# Non Destructive Testing Products Catalogue 

## X-RAY CRAWLER

- IRIS 6 X-Ray crawler
- IRIS 6 Gamma-Ray crawler
- IRIS 10 X-Ray crawler
- IRIS 10 Gamma-Ray crawler
- IRIS 10XS X-Ray and Gamma-Ray Crawler

X-RAY RADIOGRAPHY

- CPbattery Portable X-Rays Generators
- SITEX CPseries Directional Units /POWERBOX
- SITEX CP160D, CP200D, CP225D, CP300D, CP200DS, CP300DS
- SITEX CPseries Panoramic Units / RCU
- SITEX CP160CR, CP300CR
- SITEX CPseries Panoramic Units /POWERBOX
- SITEX CP300C
- SITEX \& XS Directional Units and Panoramic Units
- SITEX \& XS Panoramic for crawler
- GO-SCAN C-VIEW
- GO-SCAN 1510 HR

GAMMA RADIOGRAPHY

- 1075 SCARPro source projector
- 880 Series Source Projector
- Handle Grip Control Assemblies
- Source Guide Tubes
- Collimators
- Automatic Exposure Control Unit
- Pipeliner
- Emergency Container EC3
- Radioactive Isotopes
- OpenVision ${ }^{\text {M }}$ OVCF-NDT

FILM PROCESSORS

- INDX 900
- INDX $432.0 b$
- INDX 43/3MW - INDX 43/5MW
- INDX 37M NDT "Mobile"
- INDX 37 NDT Dryer

INDUSTREX Films Solutions for NDT

- Industrex X-ray films
- Industrex Chemicals
- Eco-Friendly Chemicals

INDUSTREX DIGITAL SYSTEM

- Industrex HPX-1
- Industrex HPX-PRO

X-Ray Film Scanners and Digitizers

- MII-900 Plus
- Microtek NDT-2000
- MII-800XL Plus

MANUAL FILM PROCESSING UNIT

- PROCESSING TANKS
- X-RAY FILM DRYER

FILM PROCESSING ACCESSORIES

- Films Hangers
- Steel Spirals

X-RAY FILM VIEWER

- FV-2010T PLUS LED
- Spot viewer LED
- Portable LED Films Viewers
- KOWOLUX M Series

DENSITOMETER

- KOWODENS TD Densitometer
- Digit-X Densitometer
- TD 200 Densitometer
- DT-200 Densitometer

RADIOGRAPHIC ACCESSORIES

- Lead Markers
- Lead Markers Box
- Image Quality Indicators (IQI)
- Flexible Cassettes
- Lead Screens
- Rigid Cassettes
- PhotoMarker for Darkroom

RADIATION SAFETY

- Radiation Warning Signs
- Isotope handling tongs
- TRACERCOTM T402 and T402HR
- Direct-Reading Dosimeter
- Dosimeter Charger
- Personal Dosimeter RAD-60R
- Dose Rate Meter 6150 AD5/6
- Dose Rate Meter X5C plus FW
- Dose Rate Meter RDS-30
- Personal Dosimeter DMC 3000
- Dose Rate Alarm Lamp GWL 10m
- Rad Alert

MOBILE DARKROOM
STATIONARY DARKROOM
WELD MEASURING GAUGES
NDT Demonstration Kit

- Standard RT Kit
- Standard UT Kit

VACUUM DEVICES FOR LEAK TESTING

- vacuum boxes

MAGNETIC PARTICLE INPECTION \& PENETRANT TESTING PENETRANT TESTING INPECTION

- Fluxo consumables

MAGNETIC PARTICLE INPECTION

- Fluxo consumables
- Magnaflux Y2, Y6,Y7
- PM-6 Permanent Magnet

ULTRASONIC FLAW DETECTOR

- ECHOGRAPH 1095
- A-Scan ECHOMETER 1077
- EPOCH 600
- EPOCH 650
- OmniScan MX2
- Ultrasonic Transducers, Test Blocks

ULTRASONIC THICKNESS GAGES

- 27MG
- 38DL PLUS
- 45 MG
- UT5000 Thickness Gauge ATEX
- Multigauge 5500

EMAT THICKNESS GAGES

- Portable EMAT thickness gauge

REBOUND HARDNESS TEST

- Equotip 550 Leeb

METAL HARDNESS TESTER

- Equotip Bambino 2

METAL HARDNESS TESTER

- Equotip Piccolo 2
- Leeb Hardness Tester HM-6561

XRF Spectrometers
Spectroxsort
LIFTING EQUIPMENT

- The Handifor
- The dynafor LLX1
- The Dynafor LLZ
- Yale Tigrip Crane Weigher TZR
- Hydraulic Adhesion Tester

PIPELINE CRAWLER IRIS 6
IRIS 6 X-Ray Crawler for onshore / offshore pipes diameter ranging from 6 " to 18 " N.D.


Pipeline diameter range
Length without the X-ray head
Speed moving
Accepted climbing
$6^{\prime \prime}$ to $18^{\prime \prime}$
2140 mm
$13 \mathrm{~m} / \mathrm{mn}$
30\%-16, $6^{\circ}$
Maximum bend
10d
Operating temperature
$40^{\circ}$ to $+80^{\circ} \mathrm{C}$
Motor propulsion
2
Propulsion battery power/ capacity
Lithium Ion Battery 24V / 7.5Ah
X-ray battery power/ capacity
Lithium Ion Battery 48V / 12.5Ah
Propulsion wheels
Clinging rubber
X-ray wheels
Orthogonal
Distance autonomy (propulsion)
4km
Exposure autonomy (X-ray)
120 mn
Positioning accuracy
+/- 5 mm
Adjustable exposure
0 à 999 s
Safety exposure delay
10s
Pilot Command Caesium 137
740 MBq 20 mCi
Pilot Command magnetic
Magnetic System
CP160CR

| Panoramic X-Ray Generator | C1802 | $:$ | CP160CR |  |
| :--- | :---: | :---: | :--- | :---: | :---: |
| Output rating Kv | $:$ | 180 | $:$ | CP160CR |
| Tube current mA | $:$ | 2 | $:$ | 2 |
| Focal spot size mm | $:$ | $4 \times 0.5$ | $:$ | $4 \times 0.5 \mathrm{~mm}$ |
| Dimensions mm | $:$ | $124 \times 580$ | $:$ | $120 \times 688$ |
| Weight | $:$ | 9.5 kg | $:$ | 9.9 kg |

Product code 13.01.00
PIPELINE CRAWLER IRIS 6
IRIS 6 Gamma-Ray Crawler for onshore / offshore pipes diameter ranging from 6" to 18" N.D.


| Pipeline diameter range | $:$ | 6 to $18^{\prime \prime}$ |
| :--- | :--- | :---: |
| Gamma-ray projector | $:$ | IPSI |
| Brand | $:$ | G610 |
| Model | $:$ | A |
| Class | $:$ | $740 \mathrm{GBq} \mathrm{20Ci}$ |

Product code 13.01.01

PIPELINE CRAWLER IRIS 10
IRIS 10 X-Ray Crawler for onshore / offshore pipes
diameter ranging from 12 " to 60 " N.D.


Pipeline diameter range
Length without the X-ray head
Speed moving
Accepted climbing
Maximum bend
Operating temperature
Motor propulsion
Propulsion battery power/ capacity
X-ray battery power/ capacity
Propulsion wheels
X-ray wheels
Distance autonomy (propulsion)
Exposure autonomy (X-ray)
Positioning accuracy
Adjustable exposure
Safety exposure delay
Pilot Command Caesium 137
Pilot Command magnetic

## Panoramic X-Ray Generator

Output rating kV
Tube current mA
Focal spot size
Working ambient temperature
Dimensions
Weight
$12^{\prime \prime}$ to $60^{\prime \prime}$
700 mm
$13 \mathrm{~m} / \mathrm{mn}$
$40 \%-22,2^{\circ}$
10d
$40^{\circ}$ to $+80^{\circ} \mathrm{C}$
2
24V / 44 Ah
120V / 22 Ah
clinging rubber
Orthogonal
4km
120mn According X-ray generator
+/- 5 mm
0 à 999 s
10s
740 MBq 20 mCi
Magnetic System

ICM SITEX
$\begin{array}{llllll}180 & 200 & 225 & 250 & 300 & 320\end{array}$
$\begin{array}{llllll}2 & 4 & 4 & 4 & 3 & 3\end{array}$
$5 \times 0.8 \mathrm{~mm}$
$-25^{\circ} \mathrm{C}$ to $70^{\circ} \mathrm{C}$
$248 \times 757 \mathrm{~mm}$
from 25 to 27 kg

## Product code 13.02.00

PIPELINE CRAWLER IRIS 10
IRIS 10 Gamma-Ray Crawler for onshore / offshore pipes diameter ranging from 16 " to 60 " N.D.


Pipeline diameter range Length without the X-ray head

12 " to 60 " According the Gamma-ray projector 1700 mm
ALL TYPE OF Ir192 AND Se75
Gamma-ray projector
Brand
Model
Class
Capacity

QSA Global
880 SENTINEL
B (U)
3.7 TBq 100Ci

GAMMA-RAY PROJECTOR
ALL TYPE
B (U)
3.7 TBq 100Ci

PIPELINE CRAWLER IRIS 10XS
IRIS 10XS X-Ray and Gamma-Ray Crawler for onshore / offshore pipes
diameter ranging from $16^{\prime \prime}$ to 30 " N.D.
IRIS 10XS Pipeline Crawler are designed to produce panoramic radiographs of circumferential butt welds in pipelines from 16 inches to 30 inches.


Min. nominal pipe diameter
16"
Max. nominal pipe diameter
30"
Travelling speed
13 metres/minute
Movement
: Forward and reverse motion
Allowable slope
Sealed lead battery
40\%-22.2 ${ }^{\circ}$
48 V 22 Ah
Autonomy (on flat ground)
X-Ray Autonomy
Allowable temperature
1500 metres

Exposure time
$-40^{\circ} \mathrm{C}$ to $+80^{\circ} \mathrm{C}$

X-Ray Autonomy
from 0 to 999 seconds

Safety delay
1 hours
Propulsion Motor
12 s
Pilot Command
: 2 Unit
Pilot Command
: $\quad 20 \mathrm{mCi} \mathrm{Cs} 137$

X-Ray Generator
: Magnetic System
Gamma-ray projector
: SITE-X CP160CR
: All Type of Ir192 or Se75
The safety ejection motor can be adapted to all Gamma-Ray projector
Product code 13.03.00


IRIS10 WITH GAMMAMAT

IRIS10 WITH NUCLEAR SU100



IRIS10 WITH SENTINEL 880


IRIS6 WITH IPSI G610

## PORTABLE X-RAY GENERATOR

## CPbattery

Constant potential ultralightweight battery powered X-ray generators for NDT and Security inspections.
The CP120B and CP160B are ultra-light and portable constant potential X-Rays generators that have been specially developed to offer a completely new concept that is able to match the major advances in imaging technology that have taken place in recent years.
Even with their ultra-compact size and being so light in weight, these constant potential generators are capable of penetrating through 10 mm (CP120B)
 and 21 mm (CP160B) of steel in a very short exposure time.
Constant Potential output.

- $\quad 120 \mathrm{kV}-1 \mathrm{~mA}$
- 160 kV- 0.5 mA
- $60^{\circ} \times 60^{\circ}$ directional beam.

Focal spot of $0.8 \times 0.5 \mathrm{~mm} / 0.8 \times 0.7 \mathrm{~mm}$
$7 \mathrm{Kg} / 9.2 \mathrm{Kg}$ including battery pack and handling.
Extended operation, external power supply options. Optimised for new digital and radiographic imaging media
Generators 160 kV- 0.5 mA Unit

Radiation geometry
Output voltage range
Tube current range
Tube current at full output
Unit

Maximum power at the anode


Steel penetration
mm
Kg
$\varnothing$
$\mathrm{mSv} / \mathrm{h}$
mm
mm


Weight
Overall dimensions mm
Leakage dose at 1 m at full output
Optical focal spot
Inherent filtration

Value
Directional
40 to 160
0.1 to 0.5
1.0

80
21
9.2
$124 \times 490$
< 2.0
$0.8 \times 0.7$
Equiv. 3.5 (AI)
IP54

Product code 11.06.00

## SITEX CPseries

Directional Units
While the SITEX CP160D \& CP320D weigh just $12 \mathrm{Kg} \& 23 \mathrm{Kg}$ respectively, they are Extremely powerful and capable of penetrating 42 mm (CP200D) and 70 mm (CP320) of steel in just under 10 minutes.
Furthermore, our unrivalled air-cooling system combined with the CP output translates into a duty cycle at $30^{\circ}$.
Moreover, its broad input power range (from 90 to 264 VAC) enables the SITEX CPSERIES to be operated on virtually any grid in the world and generator sets.
Finally, its low power consumption will ensure that your inspections are more cost-effective and environmentally friendly.

## KEY FEATURES

Unbeatable Power to Weight ratio 0.8 Be window
Up to 960 W anode dissipation
160 to 320 kV range
1 kV and 0.1 mA steps
$100 \%$ duty cycle at $30^{\circ} \mathrm{C}$
Forced air cooled
6 A at 230 V

## POWERBOX CONTROL UNIT

Developed for the CPSERIES, the POWERBOX control unit is not merely a minor component of the new system. It is one of the best!
Product code 11.07.00
: V-shaped hand rings
: Laser pointer
: Gas insulated
: Shutter \& diaphragms included
: 7.9 kg control unit
: 90 to 264 VAC mains

## SITEX CP160D

## BEAM DIRECTIONAL

## POWER SUPPLY MAINS

The CP160D is the lightest and most compact generator of the CPSERIES. Featuring a built-in Beryllium window, it is the perfect generator for the inspection of light alloys such as aluminum, magnesium or fiber based materials like glass and carbon, as well as the greater thickness of steel. In fact, with its penetration capacity that is capable of reaching up to 37 mm of steel, the CP160D is able to execute many different types of NDT tasks without the need to ever have to add extra accessories.

## CP160D

Radiation geometry
Output voltage range
Tube current range
Tube current at full output
Max. power at the anode
Constant power mode
Working cycle at $30^{\circ} \mathrm{C}\left(^{*}\right)$
Steel penetration (**)
Weight (excluding guard rings)
Overall dimensions
Leakage dose at 1 m at full output Optical focal spot (EN12543)
Max. useful angle
Inherent filtration
Waterproof level
Operating temperature
Storage temperature
Built-in carrousel featuring 5 outputs
Guard rings
(*) Open air - $5 \mathrm{~m} / \mathrm{sec}$ airstream
(**) 700 mm FFD, $10 \mathrm{~min}, \mathrm{AA} 400, \mathrm{D}=2$
Product code 11.07.01

## SITEX CP200D

BEAM DIRECTIONAL
POWER SUPPLY MAINS
Being just 20 mm longer than the CP160D, the CP200D represents the best compromise between high penetration (up to 42 mm for steel) and the capacity of the generator to fit with various NDT applications, such as inspections of more technical materials in the aeronautical or space industries. The CP200D is one of the most versatile generators on the market and thanks to its builtin multiple X-Ray output carrousel it will adapt to a very wide variety of NDT applications, without compromising in any manner its light weight ( 12 kg ) and ease of use.

| CP200D | Unit | Value |
| :--- | :--- | :--- |
| Radiation geometry | - | Directional |
| Output voltage range | kV | 10 to 200 |
| Tube current range | mA | 1 to 10 |
| Tube current at full output | mA | 4.5 |
| Max. power at the anode | W | 900 |
| Constant power mode | - | Yes |
| Working cycle at $30^{\circ} \mathrm{C} *$ | $\%$ | 100 |
| Steel penetration | mm | 42 |
| Weight (excluding guard rings) | Kg | 12 |
| Overall dimensions | mm | $\emptyset 140 \times 725$ |
| Leakage dose at 1 m at full output | $\mathrm{mSv} / \mathrm{h}$ | $<2.0$ |
| Optical focal spot (EN12543) | mm | $3.0(\sim 1.5$ IEC 336) |
| Max. useful angle | $\circ$ | $60 \times 40$ elliptical |
| Inherent filtration | mm Be | 0.8 (Be Window) |
| Waterproof level | - | $\mathrm{IP65}$ |
| Operating temperature | ${ }^{\circ} \mathrm{C}$ | -40 to +70 |
| Built-in carrousel featuring 5 outputs | - | Yes |
| Guard rings | - | 2 |



TELEDYNE ICM
Everywhereyoulook

## SITEX CP225D

## BEAM DIRECTIONAL

## POWER SUPPLY MAINS

Supplemental to its outstanding penetration capacity (up to 47 mm for steel in just 10 minutes), the CP225D includes a built-in multiple X-Ray output carrousel that features a Beryllium window for the inspection of lighter alloys such as aluminum and carbon fiber. The CP225D is one of the most versatile generators on the market and will adapt to an extremely wide variety of applications. In fields as diverse as the construction or petrochemical industries, its power and small focal spot, light weight, compactness and high penetration capacity will be much appreciated.

CP225D
Radiation geometry Output voltage range
Tube current range Tube current at full output Max. power at the anode Constant power mode Working cycle at $30^{\circ} \mathrm{C}$ * Steel penetration Weight (excluding guard rings) Overall dimensions Leakage dose at 1 m at full output Optical focal spot (EN12543)
Max. useful angle Inherent filtration Waterproof level Operating temperature Built-in carrousel featuring 5 outputs Guard rings

Unit Value

- Directional
kV $\quad 10$ to 225
mA 1 to 10
mA 4.0
W 900
- Yes
\% 100
mm 47
$\mathrm{Kg} \quad 12.1$
mm $\quad$ ¢ $140 \times 725$
$\mathrm{mSv} / \mathrm{h}<2.0$
mm 3.0 (~1.5 IEC 336)
- $60 \times 40$ elliptical
mm Be 0.8 (Be Window)
- IP65
${ }^{\circ} \mathrm{C} \quad-40$ to +70
- Yes
- 2

Product code 11.07.03

## SITEX CP300D

BEAM DIRECTIONAL

## POWER SUPPLY MAINS

Teledyne ICM's CPSERIES has been designed with a view to revolutionizing the handling and performances of portable X-Ray sets. Despite having managed to halve the weight of similar portable X-Ray generators available on the market (while continuing to provide the same power output), the SITEX CPSERIES generators feature a shutter, a laser pointer, a beryllium window, an aluminum filter and two integrated diaphragms (customized sizes are available upon request). Without compromising the robustness and reliability for which Teledyne ICM products are renowned, the small size and light weight of the SITEX CPSERIES will radically change the way that you perform your RT inspections. And you will see a positive impact in terms of both quality and return on investment (ROI).

| CP300D | Unit | Value |
| :--- | :--- | :--- |
| Radiation geometry | - | Directional |
| Output voltage range | kV | 20 to 300 |
| Tube current range | mA | 1 to 10 |
| Tube current at full output | mA | 3.0 |
| Max. power at the anode | W | 900 |
| Constant power mode | - | Yes |
| Working cycle at $30^{\circ} \mathrm{C} *$ | $\%$ | 100 |
| Steel penetration | mm | 66 |
| Weight (excluding guard rings) | Kg | 23 |
| Overall dimensions | mm | $\emptyset 180 \times 839$ |
| Leakage dose at 1 m at full output | $\mathrm{mSv} / \mathrm{h}$ | $<5.0$ |
| Optical focal spot (EN12543) | mm | 3.0 ( $\sim 1.5$ IEC 336) |
| Max. useful angle | $\circ$ | $60 \times 40$ elliptical |
| Inherent filtration | mm Be | 0.8 (Be Window) |
| Waterproof level | - | IP 65 |
| Operating temperature | ${ }^{\circ} \mathrm{C}$ | -40 to +70 |
| Built-in carrousel featuring 5 outputs | - | Yes |
| Guard rings | - | 2 |

Product code 11.07.04

TELEDYNE ICM
Everywhereyoulook

## SITEX CP200DS

## BEAM DIRECTIONAL

## IDEAL FOR DIGITAL RADIOGRAPHY

The small focal spot ( 1 mm ) of the CP200DS generator minimizes un-sharpness and gives clearer images, which makes it ideal for digital radiography (DR) when close X-ray shots are possible.
Our CP200DS is a light and powerful generator ( 200 kV ) with a metal-ceramic tube which turns it to be the best power-to-weight ratio in the world.
The CP200DS, like the rest of the CPSeries product range, operates with the plug-and-play POWERBOX control unit.

| CP200DS | Unit | Value |
| :--- | :--- | :--- |
| Radiation geometry | - | Directional |
| Output voltage range | kV | 10 to 200 |
| Tube current range | mA | 0.5 to 10 |
| Tube current at full output | mA | 3.7 |
| Max. power at the anode | W | 750 |
| Constant power mode | - | Yes |
| Working cycle at $30^{\circ} \mathrm{C}$ | $\%$ | 100 |
| Steel penetration | mm | 40 |
| Weight | Kg | 15.9 |
| Overall dimensions | mm | $\varnothing 140 \times 705$ |
| Leakage dose at 1 m at full output | $\mathrm{mSv} / \mathrm{h}$ | $<2.0$ |
| Optical focal spot (EN12543) | mm | 1 |
| Max. useful angle | $\circ$ | $60 \times 40$ elliptical |
| Inherent filtration | mm Be | 0.8 (Be Window) |
| Waterproof level | - | IP 65 |
| Operating temperature | ${ }^{\circ} \mathrm{C}$ | -30 to +60 |
| Built-in carrousel featuring 5 outputs | - | Yes |
| Guard rings | - | 2 |

## Guard rings

- 2

Product code 11.07.05

## SITEX CP300DS

## BEAM DIRECTIONAL

## IDEAL FOR DIGITAL RADIOGRAPHY

The small focal spot ( 1 mm ) of the CP300DS generator minimizes un-sharpness and gives clearer images, which makes it ideal for digital radiography (DR) when close X-ray shots are possible.
Our CP300DS is a light and powerful generator ( 300 kV ) with a metal-ceramic tube which turns it to be the best power-to-weight ratio in the world.
The CP300DS, like the rest of the CPSeries product range, operates with the plug-and-play POWERBOX control unit.
CP300DS
Radiation geometry
Output voltage range
Tube current range
Tube current at full output
Max. power at the anode
Constant power mode
Working cycle at $30^{\circ} \mathrm{C}$
Steel penetration
Weight
Overall dimensions
Leakage dose at 1 m at full output
Optical focal spot (EN12543)
Max. useful angle
Inherent filtration
Waterproof level
Operating temperature
Built-in carrousel featuring 5 outputs

| Unit | Value |
| :--- | :--- |
| - | Directional |
| kV | 30 to 300 |
| mA | 0.5 to 6 |
| mA | 3 |
| W | 900 |
| - | Yes |
| $\%$ | 100 |
| mm | 66 |
| Kg | 29 |
| mm | $\emptyset 180 \times 837$ |
| $\mathrm{mSv} / \mathrm{h}$ | $<5.0$ |
| mm | 1 |
| $\circ$ | $60 \times 30$ elliptical |
| mm Be | 0.8 (Be Window) |
| - | $\mathrm{IP65}$ |
| ${ }^{\circ} \mathrm{C}$ | -30 to +60 |
| - | Yes |
| - | 2 |



Product code 11.07.05

## CP160CR

BEAM PANORAMIC

## POWER SUPPLY BATTERY CRAWLER

Designed to fit into $6^{\prime \prime}$ pipelines and higher, the CP160CR constant potential X-Ray generator for crawlers is - in its category the most powerful panoramic X-Ray tube head in the world for crawlers. The generator is making the cutting edge constant potential technology of the CPSERIES even more compact into a $9.9 \mathrm{~kg}-120 \mathrm{~mm}$ diameter X-Ray tube head. The crawler unit is capable of penetrating up to 28 mm of steel in 10 minutes, which corresponds to just a 25 second exposure time for 6 " standard pipeline welds.
CP160CR
Radiation geometry
Output voltage range
Tube current range
Tube current at full output
Max. power at the anode
Constant power mode
Working cycle at $30^{\circ} \mathrm{C}$
Steel penetration (**)
Weight
Overall dimensions
Leakage dose at 1 m at full output
Optical focal spot (EN12543)
Max. useful angle
Inherent filtration
Waterproof level
Operating temperature
Product code 11.08.00

## CP300CR

## BEAM PANORAMIC

## POWER SUPPLY BATTERY CRAWLER

CP300CR
Radiation geometry
Output voltage range
Tube current range
Tube current at full output Max. power at the anode Constant power mode
Working cycle at $30^{\circ} \mathrm{C}$
Steel penetration (**)
Weight
Overall dimensions
Leakage dose at 1 m at full output
Optical focal spot (EN12543)
Max. useful angle
Inherent filtration
Waterproof level
Operating temperature

## CPRCU

REMOTE CONTROL UNIT
FOR CPSERIES CRAWLER
Type of power supply
Unique supply voltage
Max. mean current ( 160 kV/ 2 mA)
Product code 11.08.01
Unit Value

- Panoramic
kV $\quad 30$ to 300
mA 0.5 to 1.0
mA 2.5
W 750
- Yes
\% 100
$\mathrm{mm} \quad 52$
Kg $\quad 39.4$
mm $\quad$ ¢ $180 \times 837$
$\mathrm{mS} / \mathrm{h}<5.0$
$\mathrm{mm} \quad \emptyset 0.5 \times 5.5$
- $\quad 360 \times(2 \times 20)$
mm Equiv. 3.5 (Al)
- IP66
${ }^{\circ} \mathrm{C} \quad-30$ to +60
- Provided by the crawler

VDC 40 to 60
A 9
${ }^{\circ} \mathrm{C} \quad-40$ to +70

mm 28
$\mathrm{Kg} \quad 9.9$
mm $\quad \varnothing 120 \times 688$
$\mathrm{mS} / \mathrm{h}<2.0$
$\mathrm{mm} \quad \varnothing 4 \times 0.5$

- $360 \times(2 \times 20)$
mm Equiv. 3.5 (Al)
IP65


RCU REMOTE CONTROL UNIT
-

## SITEX \& CPSERIES

## PANORAMIC UNITS

The CP300C is the first panoramic x-ray generator of the CPSeries product range.
Equipped with a metal-ceramic tube, the CP300C is a light (less than 30 kg ) and powerful generator ( 300 kV ), able to penetrate up to 52 mm of steel in 10 minutes, making it the best power-to-weight ratio in the world.
Like the rest of the CPSeries product range, the CP300C operates with the plug-and-play POWERBOX control unit.

CP300C
Radiation geometry
Output voltage range
Tube current range
Tube current at full output
Max. power at the anode
Constant power mode
Working cycle at $30^{\circ} \mathrm{C}$
Steel penetration
Weight
Overall dimensions
Leakage dose at 1 m at full output
Optical focal spot (EN12543)
Max. useful angle
Inherent filtration
Waterproof leve
Operating temperature Guard rings

Unit Value

- Panoramic
kV 30 to 300
mA $\quad 0.5$ to 10
mA 2.5
W 750
- Yes
\% 100
mm 52
$\mathrm{Kg} \quad 29.4$
mm $\quad 180 \times 837$
$\mathrm{mSv} / \mathrm{h}<5.0$
$\mathrm{mm} \quad 0.5 \times 5.5$
- $360 \times 40$
mm $\quad 0.4 \mathrm{Ni} / 0.02+3.5 / 0.14 \mathrm{Al}$
- IP65
${ }^{\circ} \mathrm{C} \quad-30$ to +60
- 2

POWERBOX CONTROL UNIT
Developed for the CPSERIES, the POWERBOX control unit is not merely a minor component of the new system. It is one of the best! Product code 11.08.02


## SITEX \& XS DIRECTIONAL

All SITEX and SITEXS units contain a rod anode.
This is the focal spot that is outside the SF6-insulated high-voltage generator.
As maximum advantages are derived from this ideal configuration, for one and the same thickness, the volume of lead required for standard radiation protection is considerably reduced.

## SITE-X D1802

Technical specifications:
Radiation geometry Directional
Output voltage range
60 to 180 kV
Output voltage selection step
Tube current range 1 kV

Tube current at full output
1 to 3 mA

Tube current selection step
Maximum useful angle of X-ray beam
Dimensions of optical focal spot
2 mA

Inherent filtration
0.1 mA

Working cycle at $40^{\circ} \mathrm{C}$ ambient temp.
Operating temperature range
SF6 insulation pressure at $20^{\circ} \mathrm{C}$
$60 \times 40\left({ }^{\circ}\right)$
$0.8 \times 0.8 \mathrm{~mm}$
3.5 mm (Al)

80 \%

Weatherproof level -40 to $+80^{\circ} \mathrm{C}$

Penetration into steel at max. power $5.0 \mathrm{~kg} / \mathrm{cm}^{2}$
(FFD $=700 \mathrm{~mm} /$ Film D7pb/D $=1.5 / \mathrm{T}=20 \mathrm{~min}$ )
Guard rings
Position of interconnection socket
yes


Maximum leakage dose at 1 m
Axial/Radial

Microcontroller HT measurement
$10 \mathrm{mSv} / \mathrm{h}$
yes
Overall dimensions
$\varnothing 240 \times 573 \mathrm{~mm}$
Total weight
9.5 kg

## Generator Control Unit SCU286

Technical specifications:

- Supply voltage: from 198 to 264 VAC
- 5.000 records can be stored
- Storage of exposure parameters: kV, mA, exposure time, FFD, film density, type of materials
- Weight: 14 kg

Product code 11.09.01

## SITE-X D3006

Technical specifications:

Radiation geometry
: Directional
Output voltage range
Output voltage selection step
Tube current range
Tube current at full output
Tube current selection step
Maximum useful angle of X-ray beam
Dimensions of optical focal spot
Inherent filtration
Working cycle at $40^{\circ} \mathrm{C}$ ambient temp.
Operating temperature range
SF6 insulation pressure at $20^{\circ} \mathrm{C}$
Weatherproof level
Penetration into steel at max. power
Guard rings
Position of interconnection socket
Microcontroller HT measurement circuit
Overall dimensions
Total weight without guard rings
: $\quad 90$ to 300 kV
: $\quad 1 \mathrm{kV}$
: $\quad 1$ to 6 mA
: $\quad 6 \mathrm{~mA}$
: $\quad 0.1 \mathrm{~mA}$
$: \quad 60 \times 40\left({ }^{\circ}\right)$
: $\quad 2.5 \times 2.5 \mathrm{~mm}$
100 \%
-40 to $+80^{\circ} \mathrm{C}$
$5.0 \mathrm{~kg} / \mathrm{cm}^{2}$
IP65
69 mm Fe
yes
Axial/Radial
yes
ø $346 \times 831 \mathrm{~mm}$
: $\quad 2.5 \mathrm{~mm}(\mathrm{Al})+0.4 \mathrm{~mm}(\mathrm{Ni})$

Product code 11.09.03

## SITEX \& XS PONORAMIQUE

## SITE-X C1802

Technical specifications :

Output voltage range
Output voltage selection step
Tube current range
Tube current at full output
Tube current selection step
Maximum useful angle of X-ray beam
Dimensions of optical focal spot
Inherent filtration
Working cycle at $40^{\circ} \mathrm{C}$ ambient temp.
Operating temperature range
Storage temperature range
SF6 insulation pressure at $20^{\circ} \mathrm{C}$
Weatherproof level
Penetration into steel at max. power
Guard rings
Position of interconnection socket
Maximum leakage dose at 1 m
Microcontroller HT measurement circuit (kV \& mA)
Overall dimensions
Total weight

## Product code 11.10.01

## SITEX \& XS PANORAMIC

## SITE-X C3005

Technical specifications :
Output voltage range
Output voltage selection step
Tube current range
Tube current at full output
Tube current selection step
Maximum useful angle of X-ray beam
Dimensions of optical focal spot
Inherent filtration
Working cycle at $40^{\circ} \mathrm{C}$ ambient temp.
Operating temperature range
Storage temperature range
SF6 insulation pressure at $20^{\circ} \mathrm{C}$
Weatherproof level
Penetration into steel at max. power
Guard rings
Position of interconnection socket
Maximum leakage dose at 1 m
Microcontroller HT measurement circuit
Overall dimensions
Total weight without guard rings

## Product code 11.10.02

## Generator Control Unit SCU286

Technical specifications:

- Supply voltage: from 198 to 264 VAC
- Printing and transfer from SCU286 to the database
- 5.000 records can be stored
- Storage of exposure parameters: kV, mA, exposure time, FFD, film density, type of materials
- Weight: 14 kg

Product code 11.10.03

PANORAMIC X-RAY GENERATORS
FOR CRAWLERS SITEX C1802
C1802
Radiation geometry Output voltage range
Tube current range Tube current at full output Max. power at the anode Constant power mode
Working cycle at $30^{\circ} \mathrm{C}\left({ }^{*}\right)$
Steel penetration (**)
Weight (excluding guard rings)
Overall dimensions
eakage dose at 1 m at full output $\mathrm{mSv} / \mathrm{h}$ Optical focal spot (EN12543)
Max. useful angle Inherent filtration Waterproof level Operating temperature
Storage temperature
Product code 11.11.00
SITEX C3003
POWER SUPPLY CRAWLER BATTERY C3003
Radiation geometry
Output voltage range
Tube current range
Tube current at full output
Max. power at the anode
Constant power mode
Working cycle at $30^{\circ} \mathrm{C}\left({ }^{*}\right)$
Steel penetration (**)
Weight (excluding guard rings)
Overall dimensions
Leakage dose at 1 m at full output $\mathrm{mSv} / \mathrm{h}$
Optical focal spot (EN12543)

## Unit

- kV
mA
mA
W
- No
\% 100

Max. useful angle
Inherent filtration
Waterproof level
Operating temperature
Storage temperature
Product code 11.11.01

## CCU186

## CRAWLER CONTROL UNIT

## CCU186

Type of power supply
Unique supply voltage range
Max. mean current (300kV/3mA - SITE-X C3003)
Direct kV and mA measurements - control accuracy
Display of programmed parameters (CCU186R)
kV , mA programming step (CCU186R)
Battery voltage control accuracy
LED display with variable brightness (CCU186R)
Total weight kg 4
Operating temperature range $\quad{ }^{\circ} \mathrm{C} \quad-40$ to +85

## Product code 11.11.02

## GO-SCAN C-VIEW

Real-time X-ray for CUI Inspection
C-VIEW Unit Value
Technology
Pixel pitch
Active area
Active resolution 99

BANDWITH
Data interface
Frame rate fps
POWER CONSUMPTION
Power supply
X-ray max power output W
Battery performance h INTEGRATION
Dimension detector head mm
Overall dimension mm
Weight
Kg
Adjusting source

- detector distance mm

ENVIRONMENTAL
Operating temperature
Storage temperature
Humidity
${ }^{\circ} \mathrm{C}$

IP Range
Software / app

Product code 11.12.00
GO-SCAN 1510 HR

## PORTABLE X-RAY DETECTORS

Teledyne ICM and Teledyne DALSA, two of the most advanced x-ray solution providers in the world, unite forces and reveal the first Integrated Digital Portable X-Ray Solution for Non-Destructive Testing... ever!
Resolution: $99 \mu \mathrm{~m}$. Dimensions: $15 \times 10 \mathrm{~cm}$ Weight:

1510 HR
Technology
Pixel Pitch
Pixel Capacity Mode
Active Area
Active Resolution
Data Interface
ADC Conversion
Frame Rate -1x1 (GigE)
Power Supply
Power Consumption
Battery Performance
Active Cooling
Dimension Detector Head
Overall Dimension
Detector Head Weight
Overall Weight
Operating Temperature
Storage Temperature Humidity
X-Ray Energy Range
IP Range
Product code 11.12.01

| Unit | Value |
| :--- | :--- |
| - | CMOS |
| $\mu \mathrm{m}$ | 99 |
| $\#$ | 2 |
| mm | $102 \times 153 / 4 \times 6$ |
| pxI | $1032 \times 1548$ |
| - | GigE \& Wifi |
| bits | 14 |
| fps | 30 |
| - | Battery |
| W | 15 |
| - | Approx. 7 hours (continuous operation) |
| $\mathrm{y} / \mathrm{n}$ | NO |
| $\mathrm{mm} / \mathrm{inch}$ |  |
| $\mathrm{mm} / \mathrm{inch}$ |  |
| $\mathrm{Kg} / \mathrm{Ib}$ | $1.6 / 3.5$ |
| $\mathrm{Kg} / \mathrm{Ib}$ | $3.5 / 7.7$ |
| $\mathrm{C}^{\circ} / \mathrm{F}^{\circ}$ | $-20,+50 /-4,+122$ |
| $\mathrm{C}^{\circ} / \mathrm{F}^{\circ}$ | $-20,+60 /-4,+140$ |
| $\% \mathrm{R} . \mathrm{H}$ | 20 to 80 |
| kV | 10 to 225 |
| - | IP 65 |



## 1075 SCAR Pro Source Projector

SENTINELтм Model 1075 SCARPro source projector is used for industrial non-destructive testing applications of gamma radiography with Selenium-75.
SCARPro can be used as a category I or II exposure device.
When used in SCAR mode (category I), the SCARPro allows radiography to be performed in congested work areas with a minimal distance to the controlled areas. When used as a traditional projector (category II), standard SENTINELTM source guide tubes and collimators allow the Selenium-75 source to be used for axial, radial and panoramic exposures.
Exposure Device
Model 1075 SCARPro is a dual mode radiographic exposure device for Small Controlled Area Radiography and traditional projection radiography. SCAR


An interchangeable collimator with a 90 o incremental adjustment enables safe radiography in areas congested with workers. Projector
A standard guide tube attachment with an ISO compliant interlock enables traditional axial and radial projection radiography.
Length:
$(22.45 \mathrm{~cm}) 11.20$ in
Width :
$(14.99 \mathrm{~cm}) 5.90$ in
Height : $\quad(18.54 \mathrm{~cm}) 7.30 \mathrm{in}$
Weight with Jacket : $\quad(13.61 \mathrm{~kg}) 30 \mathrm{lb}$
Weight without Jacket :
( 12.25 kg ) 27 lb
Shielding :
Tungsten $16.5 \mathrm{lb}(7.5 \mathrm{~kg}$ )


Materials :

Isotope :
Maximum Source Capacity :
Controls and Guide Tubes :

Tungsten shield with built in source path, Stainless Steel, Aluminum, and Polyurethane Selenium-75
81 Ci (3 TBq) of Selenium-75
1075 SCARPro Projectors are designed, manufactured and approved for use with SENTINELTm authorized controls and accessories only.

## Product code 10.01.00

## 880 Series Source Projectors

SENTINEL™ Model 880 Delta, Elite and Omega source projectors are portable, lightweight and compact industrial radiographic exposure devices.
The patented device body consists of a titanium ' S ' tube and cast depleted uranium (DU) shield contained within a 300 series stainless steel tube with stainless steel discs welded at each end forming a cylinder shaped housing.
The discs are recessed to provide protection for the rear mounted locking mechanism and front mounted outlet port.

## EXPOSURE DEVICE

The exposure device body, containing the DU shield, locking mechanism, outlet port, protective covers and required labels*, comprises the radioactive material transport Type $B(U)$ package.
REMOVABLE JACKET
An impact resistant plastic jacket surrounds the exposure device to protect labels and provide the means for carrying and placement during radiographic operations.
The three models are identified by jacket color; yellow for the 880 Delta, blue for the 880 Elite and orange for the 880 Omega.


Product code 10.02.00

## 880 Delta Projector

Length : $(33.8 \mathrm{~cm}) 13.33 \mathrm{in}$
Width : $\quad(19.1 \mathrm{~cm}) 7.5 \mathrm{in}$
Height: $\quad(22.9 \mathrm{~cm}) 9$ in
Weight : $\quad(23.6 \mathrm{~kg}) 52 \mathrm{lbs}$

## 880 Elite Projector

Length : $\quad(33.8 \mathrm{~cm}) 13.33 \mathrm{in}$ Width : $\quad(19.1 \mathrm{~cm}) 7.5 \mathrm{in}$ Height: $\quad(22.9 \mathrm{~cm}) 9$ in Weight: $\quad(19 \mathrm{~kg}) 42 \mathrm{lbs}$
880 Omega Projector
Length : $\quad(33.8 \mathrm{~cm}) 13.33 \mathrm{in}$
Width : $\quad(19.1 \mathrm{~cm}) 7.5 \mathrm{in}$
Height: $\quad(22.9 \mathrm{~cm}) 9$ in
Weight: $\quad(15 \mathrm{~kg}) 33 \mathrm{lbs}$


## Handle Grip Control Assemblies

Extreme Condition
A handle control assembly is comprised of the handcrank and gear box, a pair of control housings, a drive cable and a safety connector.

- Available in 25,35 and 50 ft ( $7.5,10.5$ and 15 m )
- Light weight polyurethane ergonomic handle design
- Water resistant handle assembly preventing ingress of water, dirt and sand
- Control housings are constructed of light weight, non metallic

3-ply material twined together for maximum dent resistance

- Yellow and black housings for high visibility during night operations
- Large gear ratio providing 1 foot of travel per revolution (ALARA)
- Commercial grade sealed ball bearing
- Noncorrosive stainless steel end fittings
- Extreme temperature operation from $-40 \circ \mathrm{~F}$ to 212 oF ( -40 oC to 100 oC )



## Product code 10.03.00

## Source Guide Tubes

Source guide tubes are flexible stainless steel tubes with a protective polyvinyl covering and are available to fit all SENTINELтm projector units.


Product code 10.04.00

## Tungsten Gamma Ray Collimators

TCN799
Weight
: $\quad 1.75 \mathrm{lb}(0.79 \mathrm{~kg})$
Dimensions Length: 1.88 in, Diameter: 1.5 in
Attenuation lr-192: 0.05
Half Value Layers
Ir-192: 4.30
Beam Size : $60^{\circ}$ conical side throw
Product code 10.05.00
TCN846
Weight
$4.3 \mathrm{lb}(1.95 \mathrm{~kg})$
Dimensions
Length: 3.75 in Diameter 2.25 in
Attenuation
Ir-192: 0.0045
Half Value Layers
Ir-192: 7.80
Beam Size
$20^{\circ} \times 360^{\circ}$ panoramic
Product code 10.05.01

## Automatic Exposure Control Unit

The fully automatic motorized wind out system enables radiographers to position a source to expose a radiograph and then retract the source after a pre-set exposure time has elapsed. The system can be
 used with Cobalt-60 units as well as SENTINELTm Model 460, 660, and 880 devices.

## Product code 10.06.00

## THE PIPELINER

The PipeLiner is a rugged, easy to use attachment for the Sentinel 880 Delta, Sigma, Elite and Omega gamma ray radiography projectors.
The PipeLiner system is operated by one person and can be used on 2" and larger diameter pipelines.
Integral wheels mean smooth effortless transport along the pipeline to reduce operator fatigue.

| Weight | $:$ | 31 kg |
| :--- | :--- | :--- |
| Jacket and Projector | $:$ | 24.2 kg |
| Collimator and Shoe Assembly | $:$ | 6.8 kg |

## Product code 10.07.00



## Emergency Container EC3

The EC3 is a purpose designed and built emergency container for mass production. This has allowed us to produce a cost effective and weight efficient lead emergency container. The EC3 is designed to be used with Ir192, Se75 and Yb169 sources.
The EC3 can be manufactured for use with 660 or 880 compatible source holders. The Type A status of the EC3 allows the package to be used to transport the radioactive contents if the emergency container is put into action.
A Type A limit allows transportation of isotopes up to the A1 or A2 value; 1 TBq ( 27 Ci ) for Ir192.


This allows for dose saving following an emergency incident as there is no need to move the source from a non-transportable emergency container into an approved transport package.
It must be noted that the Safe Store is NOT a licenced transport container.
Product code 10.08.00

## RADIOACTIVE ISOTOPES

Iridium-192 Sealed Sources
Natural and enriched Iridium-192 sources are constructed using iridium metal discs or pellets of uniform size in a welded stainless steel capsule. Iridium plus high specific activity sources are also available.

Source Model
A424-9, SPEC-150 969, INC-IR100 87703
Half Life
Energies

- :

Product code 10.09.00

74 Days
206-612 KeV
0.47 in to 2.75 in ( 12 mm to 70 mm )

## Selenium-75 Sealed Sources

Selenium-75 sources are available in cylindrical and quasi-spherical focals, permitting shorter SFDs and greater sensitivity on fixed geometries.

| Source Model | $:$ | A424-25W |
| :--- | :--- | :--- |
| Half Life | $:$ | 120 Days |
| Energies | $:$ | $97-401 \mathrm{KeV}$ |
| Steel Working Range | $:$ | 0.32 in to 1.18 in (8 mm to 30 mm$)$ |
| Product code $\mathbf{1 0 . 1 0 . 0 0}$ |  |  |

## OpenVision ${ }^{\text {TM }}$ OVCF-NDT

OpenVision ${ }^{\text {TM }}$ is a light weight live video X -ray imaging system specifically designed for hand-held inspection.
It includes a highly sensitive radiographic imager and battery-operated 70kV x-ray tube designed for portable field operation.
The proprietary intensified video imaging system captures images and displays them on a hand-held LCD viewer, head mounted display, or portable recorder with LCD display in real-time.
This portable system is commonly used for Corrosion Under Insulation inspection.
Corrosion Under Insulation (CUI) inspection is a term used to address the inspection of areas that exist between the insulation material and the exterior wall of the pipe.

## Product code 10.11.00

## COLENTA NDT FILM-Processors

## (for processing Industrial X-Ray films)

COLENTA INDX 900

Processing applications
Film thickness
Material width
Material length
Time in Developer
Intake Speed
Cycle Time
Tank capacity-Developer
Fixer
Wash water
Solution heating
(Fix and DEV)
(350W Inline Heater)
Dryer
Replenishment
water supply

All type of Industrial X-Ray films
min . $0,10 \mathrm{~mm}$
$\min .6 \mathrm{~cm}-\max .36 \mathrm{~cm}$
$\min .10 \mathrm{~cm}$
min. 30 sec max. 150 sec
$38 \mathrm{~cm} / \mathrm{min} 8 \mathrm{~cm} / \mathrm{min}$
2,7 min (162 sec) 13,6 min (816 sec)
2,6 L
2,5 L
3 L
variable in a range of $18^{\circ} \mathrm{C}-43^{\circ} \mathrm{C}$
warm air
fully automatic
2-way magnetic valve, with $3 / 4$ " hose connection by using a DVGW approved system-separating device or pipe-separating device.
Wash water flow rate
$1,5 \mathrm{ltr} / \mathrm{min}$ when film is in process
3-10 bar
Wash water supply pressure
Wash water supply
filtered at a temperature of $10^{\circ} \mathrm{C}-15^{\circ} \mathrm{C}$
Weight
Product code 12.01.00
COLENTA INDX 43 2.0b

Film thickness
Material width
Material length
: 0,10 mm - 0,18mm
Empty 58 kg
With solution 66 kg

Time in
Developer
[sec]
$\min 25$
max 170

Tank capacity - Developer
Fixer
Washwater
Solution heating(Fix and DEV)
(separate inline 350Wheaters)
Dryer
Replenishment
Cycle Time (dry to dry)
[sec] 97
659
fulenishment is microprocessor controlled and calculated length of material entering the processor. Replenishment cycles are adjustable.
Wash water distribution
Wash water flow rate
Wash water supply pressure
Wash water supply with $3 / 4$ " hose connection
Wash water drain
Weight
Product code 12.01.01
warm air adjustable in a range of $18^{\circ} \mathrm{C}-55^{\circ} \mathrm{C}$
fully automatic.
Intake speed
[cm/min]
95
14
7,0 L (incl Developer filter system)
6,5 L
6,5 L
adjustable in a range of $18^{\circ} \mathrm{C}-43^{\circ} \mathrm{C}$
built in 2-waymagnetic valve
2,5 $\mathrm{Itr} / \mathrm{min}$ when film is processed
3-10 bar
filtered at a temperature of $8^{\circ} \mathrm{C}-15^{\circ} \mathrm{C}$
32 mm (5/4inch) hose or tube
Empty 150 kg
: min. $7,5 \mathrm{~cm}$ max. 43 cm min. 12 cm



INDX 43/3MW - INDX 43/5MW

| Film thickness :0, |  | 0,10 mm-0,18mm |
| :---: | :---: | :---: |
| Material width :m |  | : min. 7,5 cm max. 43 cm |
| Material length :m |  |  |
| Film processor INDX 43/3MW |  |  |
| Time in | Cycle Time | Intake |
| Developer | (dry to dry) | speed |
| [sec] | [min] | [cm/min] |
| 32 | $2^{\prime} 36^{\prime \prime}$ | 77 |
| 176 | 14'18' | 14 |
| Film processor INDX 43/5MW |  |  |
| Time in | Cycle Time | Intake |
| Developer | (dry to dry) | speed |
| [sec] | [min] | [cm/min] |
| 30 | 2'08' | 115,4 |
| 165 | 11'45" | 21 |

Tank capacity - Developer : 9L
Fixer
8 L
INDX 43/5MW
11L (incl Devel. filter)


Washwater
8 L
10L

Solution heating(Fix and DEV)
(separate inline 350W/550Wheaters)
Dryer
warm air adjustable in a range of $18^{\circ} \mathrm{C}-55^{\circ} \mathrm{C}$
Replenishment
fully automatic.
Wash water distribution
built in 3-waymagnetic valve
Wash water flow rate
$2,5 \mathrm{ltr} / \mathrm{min}$ when film is processed
Wash water supply pressure
3-10 bar
Wash water supply
filtered at a temperature of $8^{\circ} \mathrm{C}-15^{\circ} \mathrm{C}$
Wash water drain
32 mm ( $5 / 4 \mathrm{inch}$ ) hose or tube
Weight
Empty 132 kg Empty 150 kg
Product code 12.01.02

## INDX 37M NDT "Mobile"

Colenta INDX 37M NDT
Film Processor suitable for all commonly used NDT film types

- Maximum film feed width : 37 cm
- Minimum film length : 10 cm
- Production capacity : $13 \mathrm{~cm} / \mathrm{min}$
- Automatic Replenishment system for Developer \& Fixer
- Water Rinse crossover system between the chemical tanks that reduce carryover and repl. rates
- Anti oxidation \& Anti crystallisation cycles
- 3 Pre-programmable operating channels
- Automatic developer temp.control and cooling
- Controlled warm air drying with NO Infra-Red in use
- Prepared as standard for use with fresh water
- Well proven and reliable film transport system
- Prepared with ventilation and exhaust

Product code 12.01.03


Colentå

## COLENTA INDX 37 NDT Dryer

## Automatic NDT Industrial X-Ray Film Dryer

The affordable, compact and easy to use wash and drying solution for the varied and specialised manual developing applications.

- Low noise, Warm air drying with over-temp protection
- Low Maintenance precision gear drive - no worm drive used
- Staggered "minimum contact"roller system ensures safe, Clean and dry x-ray film production.
- Lightweight and compact for easy handling
- Low power requirements, low operating costs.

Technical Specifications:

| Max Film Width | $:$ | $36 \mathrm{~cm} / 14 \mathrm{inch}$ |
| :--- | :---: | :---: |
| Min Film Length | $:$ | $10 \mathrm{~cm} / 4 \mathrm{inch}$ |
| Tank body PA | $:$ | Wash 3,4 Litre |
| Dryer Temperature | $:$ | approx $50^{\circ} \mathrm{C}$ |
| Water replenishment | $:$ | automatic bottle feed |
| Capacity at cycle time | in-feed speed |  |
| from: | 212 sec. | $15 \mathrm{~cm} / \mathrm{min}$ |
| to: | 70 sec. | $45 \mathrm{~cm} / \mathrm{min}$ |

(adjustable in $5 \mathrm{~cm} / \mathrm{min}$ steps)
Electr. Power Supply: $\quad 230 \mathrm{~V}, \mathrm{~N}, 50 / 60 \mathrm{~Hz}, 1200 \mathrm{~W}$
Water Supply : by supplied water bottle
Product code 12.02.00


## INDUSTREX Film

## Solutions for NDT

The "gold-standard" in NDT X-ray film imaging.
Choose from a wide variety of film options

## INDUSTREX AA400 Film

This high speed, fine grain, high contrast film is suitable for a wide range of industrial applications. It is excellent for use with lead screens.
INDUSTREX T200 Film
This is our fastest ASTM E1815-96, Type 1 film.
It is suitable for use in critical imaging applications and can be used in multiple film loads to provide an extended imaging range.
INDUSTREX MX125 Film
This very fine grain, very high contrast film is suitable for a wide range of applications requiring excellent sensitivity. It can be used with or without lead screens.

## INDUSTREX M100 Film

This very fine grain, very high contrast film provides outstanding sharpness. Its excellent sensitivity and low speed make it an excellent choice for critical inspections in a wide range of materials. It can be used with or without lead screens.


## INDUSTREX DR50

FilmThis ultra-fine grain, very high contrast film has outstanding definition and is recommended for highly critical inspection needs with a wide range of materials. This film works well in multiple film techniques

## Product code 15.01.00

## INDUSTREX Chemicals

Consistent, predictable results every time INDUSTREX Chemicals for manual and automatic processing support the evolving requirements of the non-destructive testing market. Our experience in imaging science spans over one hundred years. But it's an unbreakable commitment to product innovation and customer service that has allowed the INDUSTREX line of products to achieve superiority in the NDT industry.
INDUSTREX Single Part Developer Replenisher ( $2 \times 20 \mathrm{~L}$ )


## Product code 15.02.01

INDUSTREX LO Fixer and Replenisher ( $2 \times 20 \mathrm{~L}$ )
Product code 15.02.02
Recommended for all NDT and industrial imaging films.
Offers improved archivability, great for automatic and manual processing, can be used in chemical auto mixers.

## Eco-Friendly Chemicals

INDUSTREX DX Developer
INDUSTREX FX Fixer

> | New INDUSTREX Eco-Friendly Chemicals |
| :--- |
| Available to Order |
| INDUSTREX DX Developer $2 \times 20$ L CAT 5504923 |
| INDUSTREX FX Fixer $2 \times 20$ L CAT 5504931 |

Use with All NDT Processors with No Change to Replenishment Rate.
Easy to use. Simply continue to follow the NDT processing cycle standard replenishment rates for your processor.
Replenishment rates: Developer is 665 ml per square meter
Fixer is 1200 ml per square meter.
For optimum processing:
Set developer temperature to $28^{\circ} \mathrm{C}$, immersion time 100 seconds Set developer temperature to $26^{\circ} \mathrm{C}$, immersion time 146 seconds Manual processing developer immersion time/developer temperature equivalency is the same as conventional INDUSTREX chemicals. Starting point is 4 minutes development time at $22^{\circ} \mathrm{C}$.

## Industrex HPX-1 Digital System

Rigid Cassette and Phosphor Plate Reader with Integrated Eraser

- Use plates in subdued light loading or use rigid cassettes in normal room light Dimensions
- Height
17.5 in . $(44.5 \mathrm{~cm}$ )
- Width 23 in . ( 58.4 cm )
- Depth : $\quad 26 \mathrm{in} .(66 \mathrm{~cm})$ with feed tray removed, $35 \mathrm{in} .(88.9 \mathrm{~cm})$ with tray in operating position
- Weight : $\quad 120 \mathrm{lb}(54.4 \mathrm{~kg}$ ) (or less)

Phosphor Plates Supported
-70 mm to 14 -inch ( 35 cm ) width, 8 -inch $(20 \mathrm{~cm}$ ) to 60 -inch ( 152 cm ) length

- Multiple plate simultaneous feed up to 14 -inch ( 35 cm ) width

Rigid Cassettes Supported


- 10-inch ( 25.4 cm ) to 14 -inch ( 35 cm ) width, 8 -inch ( 20 cm ) to 17-inch ( 43 cm ) length Scan Rate
- 35 to 135 seconds per $14 \times 17 \mathrm{in}$. / $35 \times 43 \mathrm{~cm}$ plate, depending on resolution setting Erase Rate, Automatic High Intensity
- 0.2-2.0 in. ( $0.5-5 \mathrm{~cm}$ ) per second Power
- 100-240 V ~ $50 / 60 \mathrm{~Hz}, 12.5$ - 8 A - automatic sensing Also Included
- Desktop computer
- High resolution color LCD monitor
- Keyboard and mouse
- INDUSTREX Digital Viewing Software

Other Available Options

- Rugged travel case
- High resolution monochrome LCD monitor
- Laptop View Station with high resolution LCD
- INDUSTREX Flex GP Digital Imaging Plate SO-170
- INDUSTREX Flex HR Digital Imaging Plate 2174


## Product code 15.03.00

## Carestream Industrex HPX-PRO

## Portable Digital System

Scanning Optics
Located above imaging area eliminating gravity driven particulates

Imaging Plate Feed
Connectivity
Air Flow
Erase

Maintenance
Calibration
Scan Resolution
Plate Sizes
Software

Image Filter

Monitor
Chassis
Power
Battery
Battery Life
Warranty
Installation
Dimensions
Weight
Product code 15.04.00

Phosphor side up to prevent damage Ethernet
Filtered to keep out dirt and dust
LED erase lamps for high efficiency and low power consumption
User serviceable parts
Fully factory calibrated and ready to operate
25 microns, 50 micron \& 100 micron
Maximum 6-inch width x maximum 96-inch length
INDUSTREX (installed and tested prior to shipping)
Windows 7 Ultimate 64 bit
Custom EDGE image display filter. 10 predefined filters including (2) specifically for gamma work.
Laptop, 3MP (color) or 5MP (monochrome)
Rigid aluminium construction with vibration damping feet
100-240 VAC (Automatic Level Sensing)
24 volt standard tool battery
4 hr . standby/45 min. active scanning and erasing per battery
1 year parts and labor
Ships complete and can be quickly and easily installed in less than 5 minutes on-site by customer 16 -inches ( 41 cm ) x 13 -inches $(33 \mathrm{~cm}) \times 12$-inches $(31 \mathrm{~cm})$.

35 lbs ( 16 kg

## X-Ray Film Scanners and Digitizers

## RT Film Digitizing

## MII-900 Plus

Microtek NDT/ RT Film Digitizing System is an all-in-one imaging solution developed exclusively for radiographic inspection. It easily transfers the industrial X-Ray film into digital images for storage and management and makes it convenient to view and share for the professionals
Scanner Type Sheet-fed film digitizer
Image Sensor Type CCD
Resolution $2400 \times 2400 \mathrm{dpi}$
Light Source LED
Scanning Area 14 " x 200" ( $355.6 \times 5080 \mathrm{~mm}$ )
Scanning Speed
Optical Density
18 seconds at 300 dpi in grayscale per 14" x 17" film 4.7 Dmax

Dynamic Range
0.5D ~ 4.5D based on ISO 14096, DS 10.0

Bit Depth
8 / 16-bit grayscale
Paper Size
Min: $\quad 2.5^{\prime \prime} \times 2.5^{\prime \prime}(63.5 \mathrm{~mm} \times 63.5 \mathrm{~mm})$
Max: $\quad 14$ " x 200" $(355.6 \times 5080 \mathrm{~mm})$
Hi-Speed USB (USB 2.0)
Connectivity
ransparent
$\begin{array}{ll}\text { Scanable Media Types } & \text { Transparent } \\ \text { Supported Film Types } & 8.5^{\prime \prime} \times 4.5^{\prime \prime}, 12 \text { " } 3 \text { 1/3" }\end{array}$
OS Support Windows XP/ Windows 7 / 8 / 10
(ScanWizard Industry)
Dimensions (L x W x H) 10.2" $\times 18.7$ " $\times 9.3$ "/ $260 \times 474 \times 235 \mathrm{~mm}$
Weight
Certifications
19.82 lbs ( 9 kg )

CE, FCC, BSMI, ETL, CCC, RoHS
AC 100V ~ 240V, 47 ~ 63 Hz , 1.5A Max
54.9 Watts

Power Consumption
Accessories:
Film holders
(8.5" x 4.5", 12" x 3 1/3")

Automatic Film Feeder (Optional) :

- Up to 15 pics of film (Min. 2.5"x10" / Max. 14" x 17")

Multi-channel tray
(Optional) :


- Up to 3 pics of $30.5 \times 8$


## Product code 22.03.00

Microtek NDT-2000
High Resolution: 1200 dpi / $21 \mu \mathrm{~m}$, 16 bit
High Dynamic Range: Able to detect changes between 0.5 to 4.5 optical density Optional Auto Film Feeder enhances working efficiency
Supports all film sizes from 14" to 200"
Self-Calibration ensures consistent image quality
Designed to prevent dust and dirt buildup, great for tough environments
Designed for aerospace, petrochemical, military and other industrial testing applications
General Specifications

Type
Image Sensor Lamp Source
Scanning Method
Bit Depth
Resolution
Dynamic Range
Scanning Area
Film SizeMin:
Max:
Film Holders
Dimensions

Weight
Product code 22.03.02
2024

Sheet-fed film digitizer
CCD
Green LED
Grayscale in single scanning pass
8 -bit, 16-bit grayscale
1200 dpi ( $21 \mu \mathrm{~m}$ )
0.5 D ~ 4.5D (Base on ISO 14096)

14" x 200" ( $355.6 \mathrm{~mm} \times 5080 \mathrm{~mm}$ )
2.5 " x 2.5 " ( $63.5 \mathrm{~mm} \times 63.5 \mathrm{~mm}$ )
$14^{\prime \prime} \times 200$ " ( $355.6 \mathrm{~mm} \times 5080 \mathrm{~mm}$ )
8.5" x 4.5", 12" x 3 1/3"
12.9"L x 18.7"W x 8.8"H
( $329 \mathrm{~mm} \times 474 \mathrm{~mm} \times 224 \mathrm{~mm}$, Film holders are not included)
44.5 lbs . 20.2 kg )


MicroTek MII-800XL+
Product Name :
Scanner Type Image Sensor Type:
Resolution
Light Source
Scanning Area
Scanning Speed Optical Density
Dynamic Range :
Bit Depth
Connectivity
Scanable Media Types:
Supported Film Types:
OS Support
Dimension
Weight
Certifications
Power Source
Power Consumption:
Product code 22.03.01

MII-800XL Plus
Flatbed film digitizer
CCD
$3200 \times 6400$ dpi (Default: 400 dpi$)$
LED
12" x 16" ( $305 \times 406 \mathrm{~mm}$ )
25 seconds @ 400 dpi (scan area: $\left.12^{\prime \prime} \times 15.8^{\prime \prime}\right)$
4.7 Dmax
0.5D - 4.5D based on ISO14096, DS11.1

8 / 16-bit grayscale
Hi-Speed USB (USB 2.0)
Transparent
$8.5^{\prime \prime} \times 4.5^{\prime \prime}, 6.5^{\prime \prime} \times 3.5^{\prime \prime}$ and 12 " x 31/3"
Windows XP / Windows 7 / 8 (ScanWizard Industry)
$24.7^{\prime \prime} \times 14.8^{\prime \prime} \times 7.1^{\prime \prime}(627.6 \times 375.9 \times 180.5 \mathrm{~mm})$
35.4 lbs ( 16.1 kg )

CE, FCC, RoHS and ISO 9001: 2000
AC 100V-240V / 47-63 Hz
45 Watts


MANUAL FILM PROCESSING UNIT
Constituted PVC antacid, complete with removable tanks with lid for developing and fixing.
1 compartment with developer tank 20 or 40 liters (depending on model) with rapid heating, regulated by a precision adjustable thermostat
1 compartment rinsing with frames support
1 compartment with fixer tank 40 or 80 liters (depending on model)
1 compartment washing generously dimensioned high turbulence of water with
frames support
Product code 02.01.00
MANUAL FILM PROCESSING FOR MOBILE
For installation in mobile darkrooms
1 developer compartment 20 liters watertight
1 rinsing compartment 20 liters watertight
1 fixer compartment 40 liters watertight
1 washing compartment 40 liters watertight
Product code 02.02.00

## PROCESSING TANKS

PVC tanks take sheet films up to 35 cm wide and 48 cm long.
10 liters, 20 liters, 40 liters
Product code 02.03.00

## X-RAY FILM DRYER



DRYING TYPE 10 OR 25 HANGERS

- Dryer for X-ray films
- Top load
- $\quad 1000$ W Resistance ( 2000 W on request)
- All our dryers are manufactured in gray PVC
- The temperature is controlled by a safety thermostat
- They have a removable air filter for easy cleaning
- Unless otherwise indicated, they are equipped with 220v

Silent and powerful ventilation tangential blower
DRYING TYPE 10 HANGERS Product code 02.08.01
DRYING TYPE 25 HANGERS Product code 02.08.02
DRYER 25 HANGERS

- Dryer for radio film
- Industrial radiology equipment compact made
 of PVC Model 10 mm
- Dryer metal film front door leading to a sliding carriage on dryer metal nylon rollers
- Film dryer fast and quiet Drying tangential turbine and resistance of 1000 W blowing upwards
- Partial recycling of hot air (power saving)
- Dimensions: $900 \times 550 \times 1000 \mathrm{~mm}$
- Dryer forming work plan


## Product code 02.09.00



Film Processing Accessories

## Stainless Steel Film Hanger

Channel Type film hangers are used for manual processing of $x$-ray film.
Specifications
Stainless Steel 304
Material Thickness
0.6 mm

Solder Point Spot Welding
Product code 02.04.00

## Stainless Steel Spirals

Specifications
Material
Stainless Steel 304
Solder Point
Product code 02.05.00
Spot Welding


## Cutter and corner cutter

The cutter is suitable for cutting paper, cardboard, foils and thin foils soft plastics.
The self sharpening cutters will give long life and efficient service as far as the maximal capacity under clamp of ( 1.5 mm ) is not overstepped or unsuitable material is cut.

- Cutter size light cm $46 \times 15$
- Cutter size light cm $51 \times 30$

Product code 02.06.00

## Timers

Darkroom Alarm Timers
Product code 02.07.00

## FV-2010T PLUS LED Film Viewer

FV-2010T PLUS LED Film Viewer is developed according to the Norm of ISO5580 Industrial radiographic
illuminators - Minimum requirements.
Inherited fine traditions of FV-2010 and FV-2009T, adopt powered LED area light source, enable the viewer to high luminance and excellent uniformity, theoretical lifetime span up to more than 50,000 hours

| Luminance | $:$ | $130,000 \mathrm{Cd} / \mathrm{M}(408,200 \mathrm{Lux})$ |
| :--- | :--- | :--- |
| High Accuracy | $:$ | $\pm 0.02 \mathrm{D}$ |
| Uniformity | $:$ | 0.95 |
| Diffusionfactor | $:$ | 0.95 |

12 hours continues maximum luminance,
Surface temperature rise $\leq 18^{\circ} \mathrm{C}$
Unlimited dimmer from 5\%-100\%
Window Size : $400 \times 100 \mathrm{~mm}(15.8 \times 4$ ")
Weight less than 4.0 Kg (8.8lbs)
Product code 03.05.01


## Spot viewer LED Film Viewer

Adjustable IRIS spot viewer
Extreme high luminance
Two level of Luminance For Choose:
$300,000 \mathrm{Cd} / \mathrm{m}^{2}$
Film: 4.5D
IRIS adjustable light mask
Spot view size can be adjust from $\phi 5 \mathrm{~mm}$ - $\phi 100 \mathrm{~mm}$
Programmable "Stand by Luminance"
Stand by Luminance: The luminance of the
viewer when you release the foot pedal
Programmable Range : From 0\% to 10\%


Compact Design, only 2.3 Kg

## Product code 03.05.02

## Portable LED Film Viewers

Higher Intensity than Conventional Units

| Luminance | $:$ | $103,000 \mathrm{Cd} / \mathrm{M} 2(323,420 \mathrm{Lux})$ |
| :--- | :--- | :--- |
| Uniformity | $:$ | 0.95, Diffusion factor: 0.95 |
| Weight less than | $:$ | 2.5 Kg |

12 hours continues maximum luminance, Surface temperature rise $\leq 15^{\circ} \mathrm{C}$
Unlimited dimmer from 5\%-100\%
Product code 03.05.00


KOWOLUX M Series mobile NDT film viewers with Power LED


|  | KOWOLUX M1 <br> Product code 03.06.00 | KOWOLUX M2 |
| :--- | :--- | :--- |
|  |  | Product code 03.07.00 |

KOWODENS TD Densitometer
For precise determination of optical densities of X-ray films the KOWODENS TD is equipped with innovative digital measuring
technique
Materials:

Housing:
Table:
Measuring range:
Resolution:

Accuracy:

## Repeatability:

Measuring light source:
Color temperature:
Luminance:

Aperture size:
Communication port:
Power Supply:
Dimensions unit:
Dimensions table:
Length measuring arm:
Weight unit:
Weight power supply:
Product code 03.06.01

## Digit-X Densitometer

| Density Range | $: 0.00$ to 4.00 D |
| :--- | :--- |
| Fibre Optic Aperture | $: 3 \mathrm{~mm}$ |
| Resolution | $: 0.010 \mathrm{D}$ |
| Accuracy | $: 0.050 \mathrm{D}$ |
| Repeatability | $: 0.020 \mathrm{D}$ |
| Drift | $: 0.0005 / \mathrm{min}$ |
| Power Supply | $: 9 \mathrm{v}$ PP3 Battery |
| Battery Life | $:$ Alkaline 2500 Hrs |
| Size | $: 210 \times 60 \times 40 \mathrm{~mm}$ |
| Weight | $: 175 \mathrm{~kg}$ |

$280 \times 380 \times 190 \mathrm{~mm}$ (WxDxH)
$280 \times 320 \mathrm{~mm}$ (WxD)
260 mm
5.80 kg
0.15 kg

2,800 K
$\leq$ D $4.00-40,000 \mathrm{~cd} / \mathrm{m}^{2}$
>D $4.00-80,000 \mathrm{~cd} / \mathrm{m}^{2}$
Ø 2 mm
USB 2.0
100 ... $240 \mathrm{~V}, 50$... 60 Hz


Product code 03.06.00

## DT-200 Densitometer



The DT-200 is a robust, easy to use, separate probe type densitometer for measuring the transmission density of $x$-ray film.

| Range | $:$ | $650 \mathrm{Cd} / \mathrm{m}^{2}-320000 \mathrm{Cd} / \mathrm{m}^{2}$ |
| :--- | :--- | :--- |
| Density | $:$ | $0.00-5.00 \mathrm{D}^{*}$ |
| Optical Aperture : | $3 m m$ diameter |  |

Probe Temperature compensated

| Display | $:$ | 4 digit LCD |
| :--- | :--- | :--- |
| Accuracy | $:$ | $\pm 0.03 \mathrm{D}$ |
| Resolution | $:$ | 0.01 D |
| Detector | $:$ | Silicon photodiode |
| Power supply | $:$ | (AA/1.5V) $\times 2$-Alkaline Battery |
| Battery life | $:$ | 1200 hours (Continuous duty, without illuminated) |
| Dimensions | $:$ | $170 \mathrm{~mm} \times 90 \mathrm{~mm} \times 60 \mathrm{~mm}$ |
| Weight | $:$ | 800 g |



Product code 03.09.00

## RADIOGRAPHIC ACCESSORIES

## LEAD MARKERS

Lead markers numbers $8 \times 2 \mathrm{~mm}$ Product code 01.02.00 to 01.02.09
Lead markers letters $8 \times 2 \mathrm{~mm}$
Product code 01.01.00 to 01.02.26
Lead markers numbers 10x2 mm
Product code 01.04.00 to 01.04.09
Lead markers 10x2 mm
Product code 01.03.00 to 01.03.26
Other sizes available on request

## LEAD MARKER BOX

Lead Marker Storage Boxes
Product code 01.05.00
LEAD MARKER TAPES
Lead marker tape 5 cm spacing Product code 01.06.00
Lead marker tape 10 cm spacing Product code 01.07.00
Other sizes available on request


Image Quality Indicators - IQIs - Penetrameters Image Quality Indicators as per standard ASTM E 747-97 et ASME SE 747
I.Q.I. ASTM Set A Fe - I.Q.I. ASTM Set C Fe

Product code 01.08.01 - Product code 01.08.03
I.Q.I. ASTM Set B Fe - I.Q.I. ASTM Set D Fe Product code 01.08.02 - Product code 01.08.04 Wire type Image Quality Indicators / IQIs EN 462-1
European standard specifications EN 462-1
Product code 01.09.00
Duplex Image Quality Indicator
IQI to EN 462-5 and ASTM E 2002-98
Product code 01.10.00
FLEXIBLE CASSETTES
$6 \times 24,6 \times 40,6 \times 48,7 \times 40,7 \times 48$
$9 \times 12,10 \times 20,10 \times 24,10 \times 40,10 \times 48$
$13 \times 18,15 \times 40,18 \times 24,20 \times 30,24 \times 30$
$30 \times 40,35 \times 43 \mathrm{~cm}$.
Product code 01.11.00
Other sizes available on request


## PAIR PACK LEAD SCREENS

## PACK INTERMEDIATE LEAD SCREENS

$0,02,0,05,0,10,0,15,0,20,0,25 \mathrm{~mm}$
(Format (cm) $6 \times 24,6 \times 40,6 \times 48,7 \times 40$, $7 \times 48,9 \times 12,10 \times 20,10 \times 24,10 \times 40,10 \times 48$
$13 \times 18,15 \times 40,18 \times 24,20 \times 30,24 \times 30$
$30 \times 40,35 \times 43$.
Product code 01.12.00
RIGID CASSETTES
The x-ray cassettes are produced in alloy aluminium and special material, the edges are in plastic and aluminium.
Product code 01.13.00

## MASKING TAPE



Black PVC Tape $25 \mathrm{~mm} \times 50 \mathrm{~m}$
White fibrin Tape $19 \mathrm{~mm} \times 50 \mathrm{~m}$
White nuclear K 226 Tape 25 mm X 55m
Other sizes available on request
Product code 01.14.00

## MARKALL BALL PAINT FIXOLID

Ball Paint Marker Red / White / Yellow
Product code 01.15.00


## PHOTOMARKER FOR DARKROOM

Photomarker for darkroom In stove enamelled steel;
Identification space $\mathrm{mm} 85 \times 25$;
Provided with electronic timer
Product code 01.16.00


## RADIATION SAFETY

## Radiation Warning Signs

Controlled Area Sign A3, Rigid Plastic
Product code 04.10.00
Radiation Barrier Tape (English).
Heavy duty tape 40 mm wide $\times 50$ metres long.
Product code 04.11.00
Tape with enclosed dispenser For 40 mm wide tapes Product code 04.11.01

## Isotope handling tongs

For handling detached gamma sources, and source holders in an emergency.

- Isotope Handling Tongs 1,5m long

- Isotope Handling Tongs 2 m long

Product code 04.12.00

## RADIATION SAFETY

## Radiation Dose Rate Monitors

TRACERCOTM T402 and T402HR

Detector:
Case material: Dose rate range: T402:
T402HR:
Accumulated dose range: T402HR:
Peak radiation dose rate: T402HR: Sensitivity data: Variation with battery voltage: Battery life: Low battery Indication: Battery: Ingress protection Rating: Humidity range:
Weight:
Standard
Compliance:
Product code 04.09.00

Radiation detected: T402: X-rays and gamma rays in range 59 keV to 1332 keV . T402HR: X-rays and gamma rays in range 33 keV to 1332 keV .

Robust, chemical resistant polymers.
Bar graph display 0-1000 $\mu \mathrm{Sv} / \mathrm{h}$
Digital numeric display $1-10,000 \mu \mathrm{~Sv} / \mathrm{hr}$.
Digital numeric display 0-100 mSv/hr.

T402: Digital numeric display 0-10,000 $\mu \mathrm{Sv}$
Digital numeric display 0-100 mSv.
T402: Digital numeric display $0-10,000 \mu \mathrm{~Sv} / \mathrm{hr}$.


Digital numeric display $0-100 \mathrm{mSv} / \mathrm{hr}$.
T402: 1.7 cps per uSv/hr. T402HR: 0.7 cps per uSv/hr.

Less than 1\%.
100-hours typically with background radiation.

On 4 hours available life left.
Standard 9V PP3 battery.

Rated IP65 (dust tight and will withstand water jets).
0 to 95\%.
500 grammes.

EU directives: 2004/108/EC Compatibility Directive.

## Direct-Reading Dosimeter

The Direct-Reading Dosimeter is a pocket-size, carbon-fiber electroscope with an ion chamber. Radiation Detected: Gamma and X-Ray
from 16 keV to 6 MeV
Range:
$0-2 \mathrm{mSv}, 0-5 \mathrm{mSv}, 0-50 \mathrm{mSv}$
Detector:
Fiber-Electrometer mounted in an Electrically
Conductive Plastic Ion Chamber
Detector Housing : Very low permeability plastics - Hermetically-Sealed
Accuracy :
Rate Response :
Electrical Leakage :
Relative Humidity :
Dimensions :
Weight :

## Product code 04.01.00

## Dosimeter Charger

+/- 10\% of true exposure
Dose rate independent for Gamma and X-Ray Less than $1.0 \%$ of full scale for 24 hours at 50 C Up to $90 \%$
$4.5^{\prime \prime}(12.4 \mathrm{~cm})$ Length X . $6^{\prime \prime}(1.5 \mathrm{~cm}$ ) Diameter 1.0 oz ( 25 grams )


Easier charging, viewing, dosimeter protection and improved accuracy...
Capable of charging any Direct-Reading Dosimeter Conforms to ANSI N42.6-1980
Operates on two 1.5 V "AA" Batteries
Has the ability to "Kick" or remove all residual charge from dosimeters properly, which prevents spurious upscale fiber movement
LED Reading Light to allow for easy charging/viewing
Residual static charge removed for improved accuracy

## Product code 04.02.00

## Personal Electronic Dosimeter RAD-60R

- Radiation detected: gamma and X-rays
- Measurement range:
dose: dose rate:
- Calibration:
- Energy response:
$1 \mu \mathrm{~Sv}$-9.99 Sv or $0.1 \mathrm{mrem}-999$ rem $5 \mu \mathrm{~Sv} / \mathrm{h}-3 \mathrm{~Sv} / \mathrm{h}$ or $0,5 \mathrm{mrem} / \mathrm{h}-300 \mathrm{rem} / \mathrm{h}$ better than $\pm 5 \%$ (Cs-137, 662 keV at $2 \mathrm{mSv} / \mathrm{h}$ ), Hp (10) $\mathrm{Hp}(10), 55 \mathrm{keV}-3 \mathrm{MeV}$, better than $\pm 25 \%$, up tp 6 MeV , better than $\pm 35 \%$


## Product code 04.03.00

## DOSE RATE METER 6150 AD5/6



Dose Rate Meters 6150 AD5 or AD6 provide universal radiation protection measuring photon radiation

| (gamma and x-rays) and the detection of alpha and beta radiation. 6150AD Models | Additi <br> onal <br> functio <br> ns | Ranges for dose rate and photon energy |
| :---: | :---: | :---: |
| $\begin{aligned} & \text { 6150AD1 } \\ & \text { 6150AD1/H } \end{aligned}$ | no | High range models: <br> analog: $1 \mu \mathrm{~Sv} / \mathrm{h}-1000 \mathrm{mSv} / \mathrm{h}$ digital: $0.1 \mu \mathrm{~Sv} / \mathrm{h}-999 \mathrm{mSv} / \mathrm{h}$ »usefulk: $0.2 \mathrm{mSv} / \mathrm{h}-999 \mathrm{mSv} / \mathrm{h}$ 45 keV - 3 (/H:2.6) MeV |
| $\begin{aligned} & \text { 6150AD5 } \\ & \text { 6150AD5/H } \end{aligned}$ | yes |  |
| $\begin{aligned} & \text { 6150AD2 } \\ & \text { 6150AD2/H } \end{aligned}$ | no | Low range models: <br> analog: $0.1 \mu \mathrm{~Sv} / \mathrm{h}-10 \mathrm{mSv} / \mathrm{h}$ digital: $0.01 \mu \mathrm{~Sv} / \mathrm{h}-9.99 \mathrm{mSv} / \mathrm{h}$ »usefulk: $2 \mu \mathrm{~Sv} / \mathrm{h}-9.99 \mathrm{mSv} / \mathrm{h}$ 60 keV - 1.3 MeV |
| $\begin{aligned} & \text { 6150AD6 } \\ & \text { 6150AD6/H } \end{aligned}$ | yes |  |

## DOSE RATE METER X5C plus

The GRAETZ X5C FW has a dose display as well as a warning function for personal radiation protection when handling ionizing radiation. The measuring system is also equipped with an RS-232 interface and an interface for connecting external probes Dose rate meter GRAETZ X5C FW
Calibratable electronic dose rate measuring system in compact and robust design Approval for use by fire departments
Extension of the measuring range by interface for external probes
Display ranges
Dose
Measuring ranges
Dose
Energy
Protection
Dimension
Weight (incl. batteries)
Product code 04.05.00

| Dose | $0.01 \mu \mathrm{~Sv} \leq \mathrm{H}^{*}(10) \leq 10 \mathrm{~Sv}$ |
| :--- | :--- |
| rate | $0 \mathrm{nSv} / \mathrm{h} \leq \dot{H}^{*}(10) \leq 19.99 \mathrm{mSv} / \mathrm{h}$ |
| Dose | $0.5 \mu \mathrm{~Sv} \leq \mathrm{H}^{*}(10) \leq 10 \mathrm{~Sv}$ |
| rate | $1 \mu \mathrm{~Sv} / \mathrm{h} \leq \dot{H}^{*}(10) \leq 19.99 \mathrm{mSv} / \mathrm{h}$ |
| sector | $40 \mathrm{keV}-1.3 \mathrm{MeV}$ |
| class | $\mathrm{IP67}$ |
| approx. | $152 \times 82 \times 39 \mathrm{~mm}$ |
| approx. | 385 g |



## GammaSmart one/two

The doe rate alarm units GammaSmart one/two are very robust, battery operated and easy to handle pocket-sized dose rate alarm units designed for the personal radiation protection.
The GamaSmart one is also approved for the use in potentially explosive atmospheres of zone 1.
Both detect gamma radiation and X-rays, indicating these with clear optical and acoustical single pulses. An increasing dose rate leads to an increasing pulse rate.

Kind of radiation Detector
Sensitivity
: gamma radiation / X-rays
: GM tube
: counting rate at $3 \mu \mathrm{~Sv} / \mathrm{h}$ approx. 6 counts/minute Ambient background
Radiation
Power supply
Housing
Dimensions/Weight
: approx. 1 count in 2 minutes
: 2 batteries 1.5 V (type AAA)
: aluminium
: $72 \times 60 \times 22 \mathrm{~mm}$ approx. 100 g (with batteries)

## Product code 04.13.00

RDS-30 Rem/Sieverts
Dose Rate Survey Meter
Physical characteristics

- radiation detected
gamma and X -ray from 48 keV to 1.3 MeV
- detector energy compensated GM tube compliant to $\mathrm{H}^{*}(10)$
- dose rate measurement Range
- dose rate linearity
from $0.01 \mu \mathrm{~Sv} / \mathrm{h}$ to $100 \mathrm{mSv} / \mathrm{h}$ or from $1 \mu \mathrm{rem} / \mathrm{h}$ to $10 \mathrm{rem} / \mathrm{h}$ $\pm 10 \% \pm 1$ digit within the range of $0.1 \mu \mathrm{~Sv} / \mathrm{h}$ to $100 \mathrm{mSv} / \mathrm{h}$ or $10 \mu \mathrm{rem} / \mathrm{h}$ to $10 \mathrm{rem} / \mathrm{h}$
- calibration accuracy : $\pm 5 \%$ of the reading in 137Cs exposure, at $3 \mathrm{mSv} / \mathrm{h}$, $+20^{\circ} \mathrm{C}\left(68^{\circ} \mathrm{F}\right)$
- energy response
- angular response
$\pm 30 \%$ over the range of $48 \mathrm{keV}-1.3 \mathrm{MeV}$
- dose measurement range $\pm 25 \%$ within $\pm 45 \%$ from the calibration direction at 48 keV
- dose rate follow-up by audible signal with frequency proportional to dose rate
- visual and audible alarm : user settable for dose and dose rate over the whole measurement range
- histogram capability of up to 480 dose rate values with user settable logging interval
- backlit display with six large digits
- display in either $\mu \mathrm{Sv} / \mathrm{h}$ or in mrem/h

Product code 04.06.01

## Electronic Personal Dosimeter,

X-ray \& Gamma
The DMC 3000 Personal Electronic Dosimeter has a rugged, high impact polycarbonate-ABS case, is small, lightweight, and is cost effective personal radiation monitoring device. Display dose: $1 \mu \mathrm{~Sv}$ to 10 Sv ( 0.1 mrem to 1000 rem) Display rate: $\quad 10 \mu \mathrm{~Sv} / \mathrm{h}$ to $10 \mathrm{~Sv} / \mathrm{h}$ ( $1 \mathrm{mrem} / \mathrm{h}$ to $1000 \mathrm{rem} / \mathrm{h}$ ) or $1 \mu \mathrm{~Sv} / \mathrm{h}$ to $10 \mathrm{~Sv} / \mathrm{h}(0.1 \mathrm{mrem} / \mathrm{h}$ to $1000 \mathrm{rem} / \mathrm{h}$ ) extended option.


## Product code 04.07.00

## Dose Rate Alarm Lamp GWL 10m

Kind of radiation: Detector: Measuring: Alarm thresholds: Acoustic alarm:

Energy range: Temperature range: Power supply:

Housing:

Dimensions/Weight:
Product code 04.08.00
gamma radiation / X-rays (DC installations) energy compensated GM tube ambient dose rate equivalent $\dot{H}^{*}(10)$ $7.5 \mu \mathrm{~Sv} / \mathrm{h}, 25 \mu \mathrm{~Sv} / \mathrm{h}, 1 \mathrm{mSv} / \mathrm{h}, 10 \mathrm{mSv} / \mathrm{h}$ $>93 \mathrm{~dB}(\mathrm{~A})$ measured in 30 cm distance, can be switched off 40 keV up to 1.3 MeV $-30^{\circ} \mathrm{C}$ up to $+60^{\circ} \mathrm{C}$ accumulator (operating time with fully charged accumulator approx. 48 hours, without acoustic alarm) aluminium combined with high impact plastic, protection class IP65

$(120 \times 120 \times 250) \mathrm{mm} 2300 \mathrm{~g}$ (with accumulator)

## RAD ALERT

The Radiation Alert ${ }^{\circledR}$ line of radiation area monitors protects your personnel and your facility.
The base controller unit includes a Touch Screen LCD, latching, siren light and strobe. Internal or external radiation probes are available for most models, with Geiger Muller or Sodium Iodide Probe options
A rugged, wall mount enclosure option is available for portal monitoring and high traffic areas to protect the sensor while on duty.
RANGE OPTIONS:
AM-7149: $\quad 0.2-16,000 \mathrm{mR} / \mathrm{hr}(2.0-160,000 \mu \mathrm{~Sv} / \mathrm{hr})$ Using an Internally Mounted LND 7149 Energy Compensated GM Detector. External mounting also available


AM-7128: $\quad 15 \mu \mathrm{R} / \mathrm{hr}-200 \mathrm{mR} / \mathrm{hr}(0.2-2000 \mu \mathrm{~Sv} / \mathrm{hr})$ Using an Internally Mounted LND 7128 Energy Compensated GM Detector. External mounting also available
AM-71313: $\quad 0.1$ to $1500 \mathrm{mR} / \mathrm{hr}(0.5-15,000 \mu \mathrm{~Sv} / \mathrm{hr}$ ) Using an Internally Mounted LND 71313 Energy Compensated GM Detector. External mounting also available
AM-1X1NAI: $\quad 1 \mu \mathrm{R} / \mathrm{hr}$ to $500 \mathrm{mR} / \mathrm{hr}(0 \mu \mathrm{~Sv} / \mathrm{hr}-5 \mathrm{mSv} / \mathrm{hr})$ Using an Externally Mounted $1 \mathrm{X} 1 \mathrm{Nal}(\mathrm{TI})$ Scintillation Probe
AM-2X2Nal: $\quad 0.1 \mu \mathrm{R} / \mathrm{hr}$ to $75 \mathrm{mR} / \mathrm{hr}(0-750 \mu \mathrm{~Sv} / \mathrm{hr})$ Using an Externally Mounted $2 \mathrm{X} 2 \mathrm{Nal}(\mathrm{TI})$ Scintillation Probe
MAX CABLE LENGTHS: GM Probes - 100ft, Scintillation Probes - 50ft
TOUCH SCREEN DISPLAY: 5-digit 4.3 inch TFT 480x272 touch screen LED display
BASE DISPLAY UNITS: Can display in $\mu \mathrm{R} / \mathrm{hr}, \mathrm{mR} / \mathrm{hr}$, $\mu \mathrm{Sv} / \mathrm{hr}$, mSv/hr, cpm, Kcpm, cps, and Kcp
FEATURES: RESPONSE: Varies automatically from 20 seconds to 2 seconds
INDICATORS:
Ultra-Bright Strobe and Audible Alarm Can trigger up to three relays with DB-9 serial connection USB VCP for computer data logging, which can also be used to control the unit with use of remote software for alarm indication and acknowledgment (Silence by remote)
ETHERNET: $\quad 10$ Base-T connection for use with remote software for alarm indication and acknowledgment (Silence by remote)
CALIBRATION CONTROLS: Functions accessible through touch screen push button under calibration cover enables secure access to changing settings
HIGH VOLTAGE: User adjustable from 200 to 1200 volts
DEAD TIME: User adjustable to compensate for dead time of the detector and electronics

POWER:
12 VDC (110/220) wall mount adapter with four sets of international adapters for almost any style wall receptacle
BATTERY LIFE:
BATTERY CHARGER:
CONSTRUCTION:
Typically 7.5 hours in non-alarm condition; 6 hours in alarm condition
Battery is continuously trickle charged when the instrument is connected to line power and turned on
Easy mount steel enclosure
TEMPERATURE RANGE: -10 to $60^{\circ} \mathrm{C}\left(14\right.$ to $\left.140^{\circ} \mathrm{F}\right)$
SIZE:
$16.2 \times 26.6 \times 5.3 \mathrm{~cm}(6.4 \times 10.5 \times 2.1 \mathrm{in}$.)
WEIGHT:
84.8 oz ( 5.3 lbs ) Without Probe and Cable

INCLUDES: Management software for use with networked area monitors, Base Unit, Power Supply, CD with Software and Operation Manual, Mounting Clips (External Versions Only), C to C Cable (External Versions Only).

## Product code 04.09.00

## MOBILE DARKROOM

This radiographic processing film darkroom is designed to be used in countries with strong climatic variations It is fixed on the rear chassis of an all-purpose vehicle.
This device enables technicians to have the laboratory near to the working site
Product code 14.01.00


## STATIONARY DARKROOM

This radiographic processing film darkroom is designed to be used in countries with strong climatic variations.
It is fixed on skids and is made of 3 rooms : darkroom, drying and desk areas.
Product code 14.02.00


Weld Measuring Gauges
Adjustable Sizes
Medium Size Tool Kit

- V-WAC Gage*,
- Magnifier,
- AWS Type Gauge*,
- Hi-Lo Gauge,
- Micrometer w/ Ball*,

Telescoping Mirror \& 6" SPI Scale*
(*) Measurement Scale: Inch or Metric
Product code 18.01.00
American Welding Society (AWS) Tool Kit

- 0-150mm Dial Caliper,
- 6 " Scale w/ Clip,
- 0-1" Micrometer,
- 2" Reading Glass,
- 7 Piece Fillet Weld Set,
- V-WAC Gauge* \& AWS Type Gauge*
(*) Measurement Scale: Inch or Metric
Product code 18.02.00
Brief Case Type Large Tool Kit/Lock \& Key
- V-WAC Gauge*
- Fillet Weld
- WTPS Gauge
- Bridge Cam
- $\quad$ Single Purpose*
- 6" SPI Scale*
- Telescoping Mirror
- Micrometer w/ Ball*
- Hi-Lo Gauge
- Skew-T Fillet Weld w/ Calc
- AWS Type Gauge*
- ADJ Fillet Weld*
- Magnifier


Product code 18.03.00
Adjustable Fillet Weld Gauge


Measure Fillet Weld \& Weld Throat Thickness, Available in Inch or Metric Product code 18.04.00

Automatic Weld Size Weld Gauge


For Accurate Calibration of Butt Fillet Type Welds, Available in Inch or Metric Product code 18.05.00

## Bridge Cam Gauge



The following measurements are possible in either inches or millimeters: Angle of Preparation, Excess Weld Metal, Depth of Undercut, Depth of Pitting, Weld Throat Size, and more.
Product code 18.06.00

## Economy Single Purpose Hi-Lo Welding Gauge



Eliminates Rejects - Improves Productivity, Available in Inch or Metric Product code 18.07.00

HI-LO Welding Gauge


Measures Internal Alignment, New Slim Design Is 30\% Lighter Product code 18.08.00
"Mini Sub" Socket Weld Gauge


Check Throat Dimensions, Checks All Pipe Schedule, All Stainless Steel Product code 18.09.00
Pit Depth Gauge


Undercuts/Pits to $1 / 2$ Inch by $1 / 32$ Inch Increments. Check Undercuts/Pits, Porosity, All Stainless Steel.
Product code 18.10.00
Pipe Pit Gauge


Range is 0 to $1 / 2^{\prime \prime}$ in $1 / 64^{\prime \prime} \& .010$ Increments, Arm Can be Locked in Place at Any Dimension, All Stainless Steel, Available in Inch or Metric
Product code 18.11.00

## Pocket Bridge Cam Gauge



Check Angle of Preparation, Excess Weld Metal, Depth of Undercut, Depth of Pitting, and more. Product code 18.12.00

Skew-T Fillet Weld Gauge


Check Angle of Vertical Member, Weld Acute Side, Weld Obtuse Side, Available in Inch or Metric Product code 18.13.00
"V-WAC" Single Weld Gauge


Undercuts/Pits to $1 / 4$ Inch, Crowns to $1 / 4$ Inch by $1 / 64$ Inch Increments (Tolerance .006 "). Check Undercuts/Pits, Porosity, Crowns, All Stainless Steel.

## Product code 18.14.00

"V-WAC" Single Weld Gauge


Undercuts/Pits to 0.240 , Crowns to 0.240 by 0.020 Increments. Check Undercuts/Pits, Porosity, Crowns, All Stainless Steel. Product code 18.15.00

## "V-WAC" Single Weld Gauge



Undercuts/Pits to 6 mm , Crowns to 6 mm by 0.5 mm Increments. Check Undercuts/Pits, Porosity, Crowns, All Stainless Steel. Product code 18.16.00

Pit Gauge


Undercuts/Pits to $0-2 \mathrm{~mm}$ by 0.2 mm Increments. Check Undercuts/Pits, All Stainless Steel.
Product code 18.17.00
Pit Gauge


Undercuts/Pits to $0.08^{\prime \prime}$, Crowns to 0.04 " by $0.005^{\prime \prime}$ Increments. Check Undercuts/Pits, Crowns, All Stainless Steel. Product code 18.18.00

## NDT Demonstration Kit

## (Demo Kit)

The flaws in these specimens can be examined by several different NDT methods to demonstrate the advantages and disadvantages of each NDT method.

Material Carbon Steel

Kit Spec: 5 specimens
-MT/PT (1) Tee @ 0.25"T x 4" x $8^{\prime \prime} \times 4^{\prime \prime}$

- VT (1) Plate @ $0.25^{\prime \prime} \mathrm{T} \times 4^{\prime \prime} \times 8^{\prime \prime}$
-UT (1) Plate @ 0.625"T x 4" x $8^{\prime \prime}$
॰RT (1) Pipe 4" Sch80 (0.337" wall) x $8^{\prime \prime} \&(1)$ Plate @ $0.625^{\prime \prime}$ x 4 " x 8 " Flaws : 2 each in plates and tee, 3 in pipe, 11 total Doc Pack: Includes C of C, CAD Drawings, RT FIlm \& Test Sheets
Product code 19.01.00
Standard RT Kit

(Radiographic Testing)
Material: Carbon Steel
Kit Spec: 10 Specimens
-(5) Plates @ 0.375"
○(3) Plates @ 0.625"
-(1) Tee @ 0.375"
-(1) Pipe @ 4" Sch80 (0.337" wall)
Flaws: 2 each specimen, 20 total
Doc Pack: Includes C of C, CAD Drawings, Test Sheets \& Radiographs


## Product code 19.02.00

## Reference Radiograph Set

Film Set Contains: 16 Radiographs of 20 "Real Flaws" plus ~6 Processing Defects
Radiographs are of 10 carbon steel specimens as follows:

○(4) Plates @ 0.375"T
○(3) Plates @ 0.625"T
○(1) Tee @ 0.375"T
○(2) Pipe @ 4" Sch80 (0.337" wall)

Product code 19.03.00

## Standard UT Kit

(Ultrasonic Testing)
Material: Carbon Steel
Kit Spec: 10 Specimens
○(4) Plates @ 0.375"
○(4) Plates @ 0.625" $T$
-(1) Tee @ 0.375"
-(1) Pipe @ 4" Sch80 (0.337" wall)
Flaws: 2 each specimen, 20 total
Doc Pack: Includes C of C, CAD Drawings and Test Sheets Product code 19.04.00


## VACUUM DEVICES FOR LEAK TESTING

The vacuum boxes are designed to be used with a compressed air source. Maximum efficiency is achieved with only 4 cubic feet per minute of air flow. This efficiency allows our boxes to operate on jobsite air or with portable air compressors powered by electric current.

## Model: 30 FB

Flat bottom box for testing lap joint welds of $3 / 8$ " plate on flat surfaces Operates using compressed air Outside Dimensions: 30"L x 7"W x 1 5/8"H
Viewing Area: 26 7/8"L x 4"W

## Product code 20.01.00

## Model: 18 CB

Corner vacuum boxes are specifically designed for testing the inside corner, where the bottom meets the sidewall at 90 degrees.
Operates using compressed air.
Outside Dimensions: 18"L x 5 1/4"W x 5 1/4"H
Viewing Area: 15"L x 2 7/8"W

## Product code 20.02.00

Model: 20FB
Flat bottom box for testing butt welds on flat surfaces
Operates using compressed air.
Outside Dimensions: 20"L x 7 "W x $15 / 8$ "H
Viewing Area: 16 7/8"L x 4 "W
Product code 20.03.00
Model: 40 CB
Corner vacuum boxes are specifically designed for testing the inside corner, where the bottom meets the sidewall at 90 degrees.
Operates using compressed air.
Outside Dimensions: 40"L x 5 1/4"W x 5 1/4"H
Viewing Area: 37"L x 2 7/8"W
Product code 20.04.00

## Model: 30 CB

Corner vacuum boxes are specifically designed for testing the inside corner, where the bottom meets the sidewall at 90 degrees.
Operates using compressed air.
Outside Dimensions: 30"L x 5 1/4"W x 5 1/4"H
Viewing Area: 27"L x 2 7/8"W

## Product code 20.05.00

## Vacuum Box Accessories



Replacement Gasket
The replacement for the original gasket attached to the vacuum box.
Gaskets are the highest quality material with the proper softness for an easy seal, yet durable enough to last for multiple uses. Replacement of the old gasket requires its removal. The surface is cleaned of the old material as much as possible. Contact cement is then applied to the surface of the replacement gasket and to the surface of the vacuum box. When tacky, the replacement gasket is applied to the box. Care must be taken when applying the replacement gasket as there is no opportunity for adjustment.

## Air Hose

$3 / 8^{\prime \prime} \times 50$ ' air hose
Made in USA by Goodyear
Oil resistant
1/4" male threaded ends
Product code 20.06.00


## Gauge

Replacement vacuum gauge.
Measurement range: 0-30 inches of mercury.
1/4" NPT threaded connection
Conversion: Pressure (inches of mercury)
$=2.03602 \times$ Pressure (psi)
Accuracy ASME B40.1 standard (grade B) (3-2-3\%).

## Product code 20.07.00

## Venturi

Replacement compressed air venturi.
4 cfm air flow required for maximum effectiveness.
No moving parts for long term mechanical reliability.
The venturi comes with a removable sound suppressor
(plastic piece on end of exhaust).
Product code 20.08.00



MAGNETIC PARTICLE INPECTION \& PENETRANT TESTING


## PENETRANT TESTING <br> INPECTION

FLUXO P125
Red Dye penetrant
Sensitivity 2
Spray can 500ml -300ml- drum
Product code 16.01.00

## FLUXO R175

Developer
Spray can 500ml -300ml- drum
Product code 16.02.00
FLUXO S190
Solvent remover
Spray can 500 ml -300ml-drum
Product code 16.03.00

## FLUXO P578

Fluorescent penetrant
Sensitivity 2
Spray can 500ml
Product code 16.04.00
FLUXO N130
Penetrant remover
Spray can 500ml
Product code 16.05.00

## MAGNETIC PARTICLE INPECTION

## FLUXO 3

Black magnetic ink
Spray can 500 mL - drum
Product code 16.06.00
FLUXO 7
White contrast Paint
Spray can 500ml
Product code 16.07.00
FLUXO 4
White contrast Paint
Spray can 500 mL - drum
Product code 16.08.00

## FLUXO 5

White contrast Paint remover
Spray can 500mL
Product code 16.09.00
FLUXO 6
Fluorescent magnetic ink
Spray can 500mL - drum
Product code 16.10.00

Y2 AC ELECTRO-MAGNETIC YOKE
The $Y$ - 2 is an AC electromagnetic yoke, ergonomically designed to improve productivity and reduce operator arm and wrist fatigue.

- 230 Volt $50 / 60 \mathrm{~Hz}$
- Weight: 2.2kg

Product code 16.22.00

## Y6 ELECTRO-MAGNETIC YOKE Discontinued

The Y6 is a lightweight encapsulated AC yoke designed for reliable, one-person detection of surface indications. Its articulated legs make it ideal for inspecting components of different geometries.
Product code 16.22.01


## PM-6 PERMANENT MAGNET

The PM-6 is a portable, lightweight, state-of-the art magnetic particle testing device for reliable one-man inspection. The PM-6 Permanent Magnet Yoke operates anywhere and needs no external power source and it is spark-proof for tests in "red" fire or explosive zones.
Product code 16.23.00

## YM-5 Yoke Discontinued



Permanent magnet adjustable arms. 3 Kg mass breakout force greater than 18 daN . Height of the handle at the end of the poles, 177 mm . For magnetic particle inspection on site (MPI).
DIMENSIONS
Handle Length: 200 mm
Height: 177 mm handle to leg tip
Poles: 35 mm
Weight-Yoke: 3.02 Kg
Weight-With Keeper: 3.34 Kg
Product code 16.24.00


## ULTRASONIC FLAW DETECTOR <br> Digital Ultrasonic Flaw Detect

## ECHOGRAPH 1095

High-tech meets comfort: Ultrasonic Testing made simple
Besides the proven qualities of its predecessor model the new ultrasonic flaw detector ECHOGRAPH 1095 features time corrected gain and backwall echo attenuation. It is the ideal instrument for manual ultrasonic testing: digital, high-contrast and comfortable in practical applications. It is reliable and sturdy and thus can be used outdoors or in rough industry environment.

- is lightweight (only 2 kg ) and easy to handle
- is equipped with a very large and high-contrast TFT colour display ( 7 " diagonal, resolution $800 \times 480$ pix) with automatic brightness control and a large viewing angle
- guides the user safely and self-explanatorily through the applications by means of its plain text menu
- ensures extremely simple and complete adjustment with its user guidance
- supports the operator during probe handling and instrument adjustment (DAC, TCG, AWS, DGS, JIS, ...)
- offers direct access to all important key functions
- displays up to 6 measured values in large digits
- is equipped with 3 monitors to measure amplitude and time-of-flight, as well as 3 associated control lamps on the front panel for monitoring threshold values
- enables to show reference echoes and to record echo dynamics

- enables simple freezing and storaging of A-scans
- allows to move all 3 monitor gates in "freeze" mode and recalculates the displayed measured values accordingly
- comes with a convenient text editor which enables the storage of each data set with an individual file name
- contains a probe data base for easy entering of probe data, even for third-party probes
- displays all functions in plain text on the screen, in addition to the 6 function keys
- permits selection of the pulse repetition frequency (PRF) from 10 Hz up to 5000 Hz : low PRF to avoid ghost echoes, and high PRF for high testing speed in case of automated testing
- saves all data, e.g. screenshots as BMP files or series of measurements as CSV files, on a removable 8 GB SD flash card
- evaluates the time-of-flight between transmitter pulse and an echo within the monitor gate
- measures the wall thickness between echoes of two monitors, either between echo peaks, edges or zero crossings
- provides 0.01 mm indication accuracy in echoecho-mode
- allows evaluation also on curved surfaces (e.g. pipes)
- provides a VGA output for external monitors
- is delivered with a colour rubber protective holster to avoid sliding and for additional protection
- offers a separate adjustable gain in the third monitor, e.g. for individual backwall echo attenuation
- has an adjustable square pulser with a pulse width automatically adapted to the frequency of the probe when it is loaded, but which can be changed manually as well
- features digital filters for optimal adaption to the probe
- is dust-proof and provides protection against water jets according to IP65

The ECHOGRAPH 1095 available in 4 versions:
1095 Basic - 1095 DAC/TCG/AWS - 1095 AVG/DAC/TCG - 1095 AVG/DAC/TCG/AWS/JIS Product code 17.15.00

## A-Scan ECHOMETER 1077 Portable and Multichannel Rack Version Measurement Of Wall Thickness And Sound Velocity

Display TFT colour display, $320 \mathrm{px} \times 240 \mathrm{px}, 50 \mathrm{~mm} \times 37 \mathrm{~mm}$ approx., illuminated
Measurands Wall thickness, sound velocity, transit time
Measurement uncertainty of gauge for wall thickness measurement (resolution):

* $0.1 \mathrm{~mm}, 0.01 \mathrm{~mm}, 0.001 \mathrm{~mm}, 0.0001 \mathrm{Inch}, 0.001 \mu \mathrm{~s}$ (selectable)

Measurement uncertainty of gauge for sound velocity measurement (resolution): $1 \mathrm{~m} / \mathrm{s}, 0.1 \mathrm{~m} / \mathrm{s}$ and $1 \mathrm{Inch} / \mathrm{s}$ (selectable)
Ranges for wall thickness measurement: $0.25 \mathrm{~mm} . .450 \mathrm{~mm}$ (depending on probe) Measurement uncertainty (gauge) in $\mathrm{mm}: 0.001 \mathrm{~mm}$ (may be limited by application) Measurement uncertainty (gauge) in Inch: 0.001 Inch (may be limited by application)


## Product code 17.16.00

## Ultrasonic Flaw Detector

## EPOCH 600

The EPOCH 600 is mid-level, handheld ultrasonic flaw detector.
Weighing only 1.68 kg ( 3.72 lb. ), its horizontal case is built to withstand the rigors of very harsh environments

- Designed to meet the requirements of EN12668-1
- Perfect Square ${ }^{\text {TM }}$ tuneable square wave pulser
- Digital high dynamic range receiver
- Eight digital filters for enhanced signal-to-noise ratio
- 2 kHz PRF for rapid scanning
- Knob or navigation pad adjustment configurations
- Large, full VGA sunlight readable display
- Long battery life, supporting lithium-ion or alkaline batteries
- Standard dynamic DAC/TVG and on board DGS/AVG
- 2 GB MicroSD memory card for data transfers and storage
- USB On-The-Go (OTG) for PC communication
- Alarm and VGA outputs

- Optional analog output


## Product code 17.01.00

## EPOCH 650

The EPOCH 650 is designed for use in nearly any inspection environment, from bench top testing in a laboratory to extreme outdoor and hazardous conditions

- Large, full VGA resolution transflective display for vivid clarity in any indoor lighting and direct sunlight conditions
- Rubber overmolded bumpers on all four corners for shock absorption and anti-marring considerations
- Four-point harness connection for chest straps
- "No tools" access to battery compartment and side I/O door
- Continuous position stand with right angle crook for improved stability from 0 to 180 degrees
- Gasketed side door for USB OTG connection and removable memory
- Standard internal, rechargeable lithium-ion battery
- Lightweight, ergonomic design for increased portability and ease of use Product code 17.02.00


## OmniScan MX2

Modular Instrument
A Platform that Evolves as your Needs Grow
Designed to secure both your current and future phased array investments, the OmniScan MX2 houses more than 10 different Olympus modules.
State of the Art PA2 and UT2 Modules
As a world leader in phased array technology,
Olympus has released a new line of modules compatible with MX2 instrument.

PA2
The new phased array offer-led by the new innovative PA2 modules, features multiple improvements, such as: Best Phased Array and TOFD Signal Quality Ever Better signal-to-noise ratio More powerful pulsers 64 pure gray tone More Multi-group Capabilities Ability to use PA and UT channels simultaneously UT2 TOFD Module and MXU Software


The new OmniScan MX2 UT2 module from Olympus represents a powerful, yet affordable solution for TOFD inspection.
Product code 17.03.00

## Ultrasonic Transducers

Atlas European Standard Transducers feature LEMO connectors,
 metric unit element diameters, and common frequencies, such as 1,2 , and 4 MHz . They are designed to meet inspection criteria referenced throughout Europe and the rest of the world. Product code 17.04.00

## Test Blocks

Calibration and/or Reference Blocks should be used in every application.

## Product code 17.05.00

## Ultrasonic Transducers

Transducers \& Wedges

- The single crystal range of shear wave transducers are available in various angle sizes.
- Phoenix developed the gold series transducer range to offer superior performance. Available with a stainless steel case, modified internal design and rear entry connectors, gold series transducers provide exceptional results.
- Twin crystal shear wave transducers hold two crystals mounted at inward angles that



## Thickness Gages

27MG
The 27 MG is a basic ultrasonic thickness gage designed to make accurate measurements from one side on internally corroded or eroded metal pipes and parts. Product code 17.06.00

## 38DL PLUS

The versatile 38DL PLUS can be used with dual element transducers for the measurement of corroded pipes to the very precise thickness measurements of thin or multilayer materials
 with a single element transducer.

## Product code 17.07.00

45MG
The 45 MG is an advanced ultrasonic thickness gage packed with standard measurement features and software options.
This unique instrument is compatible with the complete range of Olympus dual element and single element thickness gage transducers.
Product code 17.08.00

## UT5000 Thickness Gauge

## ATEX \& IECEx Certified

UT5000 Intrinsically Safe thickness gauge with CorDEX CONNECT ${ }^{\text {TM }}$ measures metal thickness for Non-Destructive Testing (NDT) and Predictive Maintenance (Pdm) on pipelines and fixed equipment within hazardous locations.
ATEX Certificate No. Baseefa11ATEX0114
IECEx Certificate No. IECEx BAS 11.0094
Memory
Stores up to 1000 measurements
Screen

Material Velocity
Selection

Transducer
Pulse Rate 8 cm (3.1inch) RGB TFT colour screen with backlight Right/left handed set up

Adjustable from single shot up to 8 Hz
Receiver Bandwidth
Frequency
Preloaded via Drop-Down menu, or user defined.

Accuracy $4 \mathrm{MHz}, 3 \mathrm{~mm}$ up to 100 mm (0.01in to 3.9 in )

- Operates with 13.54 MHz passive tags
- Detection range up to 5 cm (1.9in)

- Supports ISO/IEC 15693-2, ISO/IEC 18000-3 tag formats
- Lithium thionyl chloride primary 3.6 V cell
- 100 hours continuous operation with back light restrictions
- Low battery warning

Operating Temperature -10 to $+50 \mathrm{C}\left(14^{\circ} \mathrm{F}\right.$ to $\left.122^{\circ} \mathrm{F}\right)$
Weight $\quad 1.1 \mathrm{Kg}(2.4 \mathrm{lb})$
Product code 17.09.00

## Ultrasonic Thickness Gauge

## Multigauge 5500

The Multigauge 5500 has been designed for hands free use when climbing on staging, ladders, scaffolding or when accessing by rope. Whether it's onboard a ship, on large storage tanks, climbing on top of a road tanker or inspecting underneath a bridge, the 5500 will make the job much easier.

- Ignores coatings up to 6 mm thick using Multiple Echo.

Coating Plus+ ignores coatings up to 20 mm .

- Automatic Measurement Verification System (AMVS).
- Mounts onto waist belt or chest harness for hands free use.
- No zeroing required.
- Single crystal soft faced probe protected by a membrane.
- Easy calibration with menu driven buttons.
- Intelligent Probe Recognition (IPR).
- Echo strength indicator.
- Resolution

Accuracy
Coatings Range
Display
Batteries
Battery Life
Dimensions
Weight
Environmental
Operating Temperature
Storage Temperature
$0.1 \mathrm{~mm}\left(0.005^{\prime \prime}\right)$ or $0.05 \mathrm{~mm}\left(0.002^{\prime \prime}\right)$
$\pm 0.1 \mathrm{~mm}$ ( $0.005^{\prime \prime}$ ) or $\pm 0.05 \mathrm{~mm}$ ( $0.002^{\prime \prime}$ )
Up to 6 mm (Standard Mode)*; up to 20 mm (Coating Plus+)*
Red 4 character 7 segment LED
$3 x$ disposable AA alkaline batteries or rechargeable NiMH / NiCD
Up to 50 hours continuous use using alkaline batteries
$147 \mathrm{~mm} \times 90 \mathrm{~mm} \times 28 \mathrm{~mm}$ ( $5.75^{\prime \prime} \times 3.5^{\prime \prime} \times 1^{\prime \prime}$ )
320 g (11.3 ounces) including batteries
Case rated to IP65. RoHS and WEEE compliant
$-10^{\circ} \mathrm{C}$ to $+50^{\circ} \mathrm{C}\left(14^{\circ} \mathrm{F}\right.$ to $\left.122^{\circ} \mathrm{F}\right)$
$-10^{\circ} \mathrm{C}$ to $+60^{\circ} \mathrm{C}\left(14^{\circ} \mathrm{F}\right.$ to $\left.140^{\circ} \mathrm{F}\right)$

The Multigauge 5500 has been manufactured to comply with British Standard BS EN 15317:2007, which covers the characterization and verification of ultrasonic thickness measuring equipment.
Product code 17.11.00

## Portable EMAT thickness gauge

The gauge enables measurements to be taken at a vast range of surface temperatures, going from -20 to +720 degrees Celsius.
A convenient, compact, sophisticated and innovative field instrument, the EMAT Wall Thickness gauge «UltraSonic» can be used to easily yet precisely measure the thickness of components, pipes, vessels and other metal objects.

Weight of the device (with batteries) 1430 g
Weight of transducer
Overall dimensions (LxWxH)
Power supply:
Operation time at a brightness of 50\%
(using belt with additional external power supply unit) 40 hours
Temperature range whilst in operation
Temperature range of the test object (in basic design)
Measurement unit
Measurement range
Precision
Accuracy
Distance from test object up to
Transmission rate
Type of ultrasonic wave
Gain
Dead band at 4 MHz
Pulse Repetition Frequency (PRF) at least
Hz ultrasonic speed
NVRAM
Sampling rate
4.3"colour TFT screen with adjustable lighting

* Depending on transducer and time measured
** Depending on the surface coating and probe specifications
Product code 17.10.00
replaceable batteries (AA type, 8 pieces)
millimeter
$1.5-100 \mathrm{~mm}$
0.01 mm
0.001 mm

4 mm**
4 MHz
transversal
80dB
max. $4 \mu \mathrm{~s}$
150 Hz

1 MB
40 MHz
$480 \times 272$ Pixel

$-10^{\circ} \mathrm{C}$ up to $+50^{\circ} \mathrm{C}$
$-20^{\circ} \mathrm{C}$ up to $+720^{\circ} \mathrm{C}^{*}$

1000-9999 m/sec



## Hardness Testing

## Equotip 550 Leeb

## Rebound Hardness Test

The Equotip 550 is the most versatile all-in-one solution for portable hardness testing. The Leeb hardness principle is based on the dynamic (rebound) method and is best suited for on-site testing of heavy, large or already installed parts.
Equotip Leeb
Automatic conversions to all common hardness scales (HV, HB, HRC, HRB, HRA, HS, Rm) as required Highly accurate $\pm 4 \mathrm{HL}(0.5 \%$ at 800 HL$)$ with automatic correction for impact directions
 Wide measurement range with a variety of impact devices and support rings to serve most hardness testing requirements Extensive range of precise hardness test blocks available for each impact device with different hardness levels for regular verification
Product code 24.01.00

## Metal Hardness Tester Equotip Bambino 2

The Equotip Bambino 2 is a handy measuring device for an easy metal hardness test on most diverse part geometries.
It combines modern electronics with a patented impact device that integrates the test cycle intoone simple motion.


Product code 24.02.00

## Portable Metal Hardness Test

## Equotip Piccolo 2

The revolutionary portable metal hardness test of the Equotip Piccolo 2 convinces with precise measurements on most metals.
It offers the same features as the Equotip Bambino 2 but also allows user defined hardness conversions, free Piccolink software for systematic real time monitoring of hardness, automated portable metal hardness test during serial production and full remote control
 of the Equotip Piccolo 2 settings.
With this instrument for the portable metal hardness test customers can enjoy full bi-directional communication via USB interface and free online firmware updates.

## Product code 24.03.00

## Leeb Hardness Tester HM-6561

Technical Specifications

Display:
Accuracy:
Measuring range:
Conversion:
Materials:

Memory:
Impact device: applications.
Power supply:
Dimension:
Weight:
Working temperature :
Product code 24.10.00
12.5 mm LCD with back light Display error $\pm 0.8 \%$ at $\mathrm{LD}=900$ 200-900L
HL-HRC-HRB-HB-HV-HSD
9 different common materials With RS232C interface
250 data can be stored and re-readable D Will handle the majority of hardness testing Weight: 75g
$2 \times 1.5 \mathrm{~V}$ AAA size battery $146 \times 65 \times 36 \mathrm{~mm}$ 130 g (not including batteries) $-10^{\circ} \mathrm{C} /+50^{\circ} \mathrm{C}$


## SPECTRO xSORT

Handheld XRF Analyzer Delivers Improved Speed, Precision in Analysis of Light Elements
The design, performance, and simple operation of the SPECTRO xSORT handheld spectrometer make it ideal for performing positive material identification (PMI) for infrastructure integrity testing at refineries, power plants, and petrochemical complexes - as well as scrap metal analysis and sorting in the recycling industry. The SPECTRO xSORT Alloy model delivers grade identification in seconds. The even more powerful SPECTRO xSORT AlloyPlus analyzes most alloys in 2 seconds, and identifies alloys based on light elements such as aluminum, magnesium, silicon, phosphorus, and sulfur in 7 seconds. Advantages include:

- Ease of Use: With SPECTRO xSORT, operators don't have to switch methods between samples, or bother with helium flushes or vacuum systems. Its compact, one-piece $1.64 \mathrm{~kg}(3.62 \mathrm{lb})$ design is optimized for easy use in the field, even in tight or less accessible spots.
- Built-In Protection and Calibration: A shutter that automatically closes the measurement window between analyses - to protect internal components - also functions as the sample material for unique, automatic iCAL standardization. All calibrations loaded into SPECTRO xSORT are always ready for use.

Additional features include an X-ray safety gasket to prevent backscatter radiation from light element matrix samples; wireless LAN; quick-change battery; interface bezel with operator-defined hot keys; "live" analysis results; simplified software with touchscreen; and the SPECTRO iCAL one-sample, one-time easy automated calibration system. Options include an integrated GPS receiver and integrated video camera. The new SPECTRO xSORT analyzer is available in different models. The SPECTRO xSORT Alloy employs an innovative silicon PIN (Si-PIN) detector and delivers grade identification of metals in seconds without extensive analysis.
The SPECTRO xSORT AlloyPlus (Combi) features a top-of-the-line silicon drift detector (SDD) and provides reliable, high-productivity measurement and analysis.
Product code 26.01.00


## Lifting Equipment

## The Handifor

The Handifor electronic mini weighing Scale is perfect for weighing and measuring loads up to 200 kg .
Built to a robust specification, the innovative and compact design of the Handifor makes it easy to operate and store

- Operating life batteries 100 h
- Lightweight (ONLY 220g)
- 2xAAA batteries
- The Units can be easily adjusted via the featured 'soft key pad'
- Large Displays IP40
- Accuracy $+/-0.5 \%$ From 20 up to 200kg ------- Please specify when ordering! - -
- Rugged, lightweight \& compact


## Product code 25.01.00



The dynafor LLX1
The dynafor LLX1 dynanometers are precision force sensors used to measure forces and indicate loads. The shape of this model allows the use of standard shackles on both ends. The dynanometers of this range function in all positions for the measurement of force \& suspended for weighing. Model Precision Increment Weight
$\begin{array}{lll}\text { LLX1 } 5 \mathrm{~T} & 2 & 2.3\end{array}$

LLX1 0.5T (daN) 0.2 1 LLX1 2T
LLX1 3.2T
1 2
LLX1 $6.3 T$
LLX1 12.5T
LLX1 20T 5 10

Product code 25.02.00

## Dynafor LLZ

Dynafor LLZ range of electronic dynamometer load cell with digital display for pulling and lifting applications. Using strain gauge sensor the LLZ models are designed for use between shackles or brackets. These units operate in all positions for forces measurement and vertically for load checking and measurement.
Features:

- 0.25-20Tonnes
- Capable of displaying a wide range of units (kg, T, daN kN, lbs)
- Accuracy : 0.8\% of capacity
- Coefficient of utilisation : more than 6
- Built in Liquid crystal display (LCD) : 5 digits 18 mm high
- Offers the 'Tare' function
- Ambient temperature range : $-10^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$
- Weatherproof and dustproof in accordance with EN 60529 : IP65
- Body in painted aluminium alloy
- Power supply : $3 \times 1.5 \mathrm{~V}$, AA or R6 (diameter $14 \times 50 \mathrm{~mm}$ ).
- Battery life (using 2000 mAh batteries) 850 hours approx.

- Meets IP65 \& is fine to use in severe weather


## Product code 25.03.00

## Yale Tigrip Crane Weigher TZR

(0-100 Tonnes)
The new generation of Load Indicators designed and manufactured by industry experts, Yale. These are quality and exretemely compact handheld units perfectly engineered for the weighing of loads ranging from 0 to 100 Tonnes depending on the model chosen.


The 'TZL' unit is the standard unit featuring a digital display. The TZR model is exactly the same however comes delivered with a remote control.
Model: TZR 1.0 - TZR 2.5 - TZR 5.0 - TZR 10.0 - TZR 20.0 - TZR 35.0 - TZR 50.0 - TZR 100
Product code 25.04.00

## Hydraulic Adhesion Tester

The Hydraulic Adhesion Tester is an extremely versatile Type III adhesion gauge which can be used for many adhesion requirements. Tests can be made on flat or curved (concave and convex) surfaces. The Adhesion Tester is the ideal gauge for coatings on Tanks, Pipelines, etc.

- Hand-Powered and portable
- Ideal for site work
- Reusable stainless steel dollies Digital Adhesion Gauge features:
- Maximum hold - displays the highest value reached
- Backlit display for dark areas
- Rubber protective casing
- Switchable Metric/Imperial


The Adhesion Tester can be used with convex and concave dollies, making this the gauge for adhesion of coatings on all pipelines including those with small diameter, tanks and other curved surfaces. There is a wide range of curved dollies available, each designed for a specific range of curvature.
Product code 25.05.00

All goods are sold subject to terms and conditions of IPSI.
A copy of these terms and conditions is available upon request.

## Société Internationale de Produits et Services Industriels

102 rue JB Charcot CS 60043 - 92411 Courbevoie Cedex France - Tel : +33 (0)1 47687500 - Fax : +33 (0)1 47899939
E-mail : ipsi@ipsifrance.com - Web : www.ipsifrance.com
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