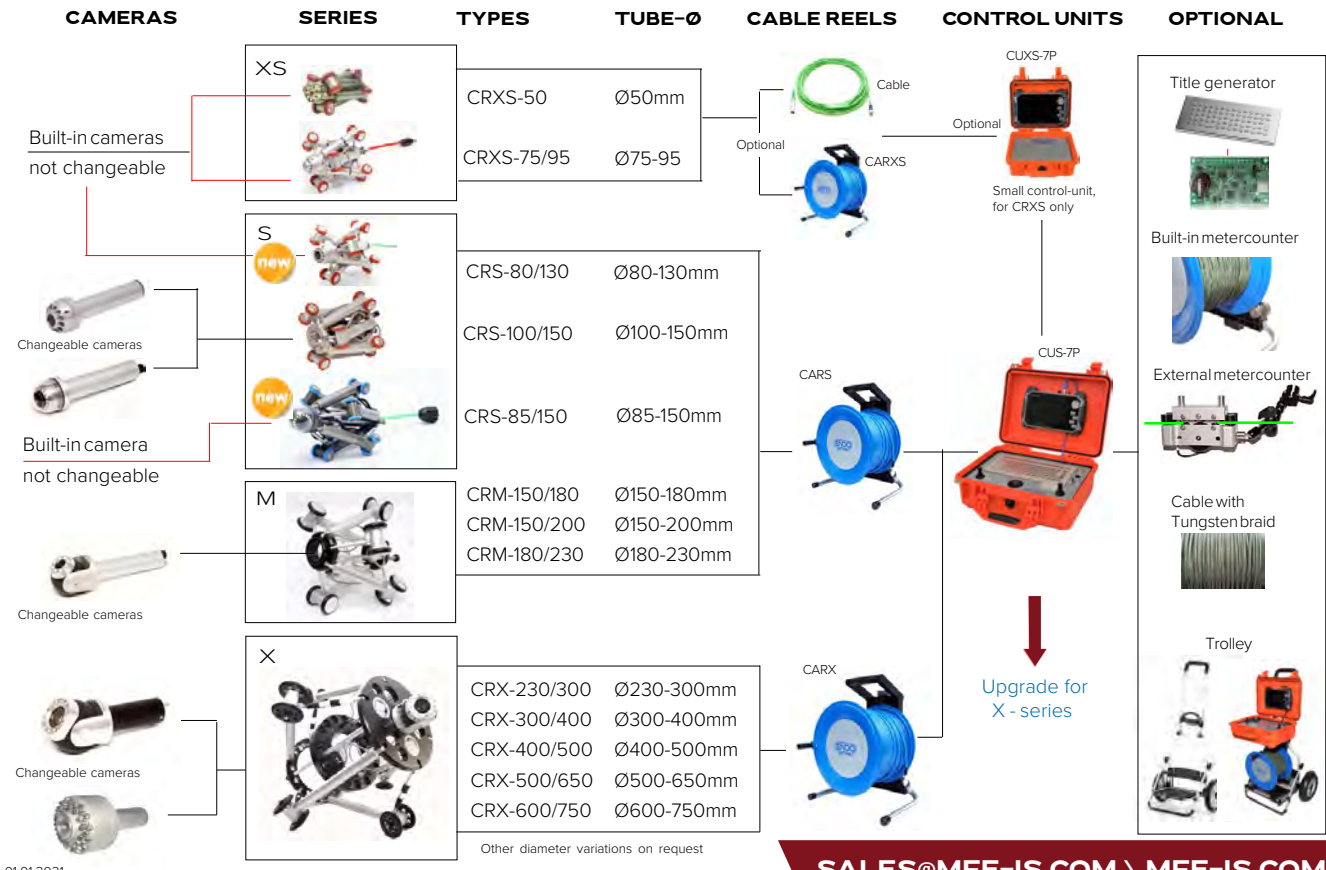
## CRAB-ROBOT TECHNICAL SPECIFICATIONS



SALES@MFE-IS.COM  
MFE-IS.COM



DS21.01.A



01.01.2021

[SALES@MFE-IS.COM](mailto:SALES@MFE-IS.COM) \ [MFE-IS.COM](http://MFE-IS.COM)

## Table of contents

<i>Description</i>	<i>Page</i>
Crab-Robot XS-series	3-5
Crab-Robot S-series	6-12
Crab-Robot M-series	13-15
Crab-robot X-series	16-21
Pan&Tilt cameras	22
Camera-modules	23
Control-units	24
Video-Endoscopes	25
Camera Inspection System	26
Digital Recorder	27

## Crab-Robot

### CRXS-50



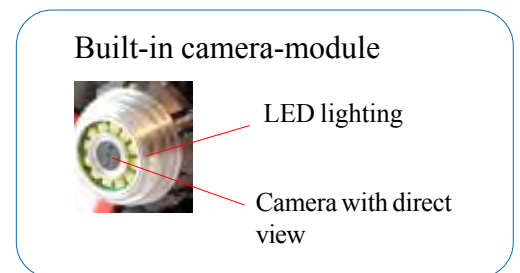
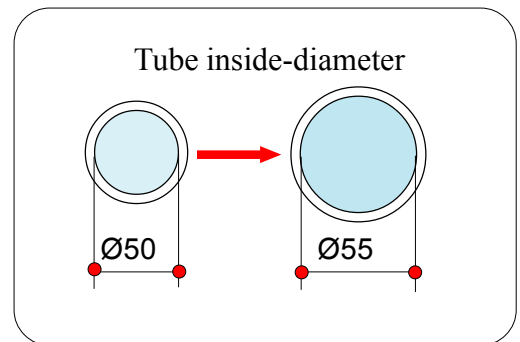
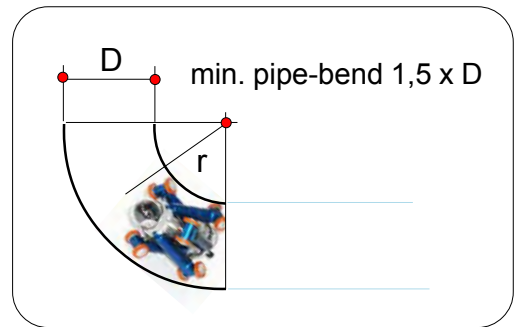
#### Technical specifications:

Min. diameter:	50mm (2")
Max. diameter:	55mm (2.2")
Length:	92mm
Weight (without camera):	0,15 kg
Material:	Aluminium anodized
Watertight:	Splashproof
Smallest tube bend:	1,5xd
Driven wheels:	12
Wheel diameter:	14mm
Wheel material:	Natural rubber - e
Ball bearings:	18
Micro-motors:	6
Voltage:	12VDC
Gearboxes:	6
Gear type:	Planetary gear
Transmission ratio:	246:1
Max.speed:	4m/min.
Horizontal traction force:	35 N
Cameramodule:	not changeable
Operating temperature	-10°C to +50°C
Recomm. max.cable length:	20-30m

*The maximum cable length is dependent on number of pipe bends*

#### Technical specifications camera module:

Image-sensor	1/3" SONY Super HAD CCD
TV lines	480 TV Lines
Pixels	352.000
Minimum illumination	2,5 Lux/F2,2
Focus	Fixfocus
Lens	3,6 mm
Lightingsystem	12 High intensity LED
Operating temperature	-10°C - +50°C



## Crab-Robot CRXS-50/75

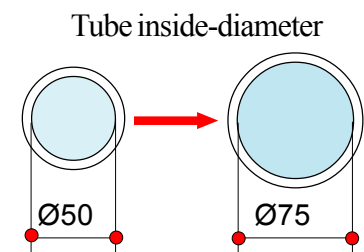
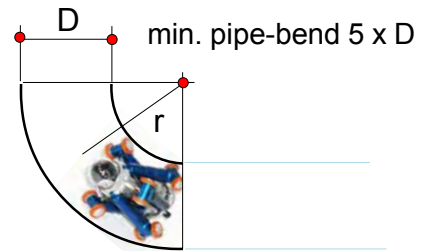


### Technical specifications:

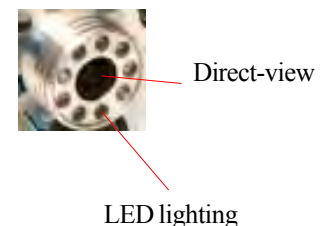
Min. diameter:	50mm (2")
Max. diameter:	75mm (3")
Length:	92mm
Weight (without camera):	0,25 kg
Material:	Aluminium anodized
Watertight:	Splashproof
Smallest tube bend:	5xd
Driven wheels:	12
Wheel diameter:	14mm
Wheel material:	Natural rubber
Ball bearings:	18
Micro-motors:	6
Voltage:	12VDC
Gearboxes:	6
Gear type:	Planetary gear
Transmission ratio:	246:1
Max.speed:	4m/min.
Horizontal traction force:	35 N
Cameramodule:	<b>not changeable</b>
Operating temperature	-10°C to +50°C
Recomm. max.cable length:	approx. 20m

### Technical specifications camera module:

Image-sensor	1/3" SONY Super HAD CCD
TV lines	480 TV Lines
Pixels	352.000
Minimum illumination	2,5 Lux/F2,2
Focus	Fixfocus
Lens	3,6mm
Ligthingsystem	8 High intensity LED
Operating temperature	-10°C - +50°C



### Built-in camera-module



### Control-unit



CUXS-7P

### Cable reel



CARXS-20



# Data Sheet: XS-Series

## Crab-Robot

### CRXS-75/95

#### Technical specifications:

Min. diameter:	75mm (3")
Max. diameter:	95mm (3.7")
Length:	120mm
Weight (without camera):	0,54 kg
Material:	Aluminium anodized
Watertight:	Splashproof
Spring shock absorbers:	1 - variable adjustable
Smallest tube bend:	1,5xd
Driven wheels:	12
Wheel diameter:	20mm
Wheel material:	Natural rubber - easily changeable
Right angle gear boxes:	6
Bevel gears:	12 - steel machined
Transmission ratio:	1:1
Ball bearings:	18
Micro-motors:	6
Voltage:	12VDC
Gearboxes:	6
Gear type:	Planetary gear
Transmission ratio:	134:1
Max.speed:	4m/min.
Horizontal traction force:	46 N
Operating temperature	-10°C to +50°C
Camera module:	not changeable
Recomm. max.cable length:	30m

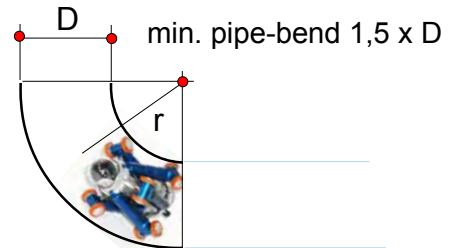
*The maximum cable length is dependent on number of pipe bends*

#### Technical specifications camera module:

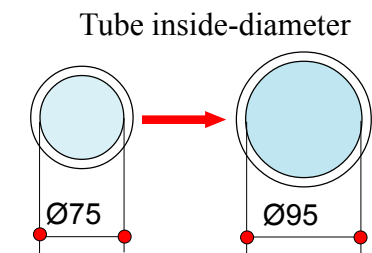
Image-sensor	1/2" SONY Super HAD CCD
TV lines	740TVL
Pixels	484.000
Minimum illumination	3.6 Lux/F2,0
Focus	Fixfocus
FOV, field of view	150°
Lighting system	16 High intensity LED
Operating temperature	-10°C - +50°C



ENDO  
CONTROL

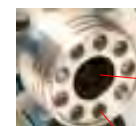


smaller tube bends upon request



variable adjustable

#### Built-in camera-module



Direct-view

LED lighting

#### Control-units



CUS-7P

Cable reel



CARXS-30

## Crab-Robot

### CRXS-80/110

#### Technical specifications:

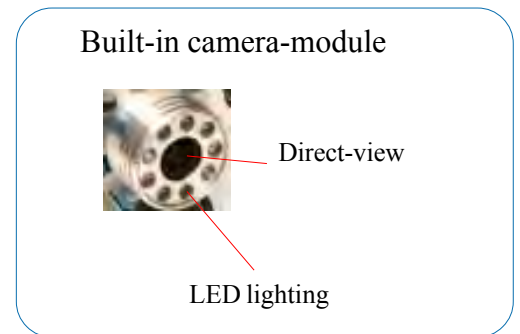
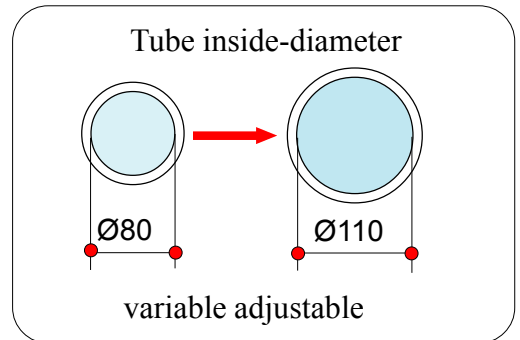
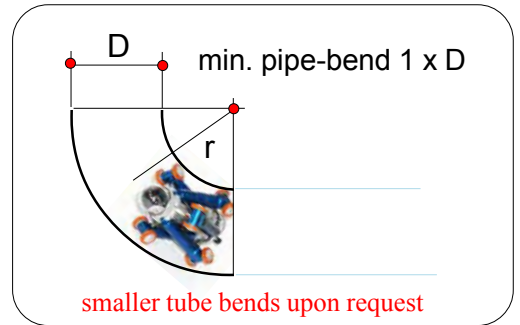
Min. diameter:	80mm (3")
Max. diameter:	110mm (4.3")
Length:	122mm
Weight (without camera):	0,595 kg
Material:	Aluminium anodized
Watertight:	Splashproof
Spring shock absorbers:	3 - variable adjustable
Smallest tube bend:	1,5xd
Driven wheels:	12
Wheel diameter:	20mm
Wheel material:	Natural rubber - easily changeable
Right angle gear boxes:	6
Bevel gears:	12 - steel machined
Transmission ratio:	1:1
Ball bearings:	18
Micro-motors:	6
Voltage:	24VDC
Gearboxes:	6
Gear type:	Planetary gear
Transmission ratio:	134:1
Max. speed:	4m/min.
Horizontal traction force:	46 N
Operating temperature	-10°C to +50°C Built-
Cameramodule:	in, not changeable
Recomm. max. cable length:	40m

*The maximum cable length is dependent on number of pipe bends*

*Available camera-modules: built-in*

*Available Control-units: CUS-7P for S+M series  
CUSX-7P for S,M+X series*

*Available cable reel: CRS-30*



## Crab-Robot

### CRS-80/130

Technical specifications:

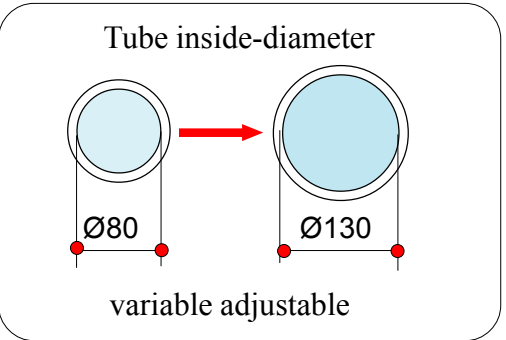
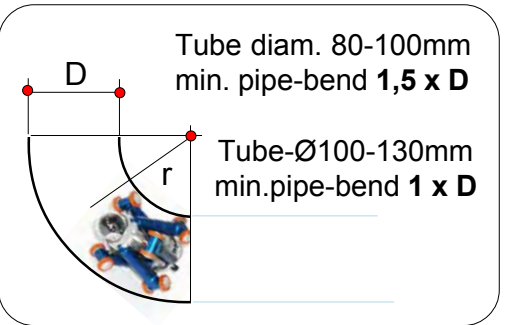


Min. diameter:	80mm (3")
Max. diameter:	130mm (5")
Length:	170mm
Weight (without camera):	0,64 kg
Material:	Aluminium anodized
Watertight:	Splashproof
Spring shock absorbers:	1- variable adjustable
Smallest tube bend:	1,5xd (1xd)
Driven wheels:	12
Wheel diameter:	20mm
Wheel material:	Silicon - easily changeable
Right angle gear boxes:	6
Bevel gears:	12 - steel machined
Transmission ratio:	1:1
Ball bearings:	18
Micro-motors:	6
Voltage:	24VDC
Gearboxes:	6
Gear type:	Planetary gear
Transmission ratio:	134:1
Max. speed:	4m/min.
Horizontal traction force:	52N
Operating temperature	-10°C to +50°C
Cameramodule:	not changeable
Recomm. max. cable length:	50m (100m)

*The maximum cable length is dependent on number of pipe bends*

Technical specifications:

Image-sensor	1/2" SONY Super
TV lines	740 TVL
Pixels	484.000
Minimum illumination	2,5Lux/F2,0
Focus	Fixfocus
Direction of view	0° direct view
FOV, field of view	80°
Lighting system	16 High intens. LED
Diameter	37mm
Shank diameter	20mm
Length	150 mm
Weight	0,12 kg



## Crab-Robot

### CRS-85/150



#### Technical specifications:

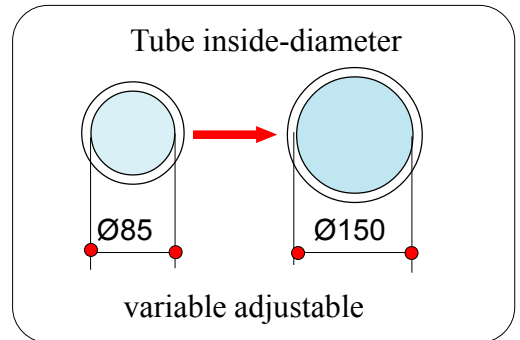
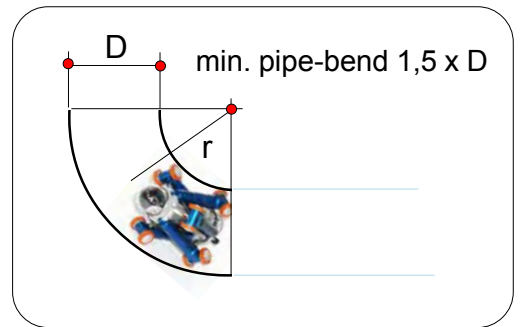
Min. diameter:	85mm (3")
Max. diameter:	150mm (6")
Length:	175mm
Weight (without camera):	0,64 kg
Material:	Aluminium hard-coated
Watertight:	Splashproof
Spring shock absorbers:	3 - variable adjustable
Smallest tube bend:	1,5xd
Driven wheels:	12
Wheel diameter:	20mm
Wheel material:	Silicon - easily changeable
Right angle gear boxes:	6
Bevel gears:	12 - steel machined
Transmission ratio:	1:1
Ball bearings:	18
Micro-motors:	6
Voltage:	24VDC
Gearboxes:	6
Gear type:	Planetary gear
Transmission ratio:	134:1
Max.speed:	4m/min.
Horizontal traction force:	52 N
Operating temperature	-10°C to +50°C
Cameramodule:	Easily changeable, different camera-modules available
Recomm. max.cable length:	50m

*The maximum cable length is dependent on number of pipe bends*

*Available camera-modules:* **CM-35/20F**, direct view with fixfocus  
**PT-35/20F**, Pan&Tilt camera + fixfocus

*Available Control-units:* **CUS-7P** for S+M-series  
**CUSX-7P** for S,M+X-series

*Available cable reel:* **CRS-30**





# Data Sheet: S-Series

## Crab-Robot CRS-100/150



Technical specifications:

Min. diameter:	100mm (4")
Max. diameter:	150mm (6")
Length:	140mm
Weight (without camera):	0,75 kg
Material:	Aluminium anodized
Watertight:	Splashproof
Spring shock absorbers:	3 - variable adjustable
Smallest tube bend:	1,5xd
Driven wheels:	12
Wheel diameter:	20mm
Wheel material:	Natural rubber - easily changeable
Right angle gear boxes:	6
Bevel gears:	12 - steel machined
Transmission ratio:	1:1
Ball bearings:	18
Micro-motors:	6
Voltage:	24VDC
Gearboxes:	6
Gear type:	Planetary gear
Transmission ratio:	134:1
Max.speed:	4m/min.
Horizontal traction force:	95 N
Operating temperature	-10°C to +50°C
Cameramodule:	Easily changeable, different camera-modules available
Recomm. max.cable length:	50m

*The maximum cable length is dependent on number of pipe bends*

*Available camera-modules: CM-35F, direct view with fixfocus*

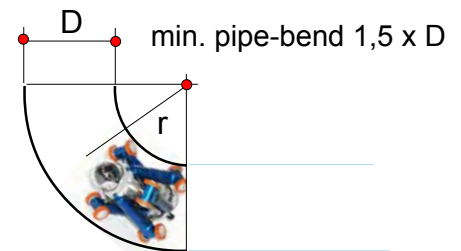
*PT-35F, Pan&Tilt camera + fixfocus*

*Available Control-units: CUS-7P for S+M- series*

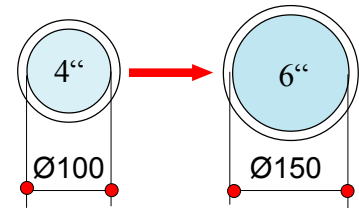
*CUSX-7P for S,M+X- series*

*Available cable reel:*

*CRS-30*



Tube inside-diameter



variable adjustable

Changeable camera-modules



Control-unit



Cable reel



# Data Sheet: S-Series

## Crab-Robot

### CRS-100/150Twin



#### Technical specifications:

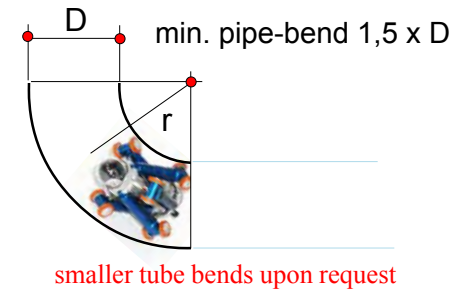
Min. diameter:	100mm (4")
Max. diameter:	150mm (6")
Length:	122/450mm
Weight (without camera):	1,45 kg
Material:	Aluminium anodized
Watertight:	Splashproof
Spring shock absorbers:	3 - variable adjustable
Smallest tube bend:	1,5xd
Driven wheels:	24
Wheel diameter:	20mm
Wheel material:	Natural rubber - easily changeable
Right angle gear boxes:	12
Bevel gears:	24 - steel machined
Transmission ratio:	1:1
Ball bearings:	36
Micro-motors:	12
Voltage:	24VDC
Gearboxes:	12
Gear type:	Planetary gear
Transmission ratio:	134:1
Max.speed:	4m/min.
Vertical traction force:	190 N
Operating temperature	-10°C to +50°C
Cameramodule:	built-in, not changeable
Recomm. max.cable length:	90m

*The maximum cable length is dependent on number of pipe bends*

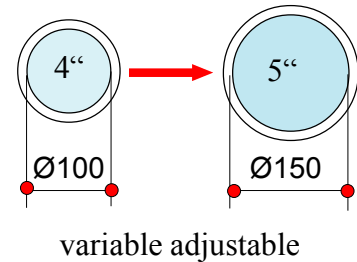
Available camera-modules:	<b>CM-50F</b> , direct view with fixfocus <b>PT-35F</b> , Pan&Tilt camera + fixfocus
Available Control-units:	<b>CUS-7P</b> for S+M- series <b>CUSX-7P</b> for S,M+X-series
Available cable reel:	<b>CRS-30</b>



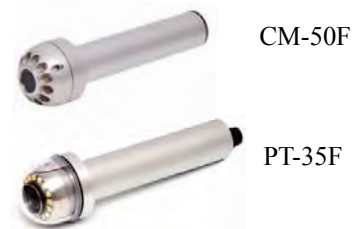
Twin version for long distance



Tube inside-diameter



Changeable camera-modules



Control-unit



Cable reel



## Crab-Robot for 90° corner

### CRS-95/105C

Technical specifications:

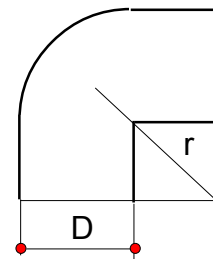
Min. diameter:	95mm (3.7")
Max. diameter:	105mm (4")
Length:	122mm
Weight (without camera):	0,64 kg
Material:	Aluminium anodized
Watertight:	Splashproof
Spring shock absorbers:	3 - variable adjustable
Smallest tube bend:	1,5xd
Driven wheels:	12
Wheel diameter:	20mm
Wheel material:	Natural rubber - easily changeable
Right angle gear boxes:	6
Bevel gears:	12 - steel machined
Transmission ratio:	1:1
Ball bearings:	18
Micro-motors:	6
Voltage:	24VDC
Gearboxes:	6
Gear type:	Planetary gear
Transmission ratio:	134:1
Max.speed:	4m/min.
Vertical traction force:	95 N
Operating temperature	-10°C to +50°C
Cameramodule:	Easily changeable, different camera-modules available
Recomm. max.cable length:	50m

*The maximum cable length is dependent on number of pipe bends*

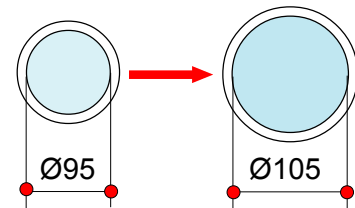
- Available camera-modules:* **CM-50F**, direct view with fixfocus  
**PT-35F**, Pan&Tilt camera + fixfocus
- Available Control-units:* **CUS-7P** for S+M-series  
**CUSX-7P** for S,M+X-series
- Available cable reel:* **CRS-30**



min. pipe-bend 0,8 x D



Tube inside-diameter



variable adjustable

Changeable camera-modules



Control-unit



Cable reel



## Crab-Robot for 90° corner CRXS-70/80C

### Technical specifications:

Min. diameter:	70mm(2.75")
Max. diameter:	80mm(3.15")
Length:	122mm
Weight (without camera):	0,64 kg
Material:	Aluminium anodized
Watertight:	Splashproof
Spring shock absorbers:	3 - variable adjustable
Smallest tube bend:	1,5xd
Driven wheels:	12
Wheel diameter:	20mm
Wheel material:	Natural rubber - easily changeable
Right angle gear boxes:	6
Bevel gears:	12 - steel machined
Transmission ratio:	1:1
Ball bearings:	18
Micro-motors:	6
Voltage:	24VDC
Gearboxes:	6
Gear type:	Planetary gear
Transmission ratio:	134:1
Max.speed:	4m/min.
Vertical traction force:	46 N
Cameramodule:	Easily changeable, different camera-modules available
Recomm. max.cable length:	30m

*The maximum cable length is dependent on number of pipe bends*

*Available camera-modules: built-in*

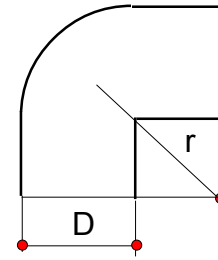
*Available Control-units: CUS-7P for S+M series*

*CUSX-7P for S,M+X series*

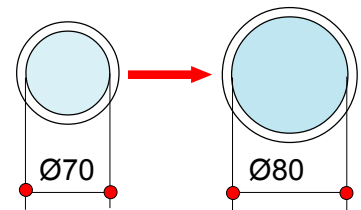
*Available cable reel: CRS-30*



min. pipe-bend 0,8 x D



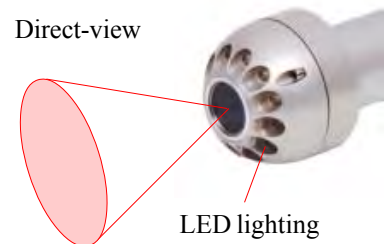
Tube inside-diameter



variable adjustable

Built-in camera-module

Direct-view



LED lighting

Control-unit



CUS-7P

Cable reel



CARS-30



# Data Sheet: M-Series

## Crab-Robot

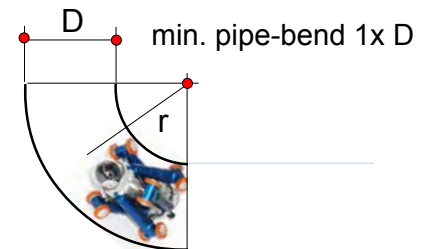
### CRM-150/180

#### Technical specifications:

Min. diameter:	150mm(6")
Max. diameter:	180mm(7")
Length:	157mm
Weigth (without camera):	1,1 kg
Material:	Aluminium anodized
Watertight:	Splashproof
Spring shock absorbers:	3 - variable adjustable
Smallest tube bend:	1xd
Driven wheels:	12
Wheel diameter:	mm
Wheel material:	Nitrile rubber NBR - easily changeable
Right angle gear boxes:	6
Bevel gears:	12 - steel machined
Transmission ratio:	1:1
Ball bearings:	18
Micro-motors:	6
Voltage:	24VDC
Gearboxes:	6
Gear type:	Planetary gear
Transmission ratio:	123:1
Max.speed:	4m/min.
Horizontal traction force:	95 N
Operating temperature	-10°C to +50°C
Cameramodule:	Easily changeable, different camera-modules available
Recomm. max.cable length:	60m

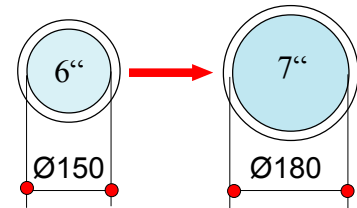
*The maximum cable length is dependent on number of pipe bends*

Available camera-modules:	<b>CM-35F</b> , direct view with fixfocus <b>PT-35F</b> , Pan&Tilt camera + fixfocus
Available Control-units:	<b>CUS-7P</b> for S+M- series <b>CUSX-7P</b> for S,M+X-series
Available cable reel:	<b>CRS-30</b>



smaller tube bends upon request

#### Tube inside-diameter



variable adjustable

#### Changeable camera-modules



CM-35F



PT-35F

#### Control-unit



CUS-7P

#### Cable reel



CARS-30

# Data Sheet: M-Series

## Crab-Robot CRM-150/200

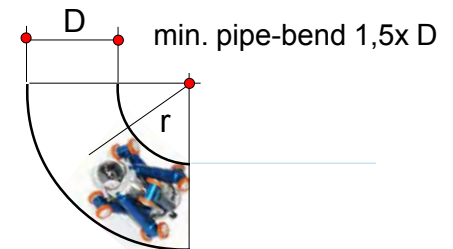
### Technical specifications:

Min. diameter:	150mm(6")
Max. diameter:	200mm(8")
Length:	157mm
Weigth (without camera):	1,1 kg
Material:	Aluminium anodized
Watertight:	Splashproof
Spring shock absorbers:	3 - variable adjustable
Smallest tube bend:	1,5xd
Driven wheels:	12
Wheel diameter:	mm
Wheel material:	Nitrile rubber NBR - easily changeable
Right angle gear boxes:	6
Bevel gears:	12 - steel machined
Transmission ratio:	1:1
Ball bearings:	18
Micro-motors:	6
Voltage:	24VDC
Gearboxes:	6
Gear type:	Planetary gear
Transmission ratio:	123:1
Max.speed:	4m/min.
Horizontal traction force:	95 N
Operating temperature	-10°C to +50°C
Cameramodule:	Easily changeable, different camera-modules available
Recomm. max.cable length:	60m

*Available camera-modules:* **CM-35F**, direct view with fixfocus  
**PT-35F**, Pan&Tilt camera + fixfocus

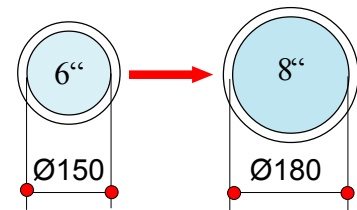
*Available Control-units:* **CUS-7P** for S+M- series  
**CUSX-7P** for S,M+X-series

*Available cable reel:* **CRS-30**



smaller tube bends upon request

### Tube inside-diameter



variable adjustable

### Changeable camera-modules



### Control-unit



### Cable reel



## Crab-Robot

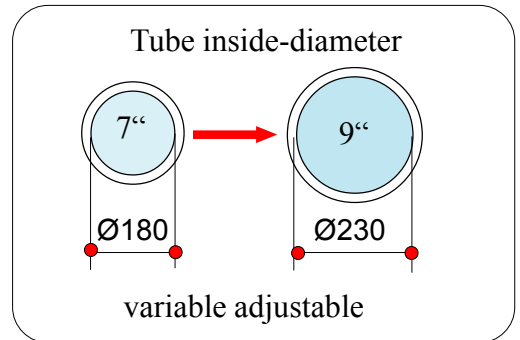
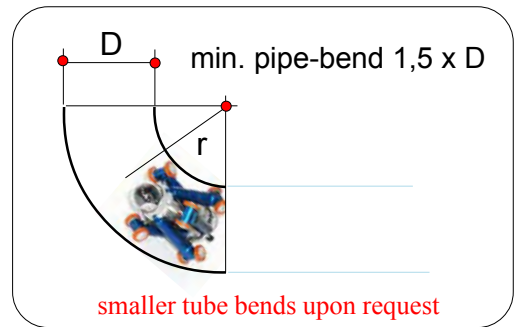
### CRM-180/230

#### Technical specifications:

Min. diameter:	180mm(7")
Max. diameter:	230mm(9")
Length:	208mm
Weigth (without camera):	1,3 kg
Material:	Aluminium hard-coated
Watertight:	Splashproof
Spring shock absorbers:	3 - variable adjustable
Smallest tube bend:	1,5xd
Driven wheels:	12
Wheel diameter:	mm
Wheel material:	Nitrile rubber MBR - easily changeable
Right angle gear boxes:	6
Bevel gears:	12 - steel machined
Transmission ratio:	1:1
Ball bearings:	18
Micro-motors:	6
Voltage:	24VDC
Gearboxes:	6
Gear type:	Planetary gear
Transmission ratio:	123:1
Max.speed:	4m/min.
Horizontal traction force:	105 N
Operating temperature	-10°C to +50°C
Cameramodule:	Easily changeable, different camera-modules available
Recomm. max.cable length:	60m

*The maximum cable length is dependent on number of pipe bends*

- Available camera-modules:*
- CM-35F, direct view with fixfocus*
  - PT-35F, Pan&Tilt camera + fixfocus*
  - PT-55F, Pan&Tilt camera + fixfocus*
- Available Control-units:*
- CUS-7P for S+M- series*
  - CUSX-7P for S,M+X-series*
- Avilabele cable reel:*
- CRS-30*



## Crab-Robot for rough surface

### CRM-200/250C

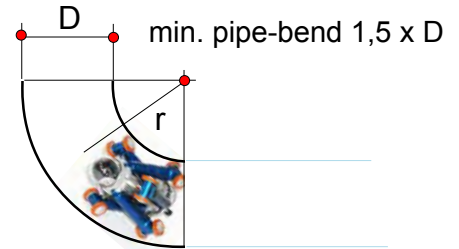


#### Technical specifications:

Min. diameter:	200mm(8")
Max. diameter:	250mm(10")
Length:	265mm
Weight (without camera):	0,84 kg
Material:	Aluminium hard coated
Watertight:	Splashproof
Spring shock absorbers:	3 - variable adjustable
Smallest tube bend:	1,5xd
Driven wheels:	12
Wheel diameter:	20mm
Wheel material:	Foam rubber wheels
Shock absorber	6 - adjustable
Right angle gear boxes:	6
Bevel gears:	12 - steel machined
Transmission ratio:	1:1
Ball bearings:	18
Micro-motors:	6
Voltage:	24VDC
Gearboxes:	6
Gear type:	Planetary gear
Transmission ratio:	123:1
Max.speed:	4m/min.
Vertical traction force:	145 N
Operating temperature	-10°C to +50°C
Cameramodule:	Easily changeable, different camera-modules available
Recomm. max.cable length:	50m

*The maximum cable length is dependent on number of pipe bends*

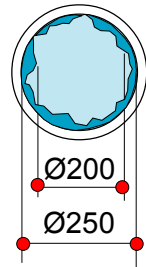
- Available camera-modules:* **CM-50F**, direct view with fixfocus  
**PT-55F**, Pan&Tilt camera + fixfocus
- Available Control-units:* **CUS-7P** for S+M-series  
**CUSX-7P** for S,M+X-series
- Available cable reel:* **CRS-30**



smaller tube bends upon request

#### Tube inside-diameter

automatic adjustable  
8"-10"



#### Changeable camera-modules



#### Control-unit



#### Cable reel





## Crab-Robot

### CRX-230/300

#### Technical specifications:

Min. diameter:	230mm(9")
Max. diameter:	300mm(12")
Length:	243mm
Weight (without camera):	2,2 kg
Material:	Aluminium anodized
Watertight:	Splashproof
Spring shock absorbers:	3 - variable adjustable
Smallest tube bend:	1,5xd
Driven wheels:	12
Wheel diameter:	mm
Wheel material:	Nitrile rubber NBR - easily changeable
Right angle gear boxes:	6
Bevel gears:	12 - steel machined
Transmission ratio:	2:1
Ball bearings:	18
Micro-motors:	6
Voltage:	24VDC
Gearboxes:	6
Gear type:	Planetary gear
Transmission ratio:	146:1
Max.speed:	4m/min.
Horizontal traction force:	172 N
Operating temperature	-10°C to +50°C
Cameramodule:	Easily changeable, different camera-modules available
Recomm. max.cable length:	70m

*The maximum cable length is dependent on number of pipe bends*

*Available camera-modules:* **CMX-80F**, direct view + remote focus

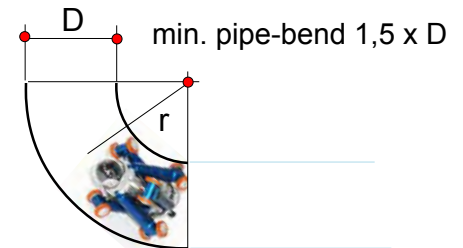
**PT-Z-80RF**, Pan&Tilt + remote-focus

*Available Control-units:* **CUX-7P** for X series

**CUSX-7P** for S,M+X series

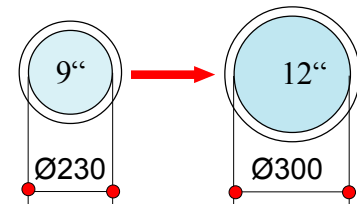
*Available cable reel:*

**CRX-30**



smaller tube bends upon request

Tube inside-diameter



variable adjustable

Changeable camera-modules



CMX-80RF



PTZ-80RF

Control-unit



CUX-7P

Cable reel



CRX-30

# Data Sheet: X-Series

## Crab-Robot

### CRX-300/400

#### Technical specifications:

Min. diameter:	300mm(12")
Max. diameter:	400mm(16")
Length:	295mm
Weight (without camera):	3,8 kg
Material:	Aluminium anodized
Watertight:	Splashproof
Spring shock absorbers:	3 - variable adjustable
Smallest tube bend:	1,5xd
Driven wheels:	12
Wheel diameter:	mm
Wheel material:	Nitrile rubber NBR - easily changeable
Right angle gear boxes:	6
Bevel gears:	12 - steel machined
Transmission ratio:	2:1
Ball bearings:	18
Micro-motors:	6
Voltage:	24VDC
Gearboxes:	6
Gear type:	Planetary gear
Transmission ratio:	146:1
Max.speed:	4m/min.
Horizontal traction force:	206 N
Operating temperature	-10°C to +50°C
Cameramodule:	Easily changeable, different camera-modules available
Recomm. max.cable length:	90m

*The maximum cable length is dependent on number of pipe bends*

*Available camera-modules:* **CMX-80F**, direct view + remote focus

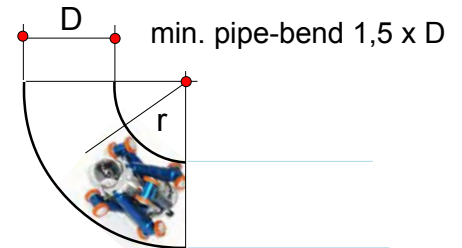
**PT-Z-80RF**, Pan&Tilt + remote-focus

*Available Control-units:* **CUX-7P** for X series

**CUSX-7P** for S,M+X series

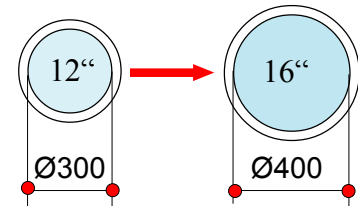
*Available cable reel:*

**CRX-30**



smaller tube bends upon request

Tube inside-diameter



variable adjustable

Changeable camera-modules



CMX-80RF



PTZ-80RF

Control-unit



CUX-7P

Cable reel



CARX-30

## Crab-Robot

### CRX-400/500

#### Technical specifications:

Min. diameter:	400mm (16")
Max. diameter:	500mm (20")
Length:	325mm
Weigth (without camera):	4,5 kg
Material:	Aluminium anodized
Watertight:	Splashproof
Spring shock absorbers:	3 - variable adjustable
Smallest tube bend:	1,5xd
Driven wheels:	12
Wheel diameter:	mm
Wheel material:	Nitrile rubber NBR - easily changeable
Right angle gear boxes:	6
Bevel gears:	12 - steel machined
Transmission ratio:	2:1
Ball bearings:	18
Micro-motors:	6
Voltage:	24VDC
Gearboxes:	6
Gear type:	Planetary gear
Transmission ratio:	146:1
Max.speed:	4m/min.
Horizontal traction force:	206 N
Operating temperature	-10°C to +50°C
Cameramodule:	Easily changeable, different camera-modules available
Recomm. max.cable length:	90m

*The maximum cable length is dependent on number of pipe bends*

*Available camera-modules:* **CMX-80F**, direct view + remote focus

**PT-Z-80RF**, Pan&Tilt + remote-focus

*Available Control-units:* **CUX-7P** for X series

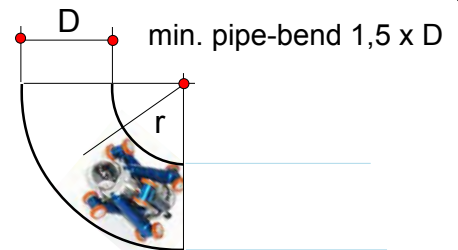
**CUSX-7P** for S,M+X series

*Available cable reel:*

**CRX-30**

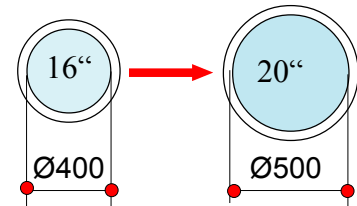


ENDO CONTROL



smaller tube bends upon request

#### Tube inside-diameter



variable adjustable

#### Changeable camera-modules



CMX-80RF



PTZ-80RF

#### Control-unit



CUX-7P

#### Cable reel



CARX-30

# Data Sheet: X-Series

## Crab-Robot

### CRX-500/600

#### Technical specifications:

Min. diameter:	500mm(20")
Max. diameter:	600mm(24")
Length:	295mm
Weight (without camera):	4,5kg
Material:	Aluminium anodized
Watertight:	Splashproof
Spring shock absorbers:	3 - variable adjustable
Smallest tube bend:	1xd
Driven wheels:	12
Wheel diameter:	mm
Wheel material:	Nitrile rubber NBR - easily changeable
Right angle gear boxes:	6
Bevel gears:	12 - steel machined
Transmission ratio:	2:1
Ball bearings:	18
Micro-motors:	6
Voltage:	24VDC
Gearboxes:	6
Gear type:	Planetary gear
Transmission ratio:	146:1
Max.speed:	4m/min.
Horizontal traction force:	206 N
Operating temperature	-10°C to +50°C
Cameramodule:	Easily changeable, different camera-modules available
Recomm. max.cable length:	90m

*The maximum cable length is dependent on number of pipe bends*

*Available camera-modules:* **CMX-80F**, direct view + remote focus

**PT-Z-80RF**, Pan&Tilt + remote-focus

*Available Control-units:* **CUX-7P** for X series

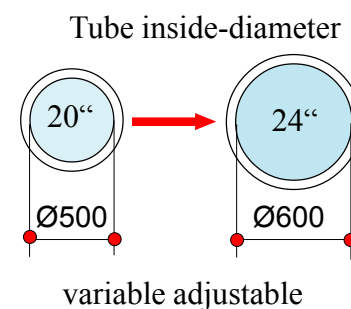
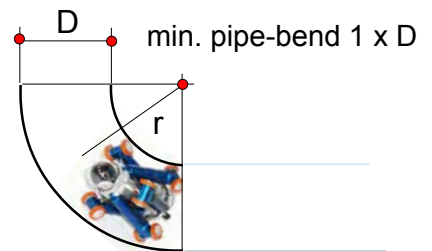
**CUSX-7P** for S,M+X series

*Available cable reel:*

**CRX-30**



ENDO CONTROL



#### Changeable camera-modules



CMX-80RF



PTZ-80RF

#### Control-unit



CUX-7P

#### Cable reel



CARX-30



## Crab-Robot

### CRX-400/600

#### Technical specifications:

Min. diameter:	400mm (16")
Max. diameter:	600mm (24")
Length:	295mm
Weight (without camera):	3,8 kg
Material:	Aluminium anodized
Watertight:	Splashproof
Spring shock absorbers:	3 - variable adjustable
Smallest tube bend:	3xd
Driven wheels:	12
Wheel diameter:	mm
Wheel material:	Nitrile rubber NBR - easily changeable
Right angle gear boxes:	6
Bevel gears:	12 - steel milled
Transmission ratio:	2:1
Ball bearings:	18
Micro-motors:	6
Voltage:	24VDC
Gearboxes:	6
Gear type:	Planetary gear
Transmission ratio:	146:1
Max.speed:	4m/min.
Horizontal traction force:	206 N
Operating temperature	-10°C to +50°C
Cameramodule:	Easily changeable, different camera-modules available
Recomm. max.cable length:	90m

*The maximum cable length is dependent on number of pipe bends*

*Available camera-modules:* **CMX-80F**, direct view + remote focus

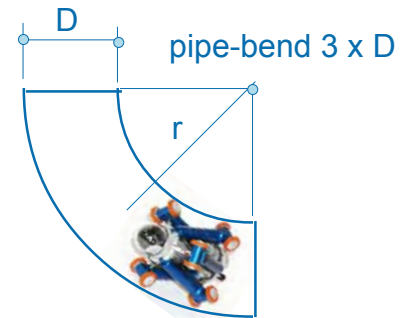
**PT-Z-80RF**, Pan&Tilt + remote-focus

*Available Control-units:* **CUX-7P** for X series

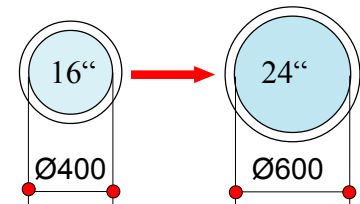
**CUSX-7P** for S,M+X series

*Available cable reel:*

**CRX-30**



Tube inside-diameter



variable adjustable

Changeable camera-modules



CMX-80RF



PTZ-80RF

Control-unit



CUS-7P

Cable reel



CARX-30

## Crab-Robot CRX-500/650



### Technical specifications:

Min. diameter:	500mm (16")
Max. diameter:	650mm (24")
Length:	430mm
Weight (without camera):	4,5 kg
Material:	Aluminium anodized
Watertight:	Splashproof
Spring shock absorbers:	3 - variable adjustable
Smallest tube bend:	1,5xd
Driven wheels:	12
Wheel diameter:	mm
Wheel material:	Nitrile rubber NBR - easily changeable
Right angle gear boxes:	6
Bevel gears:	12 - steel milled
Transmission ratio:	2:1
Ball bearings:	18
Micro-motors:	6
Voltage:	24VDC
Gearboxes:	6
Gear type:	Planetary gear
Transmission ratio:	146:1
Max.speed:	4m/min.
Horizontal traction force:	206 N
Operating temperature	-10°C to +50°C
Cameramodule:	Easily changeable, different camera-modules available
Recomm. max.cable length:	90m

*The maximum cable length is dependent on number of pipe bends*

*Available camera-modules: CMX-80F, direct view + remote focus*

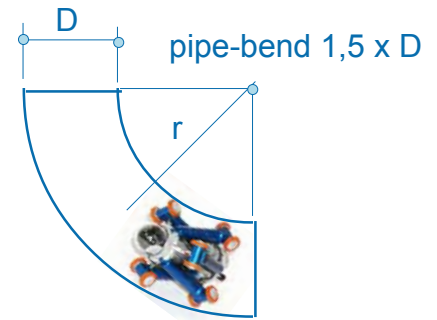
*PT-Z-80RF, Pan&Tilt + remote-focus*

*Available Control-units: CUX-7P for S+M series*

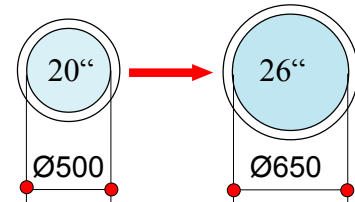
*CUSX-7P for S,M+X series*

*Available cable reel:*

*CRX-30*



Tube inside-diameter



variable adjustable

Changeable camera-modules



CMX-80RF



PTZ-80RF

Control-unit



CUS-7P

Cable reel



CARX-30

# Data Sheet: XX-Series

## Crab-Robot CRXX-500/650



### Technical specifications:

Min. diameter:	500mm (16")
Max. diameter:	650mm (24")
Length:	430mm
Weight (without camera):	4,5 kg
Material:	Aluminium anodized
Watertight:	Splashproof
Spring shock absorbers:	3 - variable adjustable
Smallest tube bend:	1xd
Driven wheels:	24
Wheel diameter:	100mm
Wheel material:	Nitrile rubber NBR - easily changeable
Right angle gear boxes:	12
Bevel gears:	24 - steel milled
Transmission ratio:	1:1
Ball bearings:	36
Micro-motors:	12
Voltage:	24VDC
Gearboxes:	6
Gear type:	Planetary gear
Transmission ratio:	100:1
Max. speed:	4m/min.
Horizontal traction force:	360 N
Operating temperature	-10°C to +50°C
Cameramodule:	Easily changeable, different camera-modules available
Recomm. max. cable length:	150m

*The maximum cable length is dependent on number of pipe bends*

*Available camera-modules: **CMX-80F**, direct view + remote focus*

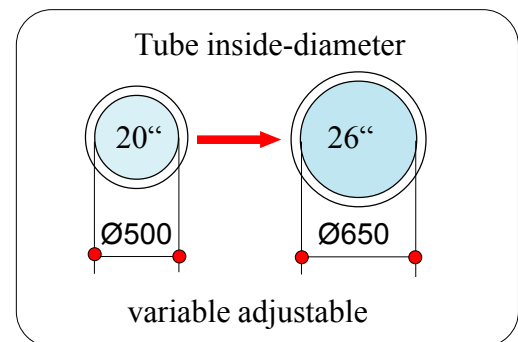
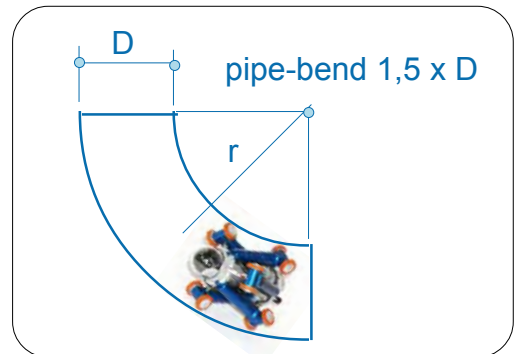
***PT-Z-80RF**, Pan&Tilt + remote-focus*

*Available Control-units: **CUX-7P** for X series*

***CUSX-7P** for S,M+X series*

*Available cable reel: **CRX-30***

**CRX-30**





## PTZ-80RF

Technical specifications:

Image-sensor	1/4" SONY Super HAD CCD
TV lines	480 TVL
Pixels	438.000
Minimum illumination	2,5 Lux/F2,2
Focus	Remote-Focus
Lens	4,2- 42 (10xZoom)
Ligthing system	10x4 (40) High intensity LED
Diameter	80mm
Shank diameter	40mm
Length	190mm
Weight	0,68 kg
Rotation	360° endless
Swivel	2x100°
Operating temperature	-10°C - +50°C

## PT-55F

Technical specifications:

Image-sensor	1/2" SONY Super HAD CCD
TV lines	740TVL
Pixels	484.000
Minimum illumination	2,5 Lux/F2,0
Focus	Fixfocus
FOV, field of view	150°
Ligthing system	16 High intensity LED
Diameter	37mm
Shank diameter	25mm
Length	150 mm
Weight	0,16 kg
Rotation	360° endless
Swivel	2x100°
Operating temperature	-10°C - +50°C

## PT-35F/25F

**Changeable**

+

## PT-35/20F

**not changeable**

Technical specifications:

Image-sensor	1/2" SONY Super HAD CCD	
TV lines	740 TVL	
Pixels	484.000	
Minimum illumination	2,5Lux/F2,0	
Focus	Fixfocus	
FOV, field of view	80°	
Ligthing system	16 High intensity LED	
Diameter	37mm	
Shank diameter	25mm	20mm
Length	150 mm	
Weight	0,16 kg	
Rotation	360° endless	2x175°
Swivel	2x100°	
Operating temperature	-10°C - +50°C	

## X - series



## M - series

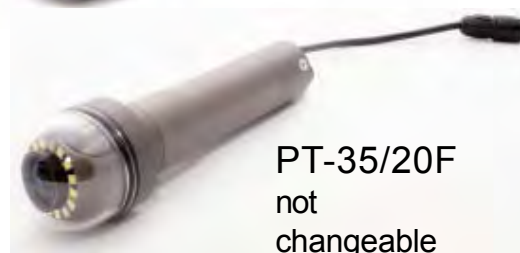


## S- series

PT-35/25F



PT-35/20F  
not  
changeable





## CM-50FF

### Direct-view Cameramodule for Crab-Robot S+M-Series

Technical specifications ccd-camera

Image-sensor	1/4" SONY Super HAD CCD
TV lines	740 TVL
Pixels	484.000
Minimum illumination	2,0 Lux/F2,2
AES	1/50s - 1/100.000s
Lens	3,6mm / F2.2
Focus	Fixocus
Viewing angle	80°
Operating temperature	-10°C - +50°C
Lighting system	High intensity LED's

## S - series M - series



## CMX-80RF

### Direct-view Cameramodule for Crab-Robot X-Series

Technical specifications ccd-camera

Image-sensor	1/4" SONY Super HAD CCD
TV lines	740 TVL
Pixels	484.000
Minimum illumination	2,0 Lux/F2,2
AES	1/50s - 1/100.000s
Lens	3,6mm / F2.2
Focus	Remote-Focus
Viewing angle	80°
Operating temperature	-10°C - +50°C
Lighting system	High intensity LED's

## X - series



## CUXS-7P



Small control-unit



## XS - series

Technical specifications:

Control-Unit	Suitable for XS-series
Casing	portable PELI-case
Voltage	85-265V
Monitor	7" LCD-Monitor + DVR with SD-card
Functions	Drive control
Dimensions	270 x 250x 120mm
Weight	4kg



## CUS-7P



Optional

Optional:  
Touch-panel  
Focus + Zoom  
for PTZ-80RF only

Speed control  
X- series

## XS S+M - series

Technical specifications:

Control-Unit	Suitable for S+M-series
Casing	portable PELI-case
Voltage	85-265V
Monitor	7" LCDMonitor + DVR with SD-card
Functions	Drive control Speed control Pan&Tilt
Dimensions	486 x 392 x 192mm
Weight	8kg



## Upgrade for X - series

Additional Functions:	Drive control X-series Speed control Touch panel: Focus + Zoom
-----------------------	--

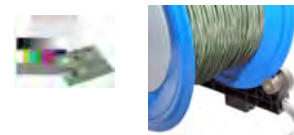
### Optional accessories



#### Titlegenerator MCTG-50



#### Built-in metercounter



#### Trolley TR-50



# Data Sheet: P+T Camera-System

The new video inspection system PTZ-80RF is built up modularly and can be used for different applications. This system was designed especially for the following applications: Great cavities, tanks, vessels, engines and turbines, as well as for bridge- inspections. For small inlet-openings in the areas of assembly, aeronautics, space Industries, air conditioning Systems or special tasks for custom and police. All these checks can be carried out economically and optimally with the new PTZ-80RF. The new video inspection system can be attached to different control-units. The simple handling, the modular designed system and different video heads with an integrated high intensity LED illumination system, are very advisable.



Sewage pipes



Security



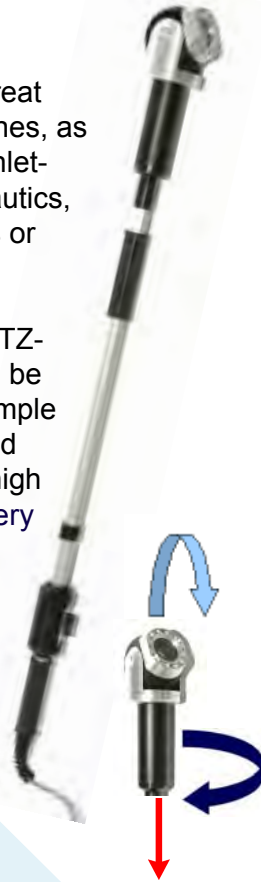
Heat exchanger



Vessels + tanks

## Applications

- \* Centrifuges
- \* Plant-constructions
- \* Chemical Separators
- \* Breweries and Diaries
- \* Turbines and compressors
- \* Chimney and fountain-shafts
- \* Vessels and tanks with small openings
- \* Cavities in bridge-and building constructions
- \* Heavy accessibility machine-plants
- \* Aerospace and aircraft-industry
- \* Ship-, and car - engines
- \* Air conditioning ducts
- \* Reactor - vessels
- \* Custom + Police
- \* Power-plants
- \* Vessels



Changeable Pan&Tilt camera module with LED Lighting



Telescoping rods:

- 2 x 60 cm
- 2 x 125 cm
- 2 x 150 cm
- 2 x 200 cm

## CUX-10P

Technical specifications control-unit:



Portable Pelicase	
Voltage	230V
Monitor	10" LCD Monitor
Video/Image storage	DVR (optional)
Dimensions	405x330x174 mm
Weight	3,5 kg
Operating temp.	-10°C - +50°C

## Control-unit



### Technical specifications:

Diam.camera-head	80 mm
Image-sensor	1/4" SONY Super HAD CCD
TV lines	480 TVL
Pixels	438.000
Minimum illumination	2,5 Lux/F2,2
Focus	Autofocus
Lens	4,2- 42 (10xZoom)
Ligthing system	High intensity LED

### PTZ-80RF



### Technical specifications:

Diam.camera-head	39 mm
Image-sensor	1/4" SONY Super HAD CCD
TV lines	450 TVL
Pixels	438.000
Minimum illumination	2,0 Lux/F2,2
Focus	Fxfocus
Lens	2,7mm /F2,2
Ligthing system	High intensity LED

### PT-35F



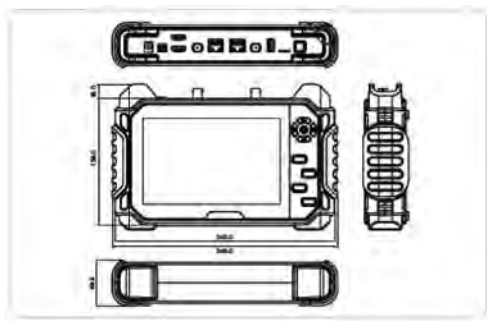


# Data Sheet: Digital Recorder

Digital Video-Recorder (DVR) with Touch Screen + SD-Card for video recording and Snap-Shot

## Features

- IPS 7 inch (1280x800) TFT-LCD Panel (LED Back Light) 7 inch wide and capacitive touch screen
  - Optical Bonding for convenient outdoor use -> Clear view under the direct rays of the sun, waterproof screen, dampproof, dustproof
  - Anti-finger coating for convenient use of the touch screen
  - Various Input signal: IP, HD/EX/3G-SDI, AHD, TVI, CVI, CVBS, HDMI
  - HDMI output port is provided.(1080p 60)
  - PoE (Max. 30W), PoC (Max. 10W)
    - PoC function is available for supported cameras only
  - Cable connection status check
  - Power supply to camera (Max. DC12V / 500mA)
  - Video recording, snapshot and playback is available.
    - ※ Supported file format : MP4 -> Playback is available on PC.
- 1) IP App : Auto Discovery, Camera Settings, Video view, Ping test, PTZ control, Snapshot, Record etc.  
(Device Type : ONVIF, RTSP, MJPEG / Requested custom protocol addition is possible.)
  - 2) Viewer App : HD/EX/3G-SDI, AHD, TVI, CVI, CVBS, HDMI in
- RS-485 control (PELCO-D/P, Samsung, Panasonic, Lilin, Yann, etc.)
  - UTC (Up The Coax Communication) Function for AHD, TVI, CVI, CVBS.
  - Signal Level Meter, Focus Meter, CRC Check function for HD-SDI/3G-SDI/EX-SDI
  - Signal Level Meter, Focus Meter for AHD/TVI/CVI/CVBS (World 1st)
  - Support WIFI & Blue Tooth connection for wireless networking.



## Specifications

	Model	SC-DVR07HD	
LCD	Display Resolution	1280(H) X 800(V) X 60(Hz)	
	Size	7 inch	
	Pixel Pitch	0.217mm(H) X 0.177mm(V)	
	Brightness (CD)	400 Cd/m <sup>2</sup>	
	Viewing Angle	89°(H) / 89°(V)	
	Response Time	5.5ms	
Video	Input	HDMI	~1080p 60
		HD-SDI	1.485Gbps~2.570Gbps
		HD Analog	AHD/TVI/CVI 1.0(720p) / UTC AHD/TVI/CVI 2.0(1080p)
	Output	Analog	CVBS NTSC/PAL (CCIR656)
		LAN	10/100Mbps / IP Camera/PoE
		HD	Up to 1080p 60
Measurement	HD-SDI / HD Analog	Signal Meter/Focus Meter	
	AHD / TVI / CVI / CVBS	A.F. Level Meter/ Focus Meter	
Power	Input	DC 12.6V(Exclusive Adapter)	
	Output	4 DC 12V 500mA /Power Output	
Accessory		Li-Polymer 11.1V 3200mAh x 2	
	Surge protection circuit built-in		
	Temperature / Humidity	0°C ~ +50°C / 0% ~ 80%	
	Case / Weight	PCMS / 3kg	
	Dimensions (mm)	248(W) X 180(H) X 40(D)	



DVR-HD-7SD-Touch

WiFi Dongle incl.



Adaptable to control-units





# news

## Portable Video-Inspection-System



### Optional accessories:

#### MCTG-50

Control-unit with 7" LCD-Monitor and Title generator



CCTV Camera-System with reel



Crab-Robot units



Trolley



External metercounter



Built-in metercounter

The new video-inspection system is very powerful, portable and versatile. A sturdy collapsible trolley can be equipped with different control units, cable drums and reels. All components are equipped with shock absorbers.

For mobile use, the individual systems can also be operated independently with high performance lithium batteries.



Cable with Tungsten braid

# Circular triangulation sensor

**Crab-Robot**  
**CRM-180/230**



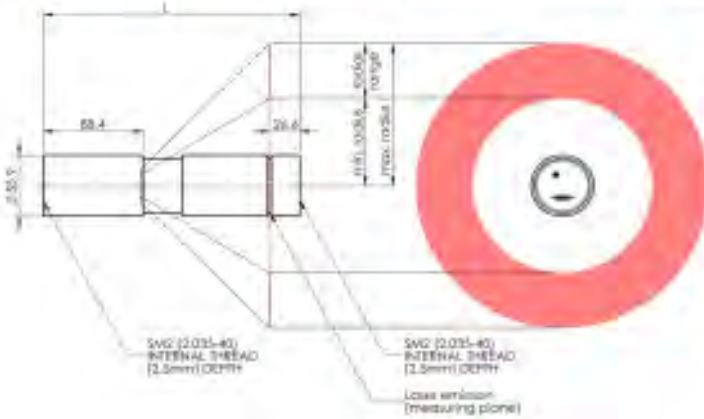
A new step in laser measurement technology.

The sensor measures internal geometries of bores, pipes containers and other cavities.

The radial laser scans the inner surface on a cavity geometry over 360° at 4096 angular points.

The result is the precise 2D cross-section. Sensors with different measuring ranges are available.

Model	85+35	130+50	230+90	380+130
Länge L (mm)	189	228.5	322	449
Radialer Messbereich (mm)	70	100	180	240
Min. Radius (mm)	50	80	140	200
Max. Radius (mm)	120	180	320	500
Gewicht (g)	491	505	541	623



## Circular triangulation sensor

