



## EROS Manipulator Vehicle

Remote-controlled, radiation-resistant intervention vehicle for observation and inspection inside buildings (cable and radio control possible)

EROS is a vehicle with component modules. The main components are the chassis with two free-moving axles, the manipulator base, the manipulator with gripping function and video cameras and equipment for transmitting data between EROS and the control centre. The chassis enables work up to a height of 2 metres.

Due to its chassis arrangement, EROS is capable of overcoming obstacles such as stairs, pits, steps, etc. The Romain 125 manipulator has six degrees of freedom and a hand weight of 12 kg. Working data and video data is transmitted to the command centre either by a 250-metre long cable, or by radio. EROS also has an emergency radio transmission facility, which in the event of the cable becoming separated, enables it to withdraw from the scene safely. Power for both radio and cable operation is supplied by a rechargeable lithium-ion battery which has a capacity for at least 4 hours operation. Safe transport and loading by crane without impact damage is ensured by a transport container.

The main components of the command centre are:

- 2x video screens with invert function for displaying camera pictures
- 1x observation monitor for displaying all relevant vehicle data
- 1x graphic monitor for displaying an animated 3-D model of EROS with self-collision supervision
- 1x control panel for controlling the vehicle and manipulator

### Vehicle

Height	1150 mm
Width	440 mm
Length	variabel 980 - 1570mm
Weight	
Cable configuration	345 kg
Radio configuration	320 kg
Speed	max. 15 m/min
Climbing power (stair)	< 42,5°
Step	bis 600 mm height
Ditch	bis 600 mm width

### Data transfer

	Radio	Cable	Not
Video data	5,8 GHz	Modem	2,36 GHz
Wirkdaten	400 MHz	Modem	400 MHz

### Manipulators

Typ	Variability	Lifting Capacity
Romain 125	6	12 daN

### Environmental conditions

Dose rate	$\leq 10^2$ Gy/h
Max Dose rate	$\leq 10^4$ Gy
Temperature	$-20^\circ\text{C} < T < 55^\circ\text{C}$

