



3E CRAWLER SMART 10

AUTOMATIC SYSTEM FOR RADIOGRAPHIC INSPECTION OF PIPELINE WELDS

3E Crawler system Smart 10 is a crawler system for X-ray (Smart 10/X) and/or Gamma ray (Smart 10/G) inspection of 10" to 48" pipeline welded joints.



-3E Crawler system Smart 10/X



-3E Crawler system Smart 10/G

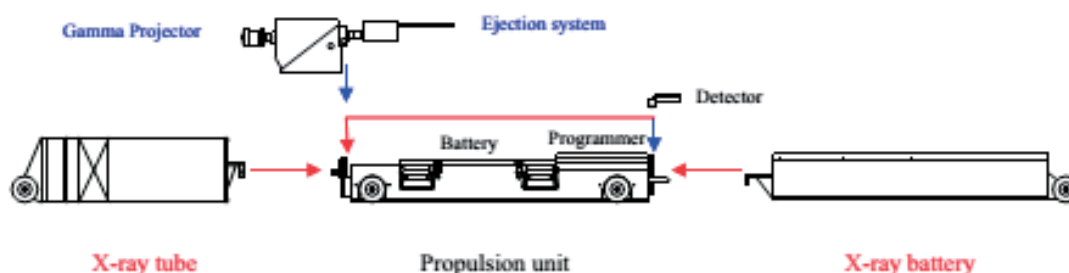
Significant characteristics of **3E Crawler system Smart 10** based on technical improvements, both in mechanics and electronics, are:

- Four wheels drive/brake
- Modular design and interchangeability
- Robustness and reliability
- Simplicity and safety of handling
- Re-programmability of crawler performance to adapt to different work requirements (*)

(*) Re-program to be made by qualified staff of 3E

3E CRAWLER SYSTEMSMART 10/X 10/G

SCHEMATIC DIAGRAM SHOWING DISTRIBUTION OF MAIN ELEMENTS OF THE CRAWLER



Note: The propulsion unit is common for both types of crawler: X and G.



3E Crawler Smart 10

TECHNICAL DATA

Dimensions and weights:

Dimension/ Element	X-ray tube Eresco 32MFC	X-ray tube Eresco 52MFC	Control unit (Both)	Gamma Projector	Propulsion unit	X-ray battery unit
Length (mm)	777	980	-	IR100	1100	950
Width (mm)	197 (Ø)	225 (Ø)	-	Note 1	200	190
Height (mm)			-		185	200
Weight (Kg)	31	36	8		30 + 19 (batteries)(*) + 4 (programmer)	71

Note 1. - Crawler can be adjusted for most common gamma projectors in the market.

(*) High capacity batteries: 31 Kg

Inspection autonomy:

- 1,5 Km/day (Propulsion Batteries 24V, 24Ah)
- 2 Km/day (Propulsion Batteries 24V, 42Ah) (Optional)

Equipment positioning: Emitter Cs¹³⁷ (20 mCi) or Electromagnetic device

Translation speed: 12,5 m/min

Exposure time: 1-999 sec. (1 sec. stepped)

Admissible slope: 35%.

Acceptable temperature:

-40 ° C up to 70 ° C

Maximum pipeline curvature:

40d (for pipes of d= 10'' - 12'')

10d (for pipes of d=14'' - 48'')

10'' (254 mm)/48'' (1220 mm)

Minimum/maximum diameter:

Driving motor feeding:

Pb batteries 24V, 24 Ah

Pb batteries 24V, 42 Ah (option)

Stopping precision:

+/- 5 mm

Exposition delay: 12 sec. (Programmable)

STANDARD SYSTEM:

BASIC SYSTEM

- Propulsion chassis, Detector and Programmer (Control unit)
- Two propulsion batteries and Charger
- One set of shafts for propulsion chassis
- Operating and maintenance manual
- Tool box
- Transit/storage case
- Training

X-RAY INSPECTION KIT (Smart -10/X):

- One set of extendable shafts for X-ray elements
- X-ray battery unit and Charger
- Assembling set

And / or

GAMMA-RAY INSPECTION KIT (C-1048/G):

- Ejector system
- Assembling set

Accessories:

- Shafts (10'' to 48'') for propulsion chassis
- Shafts (10'' to 48'') for X-ray tube assembly and X-ray battery unit
- Pair of wheels (propulsion chassis)
- Rescue unit (propulsion chassis, battery and 500 m cable)
- High capacity battery pack (for pipe OD from 12'')

X-ray tube:

3E mounts Eresco Tubes 32 and 52 MFC, alternative solutions available.

Gamma projector (Source projector and container):

Adjustable to most common gamma projectors in the market

Crawler control unit:

Emitter Cs¹³⁷ (20 mCi) or Electromagnetic device

Sources:

Iridium-192 or Selenium-75