

**NON-DESTRUCTIVE TESTING
EQUIPMENT &
ACCESSORIES**



PRODUCT CATALOGUE



3E NDT, LLC
Via Roganti 16
23020 Prosto di Piuro SO Italy
Ph +39 0343 34335
info@3endt.eu
Website : www.3endt.eu

3E NDT, LLC
300 Hwy 146 N,
La Porte, Tx 77571 USA
Ph +1 281 470-2010
sales@3endt.com
Website : www.3endt.com

3E NDT, LLC
14320 Wicks Blvd
San Leandro, CA 94577 USA
Ph +1 510-352-6767
sales@ir100.com
Website: www.ir100.com



LUMINUX HIGH INTENSITY LED FILM VIEWER

LED Film Viewer with built-in Densitometer LH- P1 D

Combines The Capabilities of LED Film Viewer & Densitometer.



Portable light weight, Easy to carry around. Corrosion Resistant Body, Perfect for Big, Small or Mobile Dark Rooms

Luminux X-ray Film Viewers have gone **Green to Save the Environment** using LED light source, Trendy looks, Corrosion resistant Body & Compact size. Uniform brightness on entire screen, no damages of X RAY Film, longer life and can easily view 4.2 film Densities. Built-in Densitometer with 3 mm Aperture for viewing density 0-5 D.

Salient Features:

Up to 80% saving in power consumption
Array of special grade LED lamps
low screen temperature & less emission
With Foot switch & sliding shutters

Uniform brightness on entire screen.
No Warm-up Time
Shock resistance
High speed cooling fan

Luminux X-ray Film Viewers meet the requirements of ASTM E1390 & ASME Sec. Art.2 T-234 EN 25580

Technical Specifications:

	Film Viewer	Densitometer	
Light Intensity	120,000 Cd/m ²	Accuracy	High Accuracy: ±0.03 D
Maximum Density	4.2 D	Viewing Density	0-5 D
Viewing Area	2.5" x 8" (60mm x 200mm)	Resolution	0.01 D
Intensity Control	5 -100% continuous	Display	4 Digit LCD
Housing Body	Powder Coated Aluminum Body	Calibration	15 Point Calibration
Uniformity	g ≥ 0.95	Probe	Integrated probe with zero switch
Dimension	18" x 5.5" x 2.5"	(455mm x 140mm x 65mm)	
Power	110 - 220 VAC / 50 - 60 Hz Operation		
Operating Temperature	-10° to 50° C -80% Humidity		
Weight	2.5 Kg (5.5 lbs.)		

Standard package include

Film Viewer, Densitometer probe, Foot Switch, Sliding shutter. Duffle Bag Operating Manual. Certification Report, Warranty Card.

* Specifications are subjected to change without notice. *Under Standard test conditions.



321 N. 8th St La Porte, Tx 77571 USA
Ph: +1 281 470-2010 • sales@3endt.com
www.3endt.com

14320 Wicks Blvd San Leandro, CA 94577 USA
Ph: +1 510 352-6767 • sales@ir100.com
www.ir100.com

Via Roganti 16 23020 Prosto di Piuro SO Italy
Ph: +39 0343 34335 • info@3endt.eu
www.3endt.eu



LUMINUX HIGH INTENSITY LED FILM VIEWER

(LH-P 1 Portable)



*Portable light weight, Easy to carry
Perfect for mobile Dark Room*



Luminux X-ray film viewers have gone **Green to Save the Environment** with trendy looks, LED light source, corrosion resistant body & compact size.

With the use of special type LED lamps, LH P1 film Viewer provides outstanding level of uniform brightness on entire screen, no damage to X-ray film, longer life and can easily view 4.5 film density.

Salient Features:

Up to 80% saving in power consumption
Array of special grade LED lamps
Low screen temperature & less emission
Compact & light weight
With Foot switch & sliding shutters
Travel carry bag

Easily View 4.5 density
Uniform brightness on entire screen.
No Warm-up Time
Shock resistance
High speed cooling fan
Reading light

Luminux X-ray Film Viewers built according ASTM E1390 ASME Sec. V Art.2 T234 EN25580

TECHNICAL SPECIFICATIONS

Light Intensity	Up to 400000 Lux (36000 foot-candles)
Dimension	260 X 210 X 120 mm (10 ¹ / ₄ " X 8 ¹ / ₄ " X4 ¹ / ₂ ")
Viewing Area	200 X 60 mm
Intensity Control	10-100% continuous
Housing Body	Powder Coated Aluminum Body
Power Requirements	230V AC 50/60Hz (110 Volts Models available)
Operating Temperature	-10° to 50° C -80% Humidity
Weight	4.5 Kg (10 lbs.)

*Specifications are subjected to change without notice. *Under Standard test conditions.

Standard package include

Film Viewer, Foot Switch, Sling Slider. Carry case and Operating manual



321 N. 8th St La Porte, Tx 77571 USA
Ph: +1 281 470-2010 • sales@3endt.com
www.3endt.com

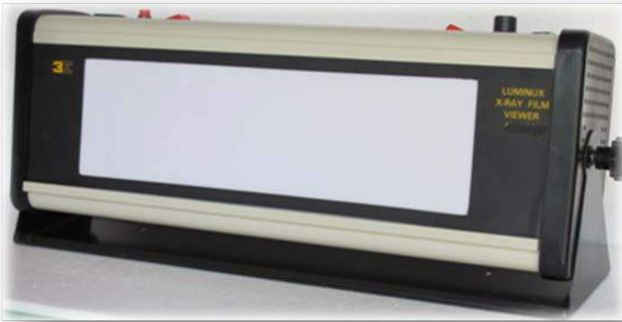
14320 Wicks Blvd San Leandro, CA 94577 USA
Ph: +1 510 352-6767 • sales@ir100.com
www.ir100.com

Via Roganti 16 23020 Prosto di Piuro SO Italy
Ph: +39 0343 34335 • info@3endt.eu
www.3endt.eu



LUMINUX HIGH INTENSITY LED FILM VIEWER

LH- 25 & LH-48 (Portable & Table Model)



Keep the Light On ...

Very bright Light over 400,000 lux



Luminux X-ray film viewers have gone **Green to Save the Environment** with trendy looks, LED light source, corrosion resistant Body & compact size.

Removable stand when not require for using as a Table Top model. Provided with step-less infinite brightness control.

Salient Features:

- Up to 80% saving in power consumption
- Array of special grade LED lamps
- low screen temperature & less emission
- Compact & light weight
- With Foot switch & sliding shutters
- Non corrosive Aluminum body

- View density up to 4.5
- Uniform brightness on entire screen.
- No Warm-up Time
- Shock resistance
- High speed cooling fan
- Reading light

Luminux X-ray Film Viewers built according ASTM E1390 ASME Sec. V Art.2 T234 EN25580

TECHNICAL SPECIFICATIONS

Specifications	Model LH-25	Model LH-48
Light Intensity	400000 LUX (36000 foot-candles)	
Dimension	560 X 155 X 275 mm (LH25)	560 x 155 x 520 mm (LH48)
Viewing Area	100 X 300 mm	100 X 480 mm
Weight	4,5 Kg (9lbs)	8 Kg (18 lbs.)
Control	10-100% continuous	
Housing	Powder Coated Aluminum Body	
Cooling	High Speed Cooling fans	
Power Input	230V AC 50/60Hz (110 Volts available)	
Operating Temperature	-10° to 50° C - 80% Humidity	

*Specifications are subjected to change without notice. *Under Standard test conditions.

Standard package include

Film Viewer, Foot Switch, Sliding Shutter and Operating manual





RADIOGRAPHIC ACCESSORIES

IMAGE QUALITY INDICATORS (Penetrators)

Material : Steel, Aluminium, Titanium,
Copper, Cupro-Nickel Monel
Special Material Available

Image Quality Indicators (Wire Type)

EN 462-1 (1 FEEN, 6 FEEN, 1 OFEEN, 13 FEEN)
DIN : 54 :109 (1 ISO 7, 6 ISO 12, 10 ISO 16, 13 ISO 19)
BS 3971, KS (Korean), JIS (Japan)
ASTM E - 747 (Set A, Set S, Set C, Set D)

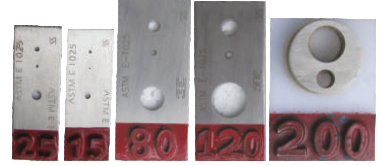


Image Quality Indicators

Duplex Type : EN 462-5

Image Quality Indicators

ASTM E-1025 and E-1742



MOUNTING BLOCKS :

Thickness (5mm to 25mm)

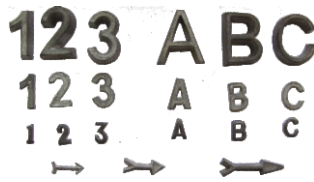
SHIMS :

Thickness (1mm to 10mm)

LEAD LETTER & NUMBERS

Normal & Deep Drawn - Thick (for Cobalt radiography)

Sizes : 3/16", 1/4", 3/8", 1/2", 3/4" & 1"
5mm, 6mm, 7mm, 10mm, 12mm, 19mm & 25mm



LEAD LETTER BOX

Lead Letter Box with
Compartments to keep Lead
Letters, Numbers & Penetrators



LEAD NUMBERS TAPES

(Available in any length of your choose)
Lead number spacing : 5cms, 10cms
& 1", 2", 4".



STAINLESS STEEL TANKS

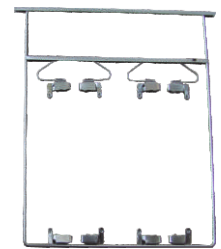
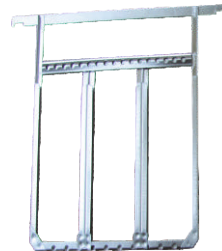
All processing tanks are made of SS
316 corrosion resistant Stainless Steel
sheet. All joints are made by TIG
Welding Process. Size available :
5 Gal, 10 Gal, 15 Gal, 20 Gal



X-RAY FILM PROCESS HANGERS Clip and Channel Type

STAINLESS STEEL TANKS 3-IN-ONE TYPE

Stand alone tank with 2 or 3 nos.
processing tanks and space for final
washing of the films.



INTEGRATED - X - RAY FILM TANK WITH COOLING SYSTEM



SAFE LIGHT



DARKROOM ALARM TIMER

STAINLESS STEEL SPOOLS FOR PROCESSING ROLL FILMS



321 N. 8th St La Porte, Tx 77571 USA
Ph: +1 281 470-2010 • sales@3endt.com
www.3endt.com

14320 Wicks Blvd San Leandro, CA 94577 USA
Ph: +1 510 352-6767 • sales@ir100.com
www.ir100.com

Via Roganti 16 23020 Prosto di Piuro SO Italy
Ph: +39 0343 34335 • info@3endt.eu
www.3endt.eu



RADIOGRAPHIC ACCESSORIES

LEAD INTENSIFYING SCREENS

Thickness available :

0.02mm, 0.05mm, 0.10mm, 0.125mm, 0.15mm, 0.25mm

Special thickness lead screens :

(for Linear Accelerator - LINAC Radiography)

Thickness available : 0.25mm, 0.50mm, 0.75mm, 1.0mm

Special screens : Made of Copper & Stainless Steel



LEAD SCREEN IN ROLL FORM

Width available : 70mm, 90mm, 100mm, 115mm

PVC CASSETTES :

Double Envelope type & Folding type with Velcro

Special Cassettes Made of Belting material



MAGNETS

For clamping radiation source pencil

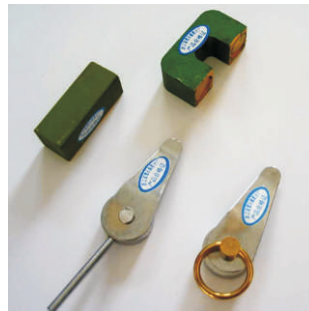
For holding cassettes against the job.

U Shape Magnets :

Size : 60x40x15mm, 45x30x11mm

Round Magnets :

Size : 60mm ϕ , 96mm ϕ



MAGNETIC CLAMPS FOR HOLDING FILMS

Single round Magnet with clamping device.

LEAD LINED X-RAY FILMS STORAGE CHEST

Cabinet is provided with lead lining to protect X-ray films against stray radiation. Available for 12 film packets & 24 film packets.

Special cabinets available with automatic built-in cooling system.

- Stop watch for controlling Exposure time.
- Crayons for marking on films and test objects.



THERMOMETERS

- Wall Hanging
- Floating Type
- Digital Type



GAMMA RAY EXPOSURE CALCULATORS



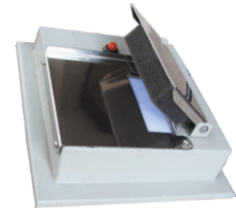
COLLIMATORS

LEAD & TUNGSTEN

Directional Type : Mini & Regular

Panoramic Type: Small & Regular

Note: Collimators can be supplied with connectors to fit different makes of source projectors.



ID PRINTER For printing of ID on Films

DENSITOMETERS

Different model of Densitometers available

STANDARD DENSITY STEP WEDGE :

Standard density strip for calibration of densitometers. supplied with calibration certificate having traceability to NBS



STANDARD REFERENCE RADIOGRAPHS :

- Standard Reference radiographs for welds as per ASTM - E390.
- Standard Reference radiographs for castings as per ASTM - E446 & E186

WALL MOUNTED CHART FOR WELD DEFECTS / CASTING DEFECTS :

- Wall Mounted chart of Radiograph of weld defects, drawings & defect definition.
- Wall Mounted chart of Radiograph of casting defects, drawings & defect definition.



321 N. 8th St La Porte, Tx 77571 USA
Ph: +1 281 470-2010 • sales@3endt.com
www.3endt.com

14320 Wicks Blvd San Leandro, CA 94577 USA
Ph: +1 510 352-6767 • sales@ir100.com
www.ir100.com

Via Roganti 16 23020 Prosto di Piuro SO Italy
Ph: +39 0343 34335 • info@3endt.eu
www.3endt.eu



RADIOACTIVITY EQUIPMENT WARNING & SAFETY



INDUSTRIAL NUCLEAR COMPANY is a leading manufacture and distributor of industrial gamma radiography equipment and radioactive sources. We also are a distributor of many related radiography supplies for the nondestructive testing industry worldwide. INC has provided reliable, cost-efficient NDT products and services since 1972. INC specializes in the encapsulation of iridium-192 for a broad spectrum of industrial applications INC is a proud member of ASNT, CSNDT.

VISIT OUR WEBSITE

www.IR100.com

For certificate and product information



RADIOACTIVITY WARNING BLINKER WITH SIREN

RAW - 1 :
Blinker Light with Siren (No Detector) (230 Volts)

RAW - 2 :
Blinker Light with Siren with **Built in Radiation Detector** to switch on system automatically. (Works on 230 Volts/Built in Chargeable Battery)

RAW - 3 :
Central Warning unit with 4 sockets to connect wired blinker lights. Central audible siren provided. (No Detector) (230 Volts)

RAW - 4 :
Blinker Light with Siren (No Detector) (Works on 230 Volts/Built in Chargeable Battery)



Radiation Warning Stickers. Sign Boards. Pennants & Tape Rolls

PVC Warning Stickers

Sign Boards with PVC Covers & Velcro for hanging on rope

Available size : 20 x 20 cms. 30 x 30 cms.

Transport Stickers Size : 10 x 10 Cms.

Cordoning Tapes

Width x Length : 7.5 cm x 100 mtr. (3" x 300")
Width x Length : 10 cm x 100 mtr. (4" x 300")

Available in : English, Spanish, Arabic, French or any language of your choice.



RADIATION SAFETY / SHIELDING

LEAD POT :

Lead container for storing radioactive source.



REMOTE HANDLING CEE VEE TONGS :

Stainless steel tongs for picking up unshielded radioactive source pencil. Length : 1.0 mtr., 1.5 mtr., 2.0 mtr.



LEAD SHOTS :

To cover unprotected Radioactive source (Bags of 2 kg.)



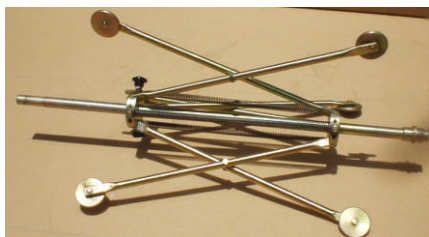
RADIATION PROTECTION BARRIERS :

Lead lined barriers to cordon off Radioactive area. Available in various sizes & styles.

PERSONAL PROTECTION ITEMS :

Lead lined Gonad Shield
Lead lined Apron
Lead lined Gloves.
Lead Glass Goggles.

SOURCE POSITIONING STANDS



SELF CENTERING SPIDERS FOR PIPELINE RADIOGRAPHY

Available for pipe diameter : from 25cm to 100cm



321 N. 8th St La Porte, Tx 77571 USA
Ph: +1 281 470-2010 • sales@3endt.com
www.3endt.com

14320 Wicks Blvd San Leandro, CA 94577 USA
Ph: +1 510 352-6767 • sales@ir100.com
www.ir100.com

Via Roganti 16 23020 Prosto di Piuro SO Italy
Ph: +39 0343 34335 • info@3endt.eu
www.3endt.eu



RADIATION MONITOR

RADAX SURVEY METERS & DOSE METERS

RADIATION SURVEY METERS

RADAX SM 1000 (Heavy Duty)
Range : 0-10mR, 100mR, 1000mR
Display : Analog

RADAX SM 5000 (Heavy Duty)
Range : 5000mR (Auto-Ranging)
Display : Digital

RADAX SM 5000
Range : 0 - 5000 mR (Auto-Ranging)
Display : Digital

RADAX SDM 5000D
Radiation + Dosimeter
Range : 0 - 5000mR (Auto-Ranging)
Display : Digital

RADAX SMM 100
(Low range High sensitivity Survey Meter)
Range : 0 - 100mR (Auto-Ranging)
Display : Digital

POCKET BLEEPER
(B - 500)



Model	RADAX SM1000	RADAX SM5000	RADAX SM5000	RADAX SDM 5000D	RADAX DM 5000	RADAX B-500
Type	Heavy Duty Surveymeter	Heavy Duty Dosimeter Warning Device	Personal Surveymeter	Personal Surveymeter	Personal Survey+Dosimeter	Personal
Display	Analog	Digital	Digital	Digital	Digital	None
Range	0-10 mR/Hr, 100mR/Hr; 0-50000 μSv/Hr	0-5000 mR/Hr	0-5000 mR/Hr, 0-50000 μSv/Hr	0-5000 mR/Hr	0-5000 mR/Hr	0-9999 mR
Accuracy	±20%	±15%	±15%	±15%	±15%	±15%
Response Time	5 sec	10 sec	10 sec	10 sec	10 sec	10 sec
Audio	Piezo Buzzer Piezo Buzzer Chirps	Chirps	Piezo Buzzer Piezo Buzzer Chirps	Chirps	Piezo Buzzer Piezo Buzzer Chirps	Chirps
Features	Rugged	Rugged	Pocket	Pocket	Pocket	
Gauge	Pocket Gauge					

QUARTZ POCKET DOSIMETERS (PEN TYPE) - ARROW-TECH (USA)

AVAILABLE RANGE : 200 MR, 500 MR & 5R

Radiation Detected: Gamma and X-Ray from 16 keV to 6 MeV
Ranges: 0-2 mR to 0-600R
Detector: Fiber electrometer mounted in an electrically conductive plastic ion chamber
Detector Housing: Very low permeability plastics-hermetically sealed
Accuracy: Within + or - 10% of true exposure
Rate Response: Dose rate independent for gamma and x-ray



321 N. 8th St La Porte, Tx 77571 USA
Ph: +1 281 470-2010 • sales@3endt.com
www.3endt.com

14320 Wicks Blvd San Leandro, CA 94577 USA
Ph: +1 510 352-6767 • sales@ir100.com
www.ir100.com

Via Roganti 16 23020 Prosto di Piuro SO Italy
Ph: +39 0343 34335 • info@3endt.eu
www.3endt.eu



MAGNETIC YOKES

MODEL - MEY 1 MEY 2 & MEY 4



Built in power supply for detect surface crack

MEY 1 is a portable, self-contained instrument designed to produce a magnetic field on ferrous-magnetic materials. The AC mode produces an intense AC field for detection of surface defects.

MEY 2 is a portable, self-contained instrument designed to produce a magnetic field on or within ferrous-magnetic materials.

The selective AC and DC functions are built into a single reliable instrument.

The AC mode produces an intense AC field for detection of surface defects. The DC mode produces an intense Half Wave Rectified DC field for detection of some sub-surface defects. Combined with the flexibility of articulating legs and a rugged molded housing, Ideal for inspection of welds and other remote testing. Articulating, double-jointed legs of yokes contour to any part shape to assure good contact.

Maxi-flux Yokes comply with ASTM E709 & ASME Section V Article 7.

Features:

- Constant AC for the location of defect
- Articulating and double-jointed legs contour easily to any shape to assure good contact
- Low Cost, Handy and Light weight
- Safe and secured for operators
- High efficiency
- Strong and rugged construction
- Highly sensitive
- Suitable for continuous inspection

Technical Specifications:

Pole distance	50 mm to 300 mm
Input Supply	230V/50-60Hz (110 volts also available)
Magnetic Flux	AC MEY 2 AC & HWDC
Load lifting capacity	5 Kgs.
Duty Cycle	2 minutes on – 2 minutes off
Weight	3Kg
Warranty	One Year Against Manufacturing Defects

MEY 4 type is the battery version

Standard package include

MPI yoke, Powder Blower, wet particle container. Carry case and Operating manual





MAGNETIC PARTICLE ACCESSORIES

MAXIFLUX BLACK LIGHT UNIT (UV Light)

Black light or ultraviolet light is used for Non Destructive Testing with Fluorescent Magnetic particles or Fluorescent Dye Penetrant.

Model : BL 100F

100 Watts high intensity UV lamp, UV filter, Ballast, Built in cooling fan, Carry case.

Model : BL 125

125 Watts egg shape UV lamp with built-in filter, Ballast, Metal reflector with handle, Carry case.

UV Light Meter (Spectronics USA)

Model : DM - 365 XA

Sensor Head Specifications :

Spectral Range : 320-400 nanometers (nm)

Measuring Range : 0-19,990 $\mu\text{W}/\text{cm}^2$

Calibration of UV Meter

Calibration services for U.V Meter and Lux Meter, available. Ask for the details.

Lux Meters

Model : LUX METER LX 101 Range : 0 to 50,000 Lux

ASTM Field Indicator (Pie Gauge)

Load Test Plates (For AC Yokes and DC Yokes)

Keto's Ring

Performance Test Plate

Artificial Fault Test Plate as per BHEL design

Residual Field Indicators

Flux Indicator strips

Centrifuge Tube with Stainless Steel Stand

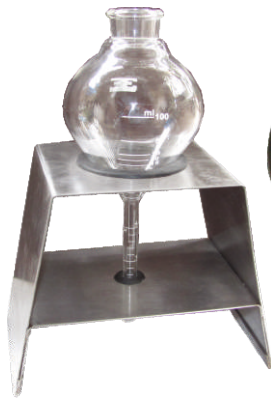
Gauss Meter (Digital)

Magnetic Powder (Dry application)

Magnetic Powder / Ink (Wet application)

Magnetic Powder Blowers

Spare Magnetizing Cables and Prod sets.



CRACK DETECTOR

Maxiflux Portable type crack detectors are light weight and highly versatile equipment. Available in both AC / HWDC flux, they are rugged work horses and designed for long trouble free service. They have advance electronic circuitry, simplicity in operation and less maintenance. Supplied with Pair of Magnetising cables and contact prods.



MODEL

AD 1500 P
AD 2000 P
AD 3000 M
AD 4000 M
AD 6000 M

MAGNETISING CURRENT (AC & HWDC)

1500
2000
3000
4000
6000





PRE POST WELD HEAT TREATMENT (Stress relieving)

POWER SOURCES TEMCON - TR

Temcon mobile transformer unite are ruggedly built equipment for pre-heat and post weld heat treatment work of pipe welds, vessels, tanks, etc. in Power plants, Refineries, Offshore / Onshore projects. Constructed in heavy gauges CRCA steel sheets or stainless steel sheets, they are providers with castors for easy mobility.

The windings of the transformer are class H with forced air cooling for long and trouble free service. Temcon Power Sources are rated for 50kVA, 65kVA, 80kVA and 100kVA to provide heating power at 32, 42, 60 and 80Volts to feed flexible heater pads.

A 50kVA Power Source can feed upto 18 heater pads of 2.7 KW at 60Volts or 15 pads of 3.25 KW at 60Volts.



Standard Features:

- Primary Input Supply : 380V/ 415V/ 440 Volts 3 Phase
50 / 60 Hz
- Secondary Output : 32 / 42 / 60 / 80 Volts
- Automatic Control : PID Programmer for each channel
- Manual Control : Energy Regulators for manual operation
- Overload Protection : Over current and over heating
- Lifting Lugs : 4 nos. Eye bolts

Model	Output
Temcon TR50	Max. 18 Heaters x 45 Amps x 60V
Temcon TR65	Max. 24 Heaters x 45 Amps x 60V Max. 18 Heaters x 45 Amps x 80V
Temcon TR75	Max. 24 Heaters x 45 Amps x 80V

TEMCON POWER CONTROL PANELS



Temcon Power Control Panel are made in variety of design and specifications. They can supply power to heater coils, heater pads, finger elements at 230Volts. Due to their very high output power, they are most suited for heat treatment of large vessels. They are manually operated or fitted with PID programmer. Ruggedly constructed but highly portable, they give a long lasting service. Since the heater elements operate at 230Volts, all control panels are fitted with Earth Leakage Circuit Breakers (ELCB) for additional safety.

All Temcon Control Panel are contactorised control modules. Energy regulators can be fitted for automatic control of Heat Treatment Cycle.

Model	Input Supply	Output Supply	Power Output
Temcon 30	415 V 63 Amps x 3 Phase	230 V x 63 Amps x 3 x 1 Phase	7 x 6 KW
Temcon 60	415 V 63 Amps x 3 Phase	230 V x 63 Amps x 3 x 1 Phase	14 x 3 KW
Temcon 100	415 V 100 Amps x 3 Phase	230 V x 100 Amps x 3 x 1 Phase	23 x 3 KW





PRE POST WELD HEAT TREATMENT (Stress relieving)

ACCESSORIES FOR STRESS RELIEVING

SPARES AND ACCESSORIES

Temperature Recorder (6 & 12 Point)

- Chino (Japan) Recorder Model EH-100
- RR Electronics (India) Model 6000-6



TEMCON TAU - 90 - THERMOCOUPLE WELDING UNIT

Thermocouple welding unit provides a positive attachment of the thermocouple wire to the work piece surface by capacitance discharge. The operation is fast and reliable, giving accurate temperature readings under conditions where other methods of attachment have registered error. Lightweight and portable, it is supplied complete with rechargeable battery, housed within the carrying case. The unit can be charged from 230V / 110V supply and is ideal for working in areas with restricted access.



Triple cables

consisting of:

- Feed cables with camlock - 25mts long
- Return cables 300Amp (with male female camlocks) - 25mts long

* Feed and return cables, complete with male and female, 300 amp camlocks

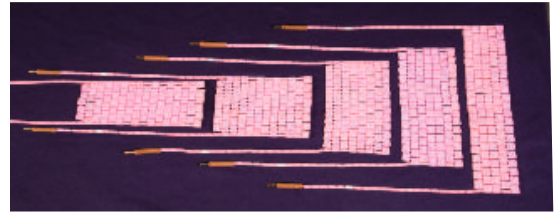
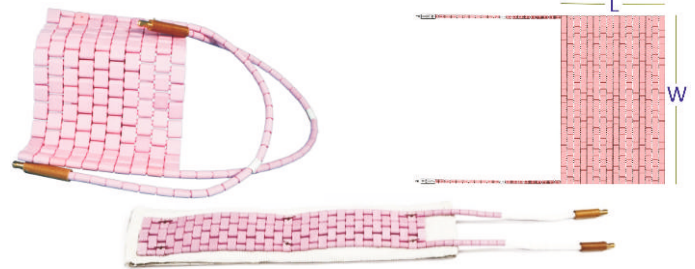
Splitter cables



ACCESSORIES FOR STRESS RELIEVING

CERAMIC FLEXIBLE MAT HEATERS

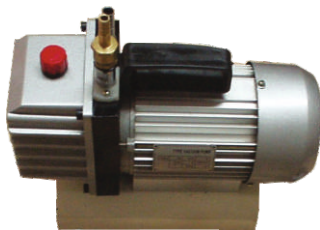
Ceramic Flexible Heaters are manufactured from high grade material and have a working temperature capability of 1050°C. They can be powered from Power source / Heat Treatment units Control Panels or Welding machines. Heating element consists of multi strand Nickel Chrome element wire, electrically insulated by interlocking sintered alumina beads,



Heater Pads 60 Volts & 30 Volts			Heater Pads 80 Volts & 40 Volts		
Stock	Length Volts (mm)	Width kW (mm)	Stock	Length Volts (mm)	Width kW (mm)
201	75		251	75	
660	60	2.7	910	80	3.6
202	100		252	100	
495	60	2.7	680	80	3.6
203	150		253	150	
330	60	2.7	450	80	3.6

VACUUM BOX LEAK TESTER

Vacuum Box for leak testing on welds and Tank floors. Quickly checks pinholes and leaks in welds when other side of the test surface is not accessible.



Standard set includes

Vacuum pump, Hose, Foot switch, Quick release nozzle,

Each vacuum box is fitted with Release valve, Quick fit socket, Vacuum gauge.

VACUUM BOXES AVAILABLE FOR : FLAT SURFACE, INSIDE CORNER & OUTSIDE CORNER

Standard type of Vacuum Boxes

Flat Box :

350mm x 200mm x 70mm
600mm x 200mm x 70mm
750mm x 200mm x 70mm

Inside Corner Box :

350mm x 100mm x 70mm
200mm x 200mm x 70mm

Outside Corner Box :

350mm x 100mm x 70mm
200mm x 200mm x 70mm

Custom made Boxes, also available





ULTRASONIC CALIBRATION BLOCKS

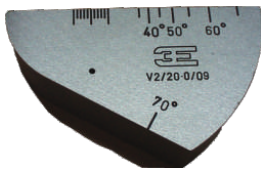
Available in Carbon steel , Stainless Steel & Aluminium



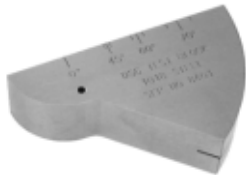
IIW-Type 1



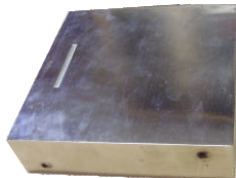
IIW-Type 2



V2 (A4) - 12, 20 & 25 mm



DSC Block



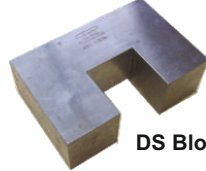
ASME Sec. V Basic Calibration Block
(For 1", 2" & 3" Thickness)



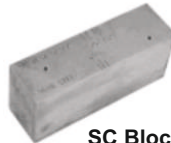
ASTM E 317 Block, Figure 1



ASTM E 317 Block, Figure 6



DS Block



SC Block



DC Block



Step Block 10 Steps
(1 mm to 10 mm)



Step Block 7 Steps
(2 mm to 20 mm)



Step Block 5 Steps
(0.1" to 0.5")



Step Block 10 Steps
(0.1" to 1.0")



Coated Step Block



DAC Block



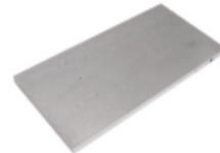
Mini Resolution Block



Resolution Test Block



IOW Beam Profile Block



ASME N-625 Ref. Plate



ASTM Distance /
Area Amplitude



ASTM Area Amplitude



ASTM Distance
Amplitude





3E Crawler System Smart 6

3E Crawler system Smart 6 is a crawler system for Xray (Smart 6/X) and/or Gamma ray (Smart 6/ G) inspection of 6” to 18” pipeline welded joints.



-3E Crawler system Smart 6-X



-3E Crawler system Smart 6-G

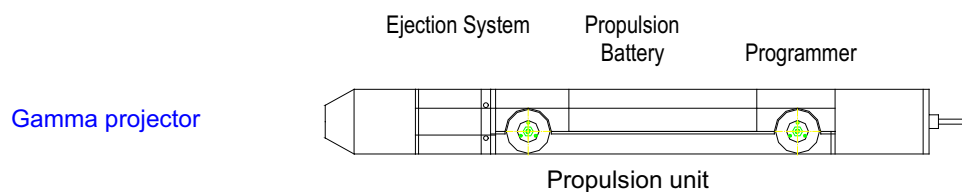
Significant characteristics of **3E Crawler system Smart 6** based on technical improvements, both in mechanics and electronics, are:

- 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 (*)

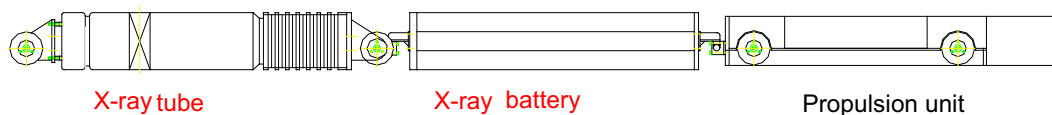
(*) Re-program to be made by qualified staff of 3E

SCHEMATIC DIAGRAM SHOWING DISTRIBUTION OF MAIN ELEMENTS OF THE CRAWLER

3E CRAWLER SYSTEM SMART 6/G



3E CRAWLER SYSTEM Smart 6/X





3E Crawler System Smart 6

TECHNICAL DATA

Dimensions and weights:

Dimension/Element	X-ray tube	Gamma projector	Propulsion unit	X-ray battery unit
Length (mm)		IR100	730	775
Width (mm)	(Note 1)	(Note 2)	124	72
Height (mm)			124	103
Weight (Kg)			10 + 3,5 (batteries) (*) + 4 (programmer) (*) High capacity batteries: 7 Kg.	14

Note 1. - Compatible with different X Ray models in the market.

Note 2. - Crawler can be adjusted for the most common gamma projector in the market

Inspection autonomy:

1 Km/day (Propulsion Batteries 24V, 5Ah)
2 Km/day (Propulsion Batteries 24V, 10Ah)
(Optional)

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

Translation speed: 11 m/min

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

Admissible slope: 35%.

Acceptable temperature: -40 ° C up to 70 ° C

Exposition delay: 12 sec. (Programmable)

Maximum pipeline curvature:

40d (for pipes of d = 6")
10d (for pipes of d = 8"- 18")

Minimum/maximum diameter:

6" (152,4 mm)/18" (457,2 mm)

Driving motor feed:

Ni-Cd batteries 24V, 5 Ah.
Ni-Cd batteries 24V, 10 Ah (option)

Stopping precision: +/- 5 mm

<p>STANDARD SYSTEM:</p> <p>BASIC SYSTEM</p> <p>Propulsion chassis, Detector and Programmer (Control unit) Two propulsion batteries and Charger Operating and maintenance manual Tool box Transit/storage case Training</p> <p>X-RAY INSPECTION KIT (C-0618/X):</p> <p>One set of shafts for X-ray elements X-ray battery unit and Charger Assembling set</p>	<p>GAMMA-RAY INSPECTION KIT (C-068/G):</p> <p>Ejector system Assembling set</p> <p>Accessories:</p> <p>Shafts (6" to 18") for propulsion chasis Shafts (6" to 18") 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")</p>
<p>X-ray tube: Compatible with different X Ray models in the market</p>	<p>Gamma projector (Source projector and container): Adjustable to most common gamma projector in the market</p>
<p>Crawler control unit: Magnetic control unit or Emitter Cs¹³⁷ (20 mCi)</p>	<p>Sources: Iridium-192 or Selenium-75</p>





3E Crawler Smart 10

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 1048/G

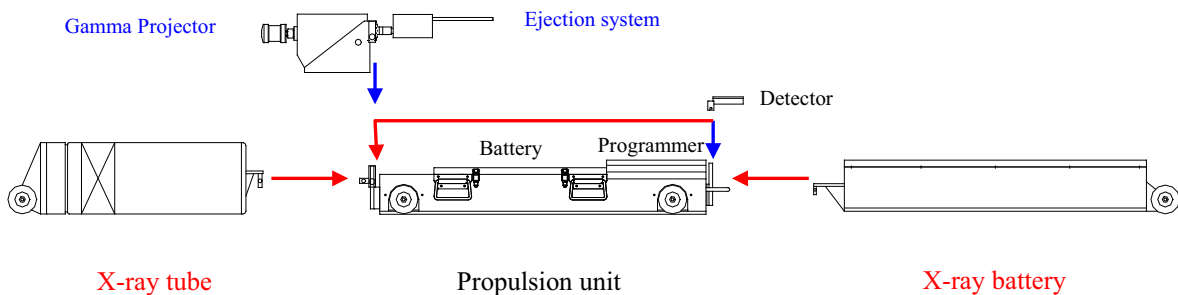
Significant characteristics of **3E Crawler system Smart 10** based on technical improvements, both in mechanics and electronics, are:

- 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

SCHMATIC 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 the most common gamma projector 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")

Minimum/maximum diameter:

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

Driving motor feeding:

Pb batteries 24V, 24 Ah

Pb batteries 24V, 42 Ah (option)

Stopping precision:

+/- 5 mm

Exposition delay: 12 sec. (Programmable)

<p>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</p> <p>X-RAY INSPECTION KIT (Smart10/X): One set of extendable shafts for X-ray elements X-ray battery unit and Charger Assembling set</p> <p>And / or</p> <p>GAMMA-RAY INSPECTION KIT (G1048/G): Ejector system Assembling set</p>	<p>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")</p>
<p>X-ray tube: 3E mounts Eresco Tubes 32 and 52 MFC, alternative solutions available.</p>	<p>Gamma-ray projector (Source projector and container): Adaptable to different models: Tech/Ops 660, 880 , Gammamat TI, Gammavolt SU, NI-202 etc</p>
<p>Crawler control unit: Emitter Cs¹³⁷ (20 mCi) or Electromagnetic device</p>	<p>Sources: Iridium-192 or Selenium-75</p>

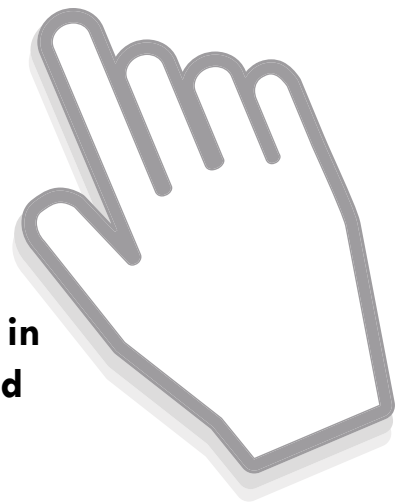


looking for something new?

XVU

A new affordable software for all your digital needs. With just one click you can connect to most Digital CR, Film Digitizer and DDA available on the market today.

Multiple languages implemented, available in English, Russian, Chinese, Polish, Italian and many others.





Digital NDT Software

XVU

Digital Radiography Software

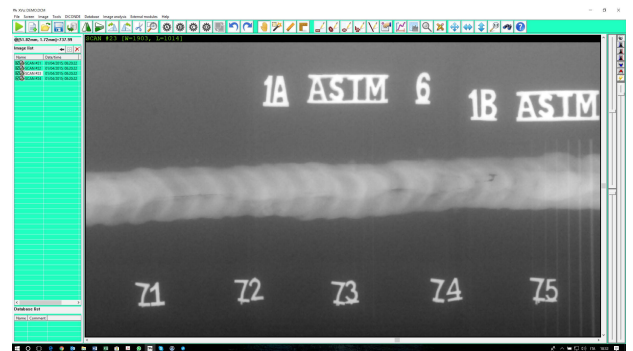
Looking for something new? Looking for new affordable software for all your digital needs?

Then XVu Is For You!

Key Features and Benefits

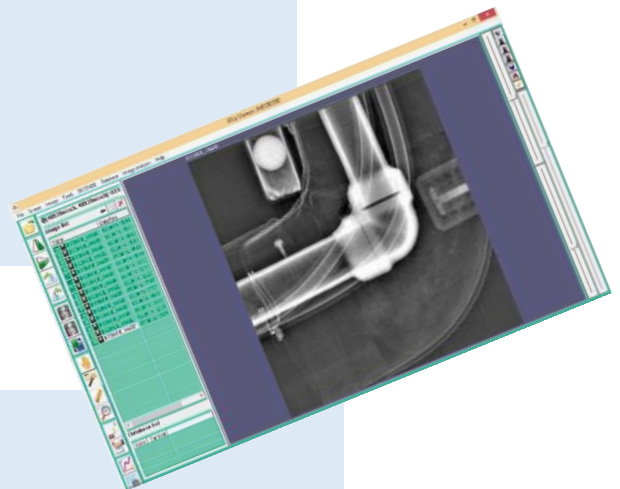
- Easy acquisition. Xvu is compatible with many:
 - ~ CR - Computed Radiography Scanners
 - ~ Film Digitizers
 - ~ DDA - Digital Detectors
 - ~ From Multiple Manufacturers

Easy Import and Review of
All DICONDE Files!!!



Viewing, Measurement & Analysis Tools

- Simple Primary Image and Navigation View Window
- 1:1 Pixel Value Display
- Zooming, Panning, Inversion, Flips, Rotations, Magnification and more.
- Auto Contrast and Window Leveling with Preset and Customizable Filters
- Histogram and Lookup Tables (LUT)
- Line Profiles and Measurement Calibration
- Wall thickness, ROI, SRB and SNR Measurements
- Stand Alone Viewer for Sharing Images
- ASTM, ISO, EN Software & DICONDE Compliant
- Export Files as TIFF, JPG or Diconde (.DCM)



Computer Specifications:

- Windows 7 or later version
- Laptop or Desktop
- Work with any processor recommended 4GB RAM
- Dedicated video card minum 2 GB memory



XS XPRESS Scan DIGITAL RADIOGRAPHY SYSTEM



XPRESS Scan

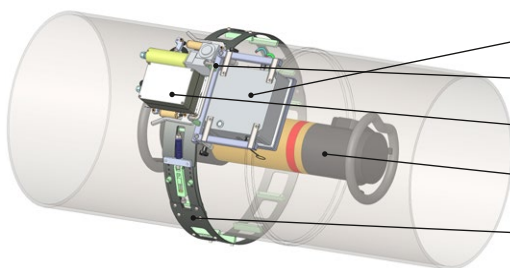
mobile digital radiography system is intended for single wall or double wall penetration of Ø300–1420 mm pipe welds for pipeline construction or repair.

- No consumables, film processing, or phosphor plates scanning
- No darkroom, no environmental issues
- Image quality class B acc. ISO 19232-5, ISO 10893-7, ISO 17636-2
- Battery operated
- Wireless data transfer
- 3 minutes installation
- External storage under DICOM protocol

Xpress scan digital radiography system provides:

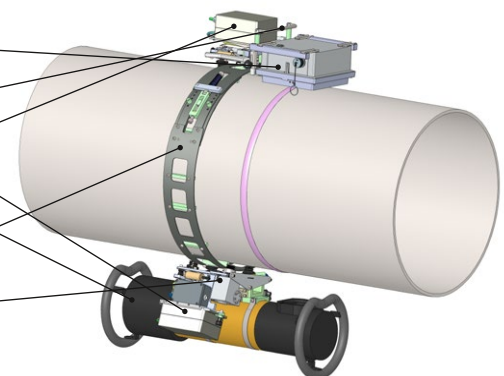
- lower inspection costs by eliminating consumables (X-ray film and film processing chemicals), film processing equipment, film storage facilities;
- compatible with any X-ray source and any crawler;
- inspection results obtained online make it possible to correct welding settings to avoid more defects;
- perfect conditions for image examination (zoom, optimal contrast, image enhancement procedures) and inspection protocol preparation;
- easy to use database.

LAYOUT OF XPRESS SCAN



- Detector unit
- Detector carrier
- Battery
- X-Ray source
- Pipe band
- X-Ray source carrier

LAYOUT OF XPRESS SCAN DW



DIGITAL RADIOGRAPHY SYSTEM



SYSTEM SPECIFICATIONS

	Xpress Scam	Xpress Scan DW
Detector	Resolution: 4 lp/mm (127 µm pixel size) Image size: 145 mm x 145 mm X-ray energy: up to 300 keV Operating temperature: -40°C to +45°C	
Productivity	6 min/weld	16 min/weld Pipe D=1420 mm (21 mm thick)
Image Storage Capacity	200 datafiles (1420 mm weld)	
Data Transfer	Data transfer to the operator's laptop with Wi-Fi, up to 300 m. Data storage: internal memory of the detector; in case of Wi-Fi connection failure, the exposure continues, and the data is secured	
International Protection Code	IP 67	
Power Supply	Power supply/charger: 110-220V AC Detector power supply: 5 Li-Ion batteries (UN 38.3 certified). Battery life 2 hours x 5 batteries = 10 hours X-Ray source carrier: the second set of 5 Li-Ion batteries	
Dimensions and Weight	Transportation case: 860x560x360 mm, 52 kg	Transportation cases: 860x560x360 mm, 52 kg, 860x560x360 mm, 45 kg
Scope of Delivery	Titanium pipe band (Ø1420 mm): Ø1000x130 mm, 9 kg Detector with carrier External battery, 5 or 10 units Transportation case with battery charger & WiFi access point Magnet-mounted WiFi antenna Accessories kit Notebook with DiSoft software Titanium pipe band according to the pipe diameter (12" ... 56" by request) X-Ray source's carrier (for TestXRay DW)	

XVu SOFTWARE



Real-time X-ray image acquisition. Exposure control, image processing and archiving using XVu software.

X-ray images are stored in DICONDE data format (ASTM E2339-11). Data protection from tempering, compatibility with conventional image formats (tiff16, bmp, jpg), image enhancement. Inspection date, time and GPS coordinates stored in datafile.

Single image built for the whole weld length.





2905 FILM DIGITIZER



"Array's 2905 Laser Film Digitizer is the equipment of choice for users who demand the highest image quality for non destructive tests and examination radiographs.

Using precise optics and a helium neon laser, the 2905 captures your industrial radiographs with speed, accuracy and reliability"

The 2905 film digitizer is designed to deliver the highest possible image quality combined with extremely fast scanning. In as little as 7 seconds a 14 X 17 inch film can be digitized at 2k resolution.

The 2905 film digitizer can be used with a range of software products to achieve a full integration with your current systems or to provide a powerful stand-alone system.

Using only the finest materials the 2905 is build to last. The 2905 is constructed with an all steel frame an heavy metal closed housing to protect the laser and optics. Coupled with a one-year parts warranty and an outstanding support network, you are assured years of reliable worry free use.

Model number: 2905HD

HIGH DENSITY

Class: DS9 (range 0-4.7 OD) according to EN 14096 Part 2
Light Source: He Ne Laser, (632.8nm)

Sensor: Photomultiplier

Scanning Mode: Transmission, B/W

Scanning System: Flat Scanning by Polygon Mirror and Field Flattener Lens

Optical Density Range: Selectable: 0-1.0, 0-2.0, 0-3.0, 0-4.0, 0-4.7 OD

A/D Convertor: 12 bits (4096 gray levels)

Sampling Pitch: 50 - 500 micron (at 1 micron steps)

Installed Memory: 48MByte Circullar buffer

Scan speed: 7 seconds at 200 micron

Film Sizes: 8" X 10" - 14" X 17"

Scanning Width: 14 inch / line maximum

Scanning Length: No limit with specific software

Smoothing Function: Digital Smoothing with Supersampling

Host Interfaces: USB2, Twain

Operating System: Windows 8 and previous versions

Dimension: W526 X D764 X H330mm

Weight: 45 kg

Power: 100 - 120 VAC, 200 - 240 VAC 50/60 Hz, approx 400 VA

Model number: 2905

Class: DB9 (range 0-4.0 OD) according to EN 14096 Part 2

Light Source: He Ne Laser, (632.8nm)

Sensor: Photomultiplier

Scanning Mode: Transmission, B/W

Scanning System: Flat Scanning by Polygon Mirror and Field Flattener Lens

Optical Density Range: Selectable: 0-1.0, 0-2.0, 0-3.0, 0-4.0 OD

A/D Convertor: 12 bits (4096 gray levels)

Sampling Pitch: 50 - 500 micron (at 1 micron steps)

Installed Memory: 48MByte Circullar buffer

Scan speed: 7 seconds at 200 micron

Film Sizes: 8" X 10" - 14" X 17"

Scanning Width: 14 inch / line maximum

Scanning Length: No limit with specific software

Smoothing Function: Digital Smoothing with Supersampling

Host Interfaces: USB2I, Twain

Operating System: Windows 2000, XP, Vista

Dimension: W526 X D764 X H330mm

Weight: 45 kg

Power: 100 - 120 VAC, 200 - 240 VAC 50/60 Hz, approx 400 VA





WIRELESS DIGITAL RADIOGRAPHY SYSTEM DIGIXRAY



DIGIXRAY

is designed for digital radiography of girthwelds of pipes $\varnothing \leq 500$ mm, lockin and connecting pipe elements.

- No consumables
- High image quality
- Wi-Fi data transmission
- Battery power supply for > 2 hours
- Working temperatures from -40 °C to $+45$ °C
- DICONDE files

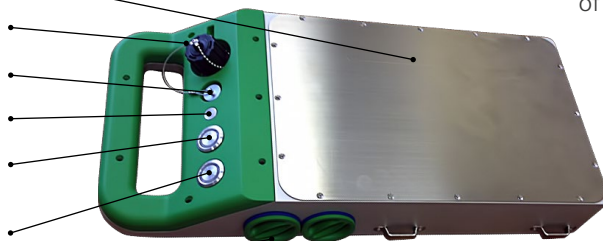
DIGIXRAY

digital radiography system provides:

- lower testing cost and time due to the absence of X-ray films, chemicals and film processing devices;
- lower exposure time and lower X-ray doses due to high sensitivity of digital radiography detector;
- flexible data monitoring from the online database.

DIGIXRAY SYSTEM AND IT'S ELEMENTS

- Detector unit
- USB connector
- LEMO connector
- Microphone
- Control button
- On/Off button
- Accumulators



Sensitive area of the detector



SYSTEM SPECIFICATION

Detector	a-Si
Scintillator	CsI/Gadox
Active area	146 × 146 mm
Image size	1152 × 1152 pixels
Pixel size	127 micron
A/D conversion	16 bits
Minimal exposure time	30 ms
Maximal exposure time	10 min
Data transmission	Wi-Fi 802.11 g/n USB 2.0
Dynamic range	50000:1
Detector unit size	442 × 202 × 67 mm
Detector unit weight	4.9 kg (including accumulators and protection shell)
Working temperatures	-40 °C to +45 °C
Storage temperatures	-40 °C to +70 °C
Protection class	IP 65 (water jets)
Power supply	Two accumulators or 110-220 V/50-60 Hz power supply unit
Accumulators	Li-ion, 10 Ah, 7.2 V (lifetime — 2.5–3 hours)
Spare accumulators	8 pcs (4 sets of 2 pcs)
Data storage	Energy-independent memory of the detector



XVu SOFTWARE

- Real-time acquisition of X-ray images
- Imaging parameters control, image processing, image database management.
- Digital images and service information in DICONDE format according to ASTM E2339-11 readable by other producer's software.
- Imaging date, time and GPS coordinates stored.





14" x 17" Wireless Detector

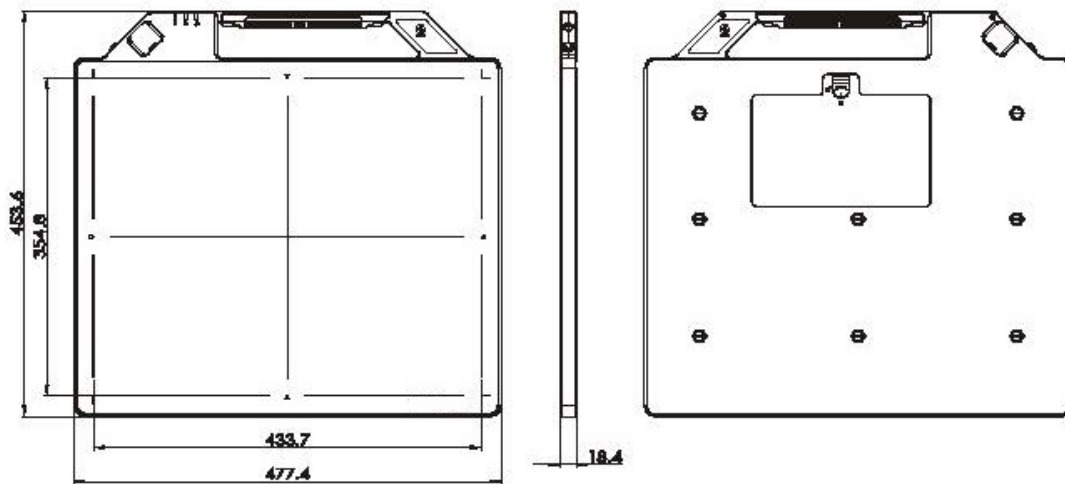
- 14"X17" portable wireless radiography detector with dual band (2.4GHz/5GHz , 802.11n) wireless transmission. Image acquisition cycle can be completed within 5 seconds (From X-ray exposure to image being displayed on screen). To ensure reliable operation in any environment, the detector also provides a standard Gigabit Ethernet port for wired operation.
- Outstanding battery capacity ensures over 1400* shots when it's fully charged (*continuous operation with 10 seconds interval between each acquisition).
- The most advanced CsI direct-deposition technology ensures excellence of image quality at low X-ray dose for safety-minded operation environment.
- Aluminum-alloy uni-body enclosure with Impact-absorption rubber edge and water-proof seals support the detector to be used in various complicated environment.

Sensor	
Scintillator	Direct Deposit CsI
Pixel Area	434 x 355mm ² (14"x17")
Pixel Array	2816X2304
Pixel Pitch	154µm
Imaging Performance	
Limiting Resolution	3.3lp/mm
MTF	> 70%(@ 1 lp/mm)
	> 40%(@ 2 lp/mm)
	> 22%(@ 3 lp/mm)
DQE	(@RQA5,30µGy)
	~ 65%(@ 0 lp/mm) ~ 20%(@ 3 lp/mm)
Sensitivity	~0.62ct/nGy
Response Non-linearity	< ± 0.5%
Maximum Linear Dose	95 µGy
Dark Noise	~ 8 nGy
Dynamic Range	~ 82dB
Greyscale	16 bits
Communications	
Communication Interface	GbitE
	2.4/5GHz, 300Mbps
Image Acquisition Time	2-3s (wired)
	4-5s (wireless)

Exposure Control	F ² AED (optional)
	Manual
Environmental	
Operating	Natural Cooling
-Temperature Range	-20C to + 60C (-5F to 140F)
-Humidity Range (Non-condensing)	30%-75%RH
Storage	
-Temperature Range	-20°C-55°C(-4°F-67°F)
-Humidity Range	10%-90%RH
Mechanical	
External Dimension	477.4x453.6x18.4mm(17.9"x18.7"x0.7")
Weight	4Kg(8.8lbs)
Weight Bearing	100Kg@ φ 40mm, 150kg@full facade
Housing Material	carbon fiber front & High Strength Aluminium alloy back
Power	
Power Dissipation	<8W(standby) / 24W (operating)
Power Supply	100-240V AC
Frequency	50/60Hz
Regulatory	
CE	HD 60107735 0001

1500P Dimension

(mm)



Specifications are subject to change without prior notice.



Integration of the most common Digital products on the market:

Film digitizer, CR systems, DR Flat Panels all working from XVu digital software platform

