PRODUCTS CATALOGUE
NDT
Non Destructive Testing
Products Catalogue

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METAL HARDNESS TESTER
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- The Handifor
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- The Dynafor LLZ
- Yale Tigrip Crane Weigher TZR
1075 SCAR Pro Source Projector

SENTINEL™ 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 SENTINEL™ 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° 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 cm) 11.20 in
Width : (14.99 cm) 5.90 in
Height : (18.54 cm) 7.30 in
Weight with Jacket : (13.61 kg) 30 lb
Weight without Jacket : (12.25 kg) 27 lb
Shielding : Tungsten 16.5 lb (7.5 kg)
Materials : Tungsten shield with built in source path, Stainless Steel, Aluminum, and Polyurethane
Isotope : Selenium-75
Maximum Source Capacity : 81 Ci (3 TBq) of Selenium-75

Controls and Guide Tubes : 1075 SCARPro Projectors are designed, manufactured and approved for use with SENTINEL™ 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.

880 Delta Projector
- Length : (33.8 cm) 13.33 in
- Width : (19.1 cm) 7.5 in
- Height : (22.9 cm) 9 in
- Weight : (23.6 kg) 52 lbs

880 Elite Projector
- Length : (33.8 cm) 13.33 in
- Width : (19.1 cm) 7.5 in
- Height : (22.9 cm) 9 in
- Weight : (19 kg) 42 lbs

880 Omega Projector
- Length : (33.8 cm) 13.33 in
- Width : (19.1 cm) 7.5 in
- Height : (22.9 cm) 9 in
- Weight : (15 kg) 33 lbs

Product code 10.02.00

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 -40oF to 212oF (-40oC to 100oC)

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 SENTINEL™ projector units.

**Product code 10.04.00**

Tungsten Gamma Ray Collimators

**TCN799**
- **Weight**: 1.75 lb (0.79 kg)
- **Dimensions**: Length: 1.88 in, Diameter: 1.5 in
- **Attenuation**: Ir-192: 0.05
- **Half Value Layers**: Ir-192: 4.30
- **Beam Size**: 60° conical side throw

**Product code 10.05.00**

**TCN846**
- **Weight**: 4.3 lb (1.95 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° x 360° 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 SENTINEL™ 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**: 31kg
- **Jacket and Projector**: 24.2kg
- **Collimator and Shoe Assembly**: 6.8kg

**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; 1TBq (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.

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: 74 Days
Energies: 206-612 KeV
Steel Working Range: 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 KeV
Steel Working Range: 0.32 in to 1.18 in (8 mm to 30 mm)

OpenVision™ OVCF-NDT

OpenVision™ is a lightweight 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.
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.
- 120 kV – 1 mA
- 160 kV- 0.5 mA
- 60° x 60° directional beam.
- Focal spot of 0.8 x 0.5 mm / 0.8 x 0.7 mm
- 7 Kg / 9.2 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

<table>
<thead>
<tr>
<th>Radiation geometry</th>
<th>-</th>
<th>Directional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output voltage range</td>
<td>kV</td>
<td>40 to 160</td>
</tr>
<tr>
<td>Tube current range</td>
<td>mA</td>
<td>0.1 to 0.5</td>
</tr>
<tr>
<td>Tube current at full output</td>
<td>mA</td>
<td>1.0</td>
</tr>
<tr>
<td>Maximum power at the anode</td>
<td>W</td>
<td>80</td>
</tr>
<tr>
<td>Steel penetration</td>
<td>mm</td>
<td>21</td>
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<tr>
<td>Weight</td>
<td>Kg</td>
<td>9.2</td>
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<tr>
<td>Overall dimensions mm</td>
<td>ø</td>
<td>124 x 490</td>
</tr>
<tr>
<td>Leakage dose at 1 m at full output</td>
<td>mSv/h</td>
<td>&lt; 2.0</td>
</tr>
<tr>
<td>Optical focal spot</td>
<td>mm</td>
<td>0.8 x 0.7</td>
</tr>
<tr>
<td>Inherent filtration</td>
<td>mm</td>
<td>Equiv. 3.5 (Al)</td>
</tr>
<tr>
<td>Waterproof level</td>
<td>-</td>
<td>IP54</td>
</tr>
</tbody>
</table>

SITEX CPseries

Directional Units

While the SITEX CP160D & CP320D weigh just 12 Kg & 23 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°.
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 °C
- Forced air cooled
- Gas insulated
- V-shaped hand rings
- Laser pointer
- Shutter & diaphragms included
- 7.9 kg control unit
- 90 to 264 VAC mains
- 6A at 230V

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

SITECP160D Product code 11.07.01

<table>
<thead>
<tr>
<th>BEAM DIRECTIONAL</th>
<th>Unit</th>
<th>Value</th>
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<tbody>
<tr>
<td>Radiation geometry</td>
<td>-</td>
<td>Directional</td>
</tr>
<tr>
<td>Output voltage range</td>
<td>kV</td>
<td>10 to 160</td>
</tr>
<tr>
<td>Tube current range</td>
<td>mA</td>
<td>1 to 10</td>
</tr>
<tr>
<td>Tube current at full output</td>
<td>mA</td>
<td>5.6</td>
</tr>
<tr>
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<td>W</td>
<td>900</td>
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<tr>
<td>Constant power mode</td>
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</tr>
<tr>
<td>Working cycle at 30°C (*)</td>
<td>%</td>
<td>100</td>
</tr>
<tr>
<td>Steel penetration (**)</td>
<td>mm</td>
<td>29</td>
</tr>
<tr>
<td>Weight (excluding guard rings)</td>
<td>Kg</td>
<td>11.9</td>
</tr>
<tr>
<td>Overall dimensions</td>
<td>mm</td>
<td>Ø 140 x 695</td>
</tr>
<tr>
<td>Leakage dose at 1 m at full output</td>
<td>mSv/h</td>
<td>&lt; 2.0</td>
</tr>
<tr>
<td>Optical focal spot (EN12543)</td>
<td>mm</td>
<td>3.0 (~1.5 IEC 336)</td>
</tr>
<tr>
<td>Max. useful angle</td>
<td>°</td>
<td>60 x 40 elliptical</td>
</tr>
<tr>
<td>Inherent filtration</td>
<td>mm Be</td>
<td>0.8 (Be Window)</td>
</tr>
<tr>
<td>Waterproof level</td>
<td>-</td>
<td>IP65</td>
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</tbody>
</table>
## SITEX CP200D

**Product code 11.07.02**

<table>
<thead>
<tr>
<th><strong>Beam Directional</strong></th>
<th><strong>Unit</strong></th>
<th><strong>Value</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Radiation geometry</td>
<td></td>
<td>Directional</td>
</tr>
<tr>
<td>Output voltage range</td>
<td>kV</td>
<td>10 to 200</td>
</tr>
<tr>
<td>Tube current range</td>
<td>mA</td>
<td>1 to 10</td>
</tr>
<tr>
<td>Tube current at full output</td>
<td>mA</td>
<td>4.5</td>
</tr>
<tr>
<td>Max. power at the anode</td>
<td>W</td>
<td>900</td>
</tr>
<tr>
<td>Constant power mode</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Working cycle at 30°C (*)</td>
<td>%</td>
<td>100</td>
</tr>
<tr>
<td>Steel penetration (**)</td>
<td>mm</td>
<td>42</td>
</tr>
<tr>
<td>Weight (excluding guard rings)</td>
<td>Kg</td>
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</tr>
<tr>
<td>Overall dimensions</td>
<td>mm</td>
<td>Ø 140 x 715</td>
</tr>
<tr>
<td>Leakage dose at 1 m at full output</td>
<td>mSv/h</td>
<td>&lt; 2.0</td>
</tr>
<tr>
<td>Optical focal spot (EN12543)</td>
<td>mm</td>
<td>3.0 (~1.5 IEC 336)</td>
</tr>
<tr>
<td>Max. useful angle</td>
<td>°</td>
<td>60 x 40 elliptical</td>
</tr>
<tr>
<td>Inherent filtration</td>
<td>mm Be</td>
<td>0.8 (Be Window)</td>
</tr>
<tr>
<td>Waterproof level</td>
<td></td>
<td>IP65</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>°C</td>
<td>-30 to +60</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>°C</td>
<td>-40 to +70</td>
</tr>
<tr>
<td>Built-in carrousel featuring 5 outputs</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Guard rings</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>(*) Open air - 5m/sec airstream</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>(***) 700 mm FFD, 10 min, AA400, D=2</td>
<td></td>
<td>-</td>
</tr>
</tbody>
</table>

## SITEX CP225D

**Product code 11.07.03**

<table>
<thead>
<tr>
<th><strong>Beam Directional</strong></th>
<th><strong>Unit</strong></th>
<th><strong>Value</strong></th>
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</thead>
<tbody>
<tr>
<td>Radiation geometry</td>
<td></td>
<td>Directional</td>
</tr>
<tr>
<td>Output voltage range</td>
<td>kV</td>
<td>10 to 225</td>
</tr>
<tr>
<td>Tube current range</td>
<td>mA</td>
<td>1 to 10</td>
</tr>
<tr>
<td>Tube current at full output</td>
<td>mA</td>
<td>4</td>
</tr>
<tr>
<td>Max. power at the anode</td>
<td>W</td>
<td>900</td>
</tr>
<tr>
<td>Constant power mode</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Working cycle at 30°C (*)</td>
<td>%</td>
<td>100</td>
</tr>
<tr>
<td>Steel penetration (**)</td>
<td>mm</td>
<td>47</td>
</tr>
<tr>
<td>Weight (excluding guard rings)</td>
<td>Kg</td>
<td>12</td>
</tr>
</tbody>
</table>
### Overall dimensions
- **Dimensions**: Ø140 x 725 mm
- **Leakage dose at 1 m at full output**: < 2.0 mSv/h
- **Optical focal spot (EN12543)**: 3.0 (≈1.5 IEC 336) mm
- **Max. useful angle**: 60 x 40 elliptical °
- **Inherent filtration**: 0.8 (Be Window) mm Be
- **Waterproof level**: IP65
- **Operating temperature**: -30 to +60 °C
- **Storage temperature**: -40 to +70 °C
- **Built-in carrousel featuring 5 outputs**: Yes
- **Guard rings**: 2
- **Airstream**: 5 m/sec
- **FFD**: 700 mm
- **AA400**: 10 min
- **D**: 2
- **Weight**: 9.9 Kg
- **Overall dimensions**: Ø120 x 688 mm
- **Leakage dose at 1 m at full output**: < 2.0 mSv/h

### SITEX CP CRAWLER
**Constant Potential Crawler Units**
Without any compromise on the performance, the CP160CR and CP180CR are, with an outside diameter of 120 mm, a length of just 688 mm and a weight of less than 10 kg, the most compact portable x-ray generators available on the market for crawler.

Offering an output range from 40 to 160 kV (180 kV for the CP180CR)/0.5 to 2 mA, this crawler X-ray generator fits perfectly to inspect pipelines starting from 6 inches.

### CP RCU REMOTE CONTROL UNIT
ICM crawler generators are equipped with a completely removable control unit, which includes an LCD display and keypad. This pocket size Remote Control Unit – the CPRCU – provides the operator with the most user-friendly interface available.

<table>
<thead>
<tr>
<th>CP160CR</th>
<th>Unit</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radiation geometry</td>
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<td>Panoramic</td>
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<tr>
<td>Output voltage range</td>
<td>kV</td>
<td>40 to 160</td>
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<tr>
<td>Tube current range</td>
<td>mA</td>
<td>0.5 to 2.0</td>
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<tr>
<td>Tube current at full output</td>
<td>mA</td>
<td>2.0</td>
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<td>W</td>
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<td>Constant power mode</td>
<td>-</td>
<td>Yes</td>
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<tr>
<td>Working cycle at 30°</td>
<td>C %</td>
<td>100</td>
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<tr>
<td>Steel penetration (**)</td>
<td>mm</td>
<td>28</td>
</tr>
<tr>
<td>Weight</td>
<td>Kg</td>
<td>9.9</td>
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<tr>
<td>Overall dimensions</td>
<td>mm</td>
<td>Ø 120 x 688</td>
</tr>
<tr>
<td>Leakage dose at 1 m at full output</td>
<td>mSv/h</td>
<td>&lt; 2.0</td>
</tr>
</tbody>
</table>
SITEX & XS DIRECTIONAL

SITE-X D1802

Technical specifications:

Output voltage range : 60 to 180 kV
Output voltage selection step : 1 kV
Tube current range : 1 to 3 mA
Tube current at full output : 2 mA
Tube current selection step : 0.1 mA
Maximum useful angle of X-ray beam: 60 x 40 (°)
Dimensions of optical focal spot : 0.8 x 0.8 mm
Inherent filtration : 3.5 mm (Al)
Working cycle at 40°C ambient temp.: 80 %
Operating temperature range : -25 to +70 °C
Storage temperature range : -40 to +80 °C
SF6 insulation pressure at 20°C : 5.0 kg/cm²
Weatherproof level : IP65
Penetration into steel at max. power: 24 mm Fe
(FFD=700mm/Film D7pb/D=1.5/T=20 min)
Guard rings : yes
Position of interconnection socket : Axial/Radial
Maximum leakage dose at 1 m : 10 mSv/h
Microcontroller HT measurement : yes circuit (kV & mA)
Overall dimensions : ø 240 x 573 mm
Total weight : 9.5 kg

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
SITEX & XS DIRECTIONAL

SITE-X D2258

Technical specifications:

- **Output voltage range**: 70 to 225 kV
- **Output voltage selection step**: 1 kV
- **Tube current range**: 1 to 8 mA
- **Tube current at full output**: 8 mA
- **Tube current selection step**: 0.1 mA
- **Maximum useful angle of X-ray beam**: 60 x 40 (°)
- **Dimensions of optical focal spot**: 2.5 x 2.5 mm
- **Inherent filtration**: 2.5 mm (Al) + 0.4 mm (Ni)
- **Working cycle at 40°C ambient temp.**: 100 %
- **Operating temperature range**: -25 to +70 °C
- **Storage temperature range**: -40 to +80 °C
- **SF6 insulation pressure at 20°C**: 5.0 kg/cm²
- **Weatherproof level**: IP65
- **Penetration into steel at max. power**: 49 mm Fe

(FFD=700mm/Film D7pb/D=1.5/T=20 min)

- **Guard rings**: yes
- **Position of interconnection socket**: Axial/Radial
- **Maximum leakage dose at 1 m**: 10 mSv/h
- **Microcontroller HT measurement circuit (kV & mA)**: yes
- **Overall dimensions**: ø 346 x 771 mm
- **Total weight**: 28 kg

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 11.09.01*
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. SITEX and SITEXS are among the lightest portable X-ray generators available on the market.

SITE-X D3006

Technical specifications:
- Output voltage range: 90 to 300 kV
- Output voltage selection step: 1 kV
- Tube current range: 1 to 6 mA
- Tube current at full output: 6 mA
- Tube current selection step: 0.1 mA
- Maximum useful angle of X-ray beam: 60 x 40 (°)
- Dimensions of optical focal spot: 2.5 x 2.5 mm
- Inherent filtration: 2.5 mm (Al) + 0.4 mm (Ni)
- Working cycle at 40°C ambient temp.: 100%
- Operating temperature range: -25 to +70 °C
- Storage temperature range: -40 to +80 °C
- SF6 insulation pressure at 20°C: 5.0 kg/cm²
- Weatherproof level: IP65
- Penetration into steel at max. power: 69 mm Fe

SITE-X C1802S

Technical specifications:
- Output voltage range: 50 to 180 kV
- Output voltage selection step: 1 kV
- Tube current range: 1 to 3 mA
- Tube current at full output: 2 mA
- Tube current selection step: 0.1 mA
- Maximum useful angle of X-ray beam: 360x (2 x 20) (°)
- Dimensions of optical focal spot: diam. 4 x 0.5 mm
Inherent filtration : 3.5 mm (Al)
Working cycle at 40°C ambient temp.: 80 %
Operating temperature range : -25 to +70 °C
Storage temperature range : -40 to +80 °C
SF6 insulation pressure at 20°C : 5.0 kg/cm²
Weatherproof level : IP65
Penetration into steel at max. power: 17 mm Fe (FFD=700mm/Film D7pb/D=1.5/T=20 min)
Guard rings : yes
Position of interconnection socket : Radial
Maximum leakage dose at 1 m : 2 mSv/h
Microcontroller HT measurement circuit (kV & mA) : yes
Overall dimensions : ø 250 x 653 mm
Total weight : 9.5 kg

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 11.10.01

SITEX & XS PANORAMIC
SITE-X C3005

Technical specifications:
Output voltage range : 90 to 300 kV
Output voltage selection step : 1 kV
Tube current range : 1 to 5 mA
Tube current at full output : 5 mA
Tube current selection step : 0.1 mA
Maximum useful angle of X-ray beam: 360 x (2x20 (°)
Dimensions of optical focal spot : ø 5 x 0.8 mm
Inherent filtration : 2.5 mm (Al) + 0.4 mm (Ni)
Working cycle at 40°C ambient temp.: 100 %
Operating temperature range : -25 to +70 °C
Storage temperature range : -40 to +80 °C
SF6 insulation pressure at 20°C : 5.0 kg/cm²
Weatherproof level : IP65
Penetration into steel at max. power: 60 mm Fe (FFD=700mm/Film D7pb/D=1.5/T=20 min)
Guard rings : yes
Position of interconnection socket : Axial/Radial
Maximum leakage dose at 1 m: 10 mSv/h
Microcontroller HT measurement circuit (kV & mA): yes
Overall dimensions: ø 346 x 831 mm
Total weight without guard rings: 32 kg

Directional and panoramic X-ray 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
- Operating T° range from -25°C to +55°C
- Weight: 14 kg
- Automatic preheating time

Product code 11.10.02

PANORAMIC X-RAY GENERATORS FOR CRAWLERS

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. SITEX and SITEXS are among the lightest portable X-ray generators available on the market.

Control unit for crawlers CCU186

Fitting a complete control unit, including display and keypad, to a crawler needlessly exposes components which are more fragile by nature to the extreme intra-tube conditions. The ICM solution is an independent pocket-size remote control unit: the CCU186R. This provides the operator/CCU186 interface only when the radiological parameters of the campaign are being programmed. As soon as the preheating has been completed and the kVs and mAs have been keyed in, the remote control is disconnected: the crawler is then ready.

Product code 11.11.00
COLENTA NDT FILM-Processors  
(for processing Industrial X-Ray films)

COLENTA INDX 900

<table>
<thead>
<tr>
<th>Processing applications</th>
<th>All type of Industrial X-Ray films</th>
</tr>
</thead>
<tbody>
<tr>
<td>Film thickness</td>
<td>min. 0,10 mm</td>
</tr>
<tr>
<td>Material width</td>
<td>min. 6 cm - max. 36 cm</td>
</tr>
<tr>
<td>Material length</td>
<td>min. 10 cm</td>
</tr>
<tr>
<td>Time in Developer</td>
<td>min.30 sec max. 150 sec</td>
</tr>
<tr>
<td>Intake Speed</td>
<td>38 cm/min 8 cm/min</td>
</tr>
<tr>
<td>Cycle Time</td>
<td>2,7 min (162 sec) 13,6 min (816 sec)</td>
</tr>
<tr>
<td>Tank capacity-Developer</td>
<td>2,6 L</td>
</tr>
<tr>
<td>Fixer</td>
<td>2,5 L</td>
</tr>
<tr>
<td>Wash water</td>
<td>3 L</td>
</tr>
<tr>
<td>Solution heating</td>
<td>variable in a range of 18°C - 43°C (350W Inline Heater)</td>
</tr>
<tr>
<td>Dryer</td>
<td>warm air</td>
</tr>
<tr>
<td>Replenishment</td>
<td>fully automatic.</td>
</tr>
<tr>
<td>Water supply</td>
<td>2-way magnetic valve, with 3/4&quot; hose connection by using a DVGW approved system-separating device or pipe-separating device.</td>
</tr>
<tr>
<td>Wash water flow rate</td>
<td>1,5 ltr/min when film is in process</td>
</tr>
<tr>
<td>Wash water supply pressure</td>
<td>3 - 10 bar</td>
</tr>
<tr>
<td>Wash water supply</td>
<td>filtered at a temperature of 10°C - 15°C</td>
</tr>
<tr>
<td>Weight</td>
<td>Empty 58 kg</td>
</tr>
</tbody>
</table>

Product code 12.01.00

With solution 66 kg

COLENTA INDX 43 2.0b

| Film thickness              | 0,10 mm - 0,18mm                   |
| Material width              | min. 7,5 cm max. 43 cm             |
| Material length             | min. 12 cm                         |
| Time in Developer           |                                     |
| Developer                   |                                     |
| [sec]                       |                                     |
| Cycle Time                  |                                     |
| (dry to dry)                |                                     |
| [sec]                       |                                     |
| Intake speed                |                                     |
| [cm/min]                    |                                     |
| min 25                      | 97                                 |
| max 170                     | 659                                |
| Tank capacity – Developer   | 7,0 L (incl Developer filter system) |
| Fixer                       | 6,5 L                              |
| Washwater                   | 6,5 L                              |
| Solution heating             | adjustable in a range of 18°C - 43°C (separate inline 350W heaters) |
| Dryer                       | warm air adjustable in a range of 18°C - 55°C |
Replenishment: fully automatic. Replenishment is microprocessor controlled and calculated from information received from sensors measuring the width and length of material entering the processor. Replenishment cycles are adjustable.

Wash water distribution: built in 2-way magnetic valve
Wash water flow rate: 2.5 ltr/min when film is processed
Wash water supply pressure: 3 - 10 bar
Wash water supply: filtered at a temperature of 8°C - 15°C with 3/4” hose connection
Wash water drain: 32mm (5/4 inch) hose or tube
Weight: Empty 150 kg

Product code: 12.01.01

Wash water distribution: built in 2-way magnetic valve
Wash water flow rate: 2.5 ltr/min when film is processed
Wash water supply pressure: 3 - 10 bar
Wash water supply: filtered at a temperature of 8°C - 15°C with 3/4” hose connection
Wash water drain: 32mm (5/4 inch) hose or tube
Weight: Empty 150 kg

Film thickness: 0.10 mm - 0.18 mm
Material width: min. 7.5 cm max. 43 cm
Material length: min. 10 cm

Film processor INDX 43/3MW

<table>
<thead>
<tr>
<th>Time in Developer [sec]</th>
<th>Cycle Time (dry to dry) [min]</th>
<th>Intake speed [cm/min]</th>
</tr>
</thead>
<tbody>
<tr>
<td>32</td>
<td>2’36”</td>
<td>77</td>
</tr>
<tr>
<td>176</td>
<td>14’18”</td>
<td>14</td>
</tr>
</tbody>
</table>

Film processor INDX 43/5MW

<table>
<thead>
<tr>
<th>Time in Developer [sec]</th>
<th>Cycle Time (dry to dry) [min]</th>
<th>Intake speed [cm/min]</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>2’08”</td>
<td>115,4</td>
</tr>
<tr>
<td>165</td>
<td>11’45”</td>
<td>21</td>
</tr>
</tbody>
</table>

Tank capacity – Developer: 9 L 11L (incl Devel. filter)
Fixer: 8 L 10L
Washwater: 8 L 10L
Solution heating (Fix and DEV): adjustable in a range of 18°C - 43°C (separate inline 350W/550W heaters)
Dryer: warm air adjustable in a range of 18°C - 55°C
Replenishment: fully automatic
Wash water distribution: built in 3-way magnetic valve

INDX 43/3MW
INDX 43/5MW
Wash water flow rate: 2,5 ltr/min when film is processed
Wash water supply pressure: 3 - 10 bar
Wash water supply: filtered at a temperature of 8°C - 15°C with 3/4" hose connection
Wash water drain: 32mm (5/4inch) hose or tube
Weight: Empty 132 kg, Empty 150 kg, With solution 153 kg, With solution 179.5 kg

COLENTA INDEX 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: 36cm/14inch
Min Film Length: 10cm/4inch
Tank body PA: Wash 3,4 Litre
Dryer Temperature: approx 50°C
Water replenishment: automatic bottle feed
Capacity at cycle time in-feed speed
from: 212 sec. 15 cm/min
  to: 70 sec. 45 cm/min
(adjustable in 5cm/min steps)
Electr. Power Supply: 230V, N, 50/60 Hz, 1200W
Water Supply: by supplied water bottle

Product code 12.01.02
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

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 HPX-1 Digital System
Product Specifications
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 cm)
- Width : 23 in. (58.4 cm)
- Depth : 26 in. (66 cm) with feed tray removed, 35 in. (88.9 cm) with tray in operating position
- Weight : 120 lb (54.4 kg) (or less)

Phosphor Plates Supported
- 70 mm to 14-inch (35 cm) width, 8-inch (20 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 x 17 in. / 35 x 43 cm plate, depending on resolution setting

Erase Rate, Automatic High Intensity
- 0.2 - 2.0 in. (0.5 - 5 cm) per second Power
- 100-240 V ~ 50/60 Hz, 12.5 – 8 A - automatic sensing Also Included

Power
- 100 - 240 V ~ 50/60 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
- Phosphor side up to prevent damage

Connectivity
- Ethernet

Air Flow
- Filtered to keep out dirt and dust
**Erase**
- LED erase lamps for high efficiency and low power consumption

**Maintenance**
- User serviceable parts

**Calibration**
- Fully factory calibrated and ready to operate

**Scan Resolution**
- 25 microns, 50 micron & 100 micron

**Plate Sizes**
- Maximum 6-inch width x maximum 96-inch length

**Software**
- INDUSTREX (installed and tested prior to shipping) Windows 7 Ultimate 64 bit

**Image Filter**
- Custom EDGE image display filter. 10 predefined filters including (2) specifically for gamma work. Filters enhance the display and the original image is always kept on file.

**Monitor**
- Laptop, 3MP (color) or 5MP (monochrome)

**Chassis**
- Rigid aluminium construction with vibration damping feet

**Power**
- 100-240 VAC (Automatic Level Sensing)

**Battery**
- 24 volt standard tool battery

**Battery Life**
- 4 hr. standby/45 min. active scanning and erasing per battery

**Warranty**
- 1 year parts and labor

**Installation**
- Ships complete and can be quickly and easily installed in less than 5 minutes on-site by customer

**Dimensions**
- 16-inches (41cm) x 13-inches (33cm) x 12-inches (31cm).

**Weight**
- 35 lbs (16 kg)

---

**RT Film Digitizing**

**MII-900 Plus**

Microtek NDT/ RT Film Digitizing System is an all-in-one imaging solution developed exclusively for radiographic inspection industry.

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

<table>
<thead>
<tr>
<th><strong>Scanner Type</strong></th>
<th>Sheet-fed film digitizer</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Image Sensor Type</strong></td>
<td>CCD</td>
</tr>
<tr>
<td><strong>Resolution</strong></td>
<td>2400 x 2400 dpi</td>
</tr>
<tr>
<td><strong>Light Source</strong></td>
<td>LED</td>
</tr>
<tr>
<td><strong>Scanning Area</strong></td>
<td>14&quot; x 200&quot; (355.6 x 5080 mm)</td>
</tr>
<tr>
<td><strong>Scanning Speed</strong></td>
<td>18 seconds at 300 dpi per 14&quot; x 17&quot; film</td>
</tr>
<tr>
<td><strong>Optical Density</strong></td>
<td>4.7 Dmax</td>
</tr>
<tr>
<td><strong>Dynamic Range</strong></td>
<td>0.5D ~ 4.5D based on ISO 14096, DS 10.0</td>
</tr>
<tr>
<td><strong>Bit Depth</strong></td>
<td>8 / 16-bit grayscale</td>
</tr>
<tr>
<td><strong>Paper Size</strong></td>
<td>Min: 2.5&quot; x 2.5&quot; (63.5 mm x 63.5 mm)</td>
</tr>
<tr>
<td></td>
<td>Max: 14&quot; x 200&quot; (355.6 x 5080 mm)</td>
</tr>
<tr>
<td><strong>Connectivity</strong></td>
<td>Hi-Speed USB (USB 2.0)</td>
</tr>
<tr>
<td><strong>Scorable Media Types</strong></td>
<td>Transparent</td>
</tr>
<tr>
<td><strong>Supported Film Types</strong></td>
<td>8.5&quot; x 4.5&quot;, 12&quot; x 3 1/3&quot;</td>
</tr>
<tr>
<td><strong>OS Support</strong></td>
<td>Windows XP/ Windows 7 / 8 / 10 (ScanWizard Industry)</td>
</tr>
</tbody>
</table>
Dimensions: (L x W x H) 10.2" x 18.7" x 9.3"/ 260 x 474 x 235 mm
Weight: 19.82 lbs (9 kg)
Certifications: CE, FCC, BSMI, ETL, CCC, RoHS
Power Source: AC 100V ~ 240V, 47 ~ 63 Hz, 1.5A Max
Power Consumption: 54.9 Watts

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 x 8

Product code 22.03.00
### Pipeline Crawler IRIS 6

IRIS 6 X-Ray Crawler for onshore / offshore pipes

diameter ranging from 6" to 18" N.D.

---

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pipeline diameter range</td>
<td>6 to 18’</td>
</tr>
<tr>
<td>Length without the X-ray head</td>
<td>695 mm</td>
</tr>
<tr>
<td>Speed moving</td>
<td>13m/mn</td>
</tr>
<tr>
<td>Accepted climbing</td>
<td>30% - 16,6°</td>
</tr>
<tr>
<td>Maximum bend</td>
<td>10d</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>40° to +80°C</td>
</tr>
<tr>
<td>Motor propulsion</td>
<td>2</td>
</tr>
<tr>
<td>Propulsion battery power/ capacity</td>
<td>24V / 4 Ah</td>
</tr>
<tr>
<td>X-ray battery power/ capacity</td>
<td>48V / 7 Ah</td>
</tr>
<tr>
<td>Propulsion wheels</td>
<td>Clinging rubber</td>
</tr>
<tr>
<td>X-ray wheels</td>
<td>Orthogonal</td>
</tr>
<tr>
<td>Distance autonomy (propulsion)</td>
<td>4km</td>
</tr>
<tr>
<td>Exposure autonomy (X-ray)</td>
<td>50’ According X-ray generator</td>
</tr>
<tr>
<td>Positioning accuracy</td>
<td>+/- 5 mm</td>
</tr>
<tr>
<td>Adjustable exposure</td>
<td>0 à 999 s</td>
</tr>
<tr>
<td>Safety exposure delay</td>
<td>10s</td>
</tr>
<tr>
<td>Pilot Command Caesium 137</td>
<td>740MBq 20mCi</td>
</tr>
<tr>
<td>Pilot Command magnetic</td>
<td>Magnetic System</td>
</tr>
</tbody>
</table>

**Panoramic X-Ray Generator**

| Output rating Kv                     | 180 : 160                   |
| Tube current mA                      | 2 : 2                       |
| Focal spot size mm                   | 4 x 0.5 : 4 x 0.5           |

**Dimensions**

| Dimensions mm                       | 124 x 580 : 120 x 688       |
| Weight                              | 9.5kg : 9.9kg               |

Product code 13.01.00

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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”
Length without the ray head : 695 mm
Speed moving : 13m/mn
Accepted climbing : 30% - 16,6°
Maximum bend : 10d
Operating temperature : 40° to +80°C
Motor propulsion : 2
Propulsion battery power/ capacity : 24V / 4 Ah
Propulsion wheels : Clinging rubber
Distance autonomy (propulsion) : 6km
Positioning accuracy : +/- 5 mm
Adjustable exposure : 0 à 999 s
Safety exposure delay : 10s
Pilot Command Caesium 137 : 740MBq 20mCi
Pilot Command magnetic : Magnetic System

**Gamma-ray projector**

Brand : IPSI
Model : G610
Class : A
Capacity : 740 GBq 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 : 12 to 60'
Length without the X-ray head : 2700 mm
Speed moving : 13m/mn
Accepted climbing : 40% - 22.2°
Maximum bend : 10d
Operating temperature : 40° to +80°C
Motor propulsion : 2
Propulsion battery power/ capacity : 24V / 36 Ah
X-ray battery power/ capacity : 120V / 18 Ah
Propulsion wheels : clinging rubber
X-ray wheels : Orthogonal
Distance autonomy (propulsion) : 4km
Exposure autonomy (X-ray) : 120’ According X-ray generator
Positioning accuracy : +/- 5 mm
Adjustable exposure : 0 à 999 s
Safety exposure delay : 10s
Pilot Command Caesium 137 : 740MBq 20mCi
Pilot Command magnetic : Magnetic System

Panoramic X-Ray Generator

Output rating kV : 180 200 225 250 300 320
Tube current mA : 2 4 4 4 3 3
Focal spot size : 5 x 0.8 mm
Working ambient temperature : -25°C to 70°C
Dimensions : 248 x 757 mm
Weight : from 25 to 27kg
PIPELINE CRAWLER IRIS 10

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

Pipeline diameter range : 16 to 60’ According the Gamma-ray projector
Length without the X-ray head : 2700 mm
Speed moving : 13m/mn
Accepted climbing : 40% - 22,2°
Maximum bend : 10d
Operating temperature : 40° to +80°C
Motor propulsion : 2
Propulsion battery power/ capacity : 24V / 36 Ah
Propulsion wheels : clinging rubber
Distance autonomy (propulsion) : 6km
Positioning accuracy : +/- 5 mm
Adjustable exposure : 0 à 999 s
Safety exposure delay : 10s
Pilot Command Caesium 137 : 740MBq 20mCi
Pilot Command magnetic : Magnetic System
Gamma-ray projector : ALL TYPE OF Ir192 AND Se75
Brand : QSA Global : GAMMA-RAY PROJECTOR
Model : 880 SENTINEL : ALL TYPE
Class : B (U) : B (U)
Capacity : 3.7 TBq 100Ci : 3.7 TBq 100Ci

Product code 13.02.01
MANUAL FILM PROCESSING UNIT

*Product code 02.01.00*

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

MANUAL FILM PROCESSING UNIT

*Product code 02.02.00*

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

PROCESSING TANKS

*Product code 02.03.00*

PVC tanks take sheet films up to 35cm wide and 48cm long.
10 liters, 20 liters, 40 liters
X-RAY FILM DRYER

DRYING TYPE 10 OR 25 HANGERS
Top load
1000 W Resistance (2000 W on request)
dryer for X-ray films
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 10mm
Drier 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 X 550 X 1000 mm
Dryer forming work plan
Product code 02.09.00

Film Processing   Accessories
Film Hanger
Channel Type film hangers are used for manual processing of x-ray film.
Specifications
Material: 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: Spot Welding
Product code 02.05.00
DARKROOM SAFELIGHT

The Darkroom Safelight is designed for use in X-Ray darkrooms, emitting light with a wavelength of 640nm.

*Product code 02.06.00*

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 X 15
- Cutter size light cm 51 X 30

*Product code 02.06.00*

TIMERS

Darkroom Alarm Timers

*Product code 02.07.00*

X-RAY FILM VIEWER 10 x 24

Structure in steel sheet painted with fire, lighting by halogen lamp 1000 w.

- Dual cooling fan.
- Tinted windows spaced.
- Diffuser monochrome white.

Independent command:

- Switch for power supply and ventilation
- Pedal to switch on lights and intensity

VIEWING AREA : 10 X 24
DIMENSION CM : 37 X 20 X 22
NUMBER OF TUBES : 1 – 1000 W
LIGHT SELECTION : 1- 10 X 24
DENSITY : 3.7

*Product code 03.01.00*

X-RAY FILM VIEWER 10 x 48

Structure in steel sheet painted with fire, lighting by halogen lamps 3x750 w.

- Dual cooling fan.
- Tinted windows spaced.
- Diffuser monochrome white.

Independent command:

- Switch for power supply and ventilation
- Pedal to switch on lights and intensity

VIEWING AREA : 10 X 48
DIMENSION CM : 63 X 20 X 22
NUMBER OF TUBES : 3 – 750 W
LIGHT SELECTION : 1- 10 X 48
DENSITY : 3.8

*Product code 03.02.00*
### LEADS FILM VIEWER 10 x 24

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>UM</th>
<th>Securities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated voltage</td>
<td>V</td>
<td>230</td>
</tr>
<tr>
<td>Maximum power</td>
<td>W</td>
<td>77</td>
</tr>
<tr>
<td>Frequency</td>
<td>Hz</td>
<td>50</td>
</tr>
<tr>
<td>Fuses 5X20</td>
<td>I</td>
<td>T 400 mA</td>
</tr>
<tr>
<td>Class of insulation</td>
<td>I</td>
<td></td>
</tr>
<tr>
<td>Laser product class</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Maximum luminance</td>
<td>Cd/mq</td>
<td>90,000</td>
</tr>
<tr>
<td>high density</td>
<td></td>
<td>(about 3.9 D)</td>
</tr>
<tr>
<td>Noise less than dBA</td>
<td></td>
<td>85</td>
</tr>
<tr>
<td>Temperature range of use</td>
<td>°C</td>
<td>10 – 40</td>
</tr>
<tr>
<td><strong>Characteristics</strong></td>
<td></td>
<td><strong>Securities</strong></td>
</tr>
<tr>
<td>Altitude</td>
<td>M</td>
<td>2000</td>
</tr>
<tr>
<td>Color Temperature °K</td>
<td></td>
<td>6000</td>
</tr>
<tr>
<td>Relative humidity Rh</td>
<td></td>
<td>80%</td>
</tr>
<tr>
<td>External Dimensions cm</td>
<td></td>
<td>21 x 38 x 19,5</td>
</tr>
<tr>
<td>Size reading area cm</td>
<td></td>
<td>10 x 2</td>
</tr>
<tr>
<td>Cable length ped cm</td>
<td></td>
<td>265</td>
</tr>
<tr>
<td>Length of supply cable cm</td>
<td></td>
<td>185</td>
</tr>
<tr>
<td>Weight kg</td>
<td></td>
<td>6.5</td>
</tr>
<tr>
<td>Degree of protection IP</td>
<td></td>
<td>20</td>
</tr>
<tr>
<td><strong>Product code 03.03.00</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### LEADS FILM VIEWER 10 x 48

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>UM</th>
<th>Securities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated voltage</td>
<td>V</td>
<td>230</td>
</tr>
<tr>
<td>Maximum power</td>
<td>W</td>
<td>136</td>
</tr>
<tr>
<td>Frequency</td>
<td>Hz</td>
<td>50</td>
</tr>
<tr>
<td>Fuses 5X20</td>
<td>I</td>
<td>T 400 mA</td>
</tr>
<tr>
<td>Class of insulation</td>
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<tr>
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<td></td>
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</tr>
<tr>
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<td></td>
<td>85</td>
</tr>
<tr>
<td>Temperature range of use</td>
<td>°C</td>
<td>10 – 40</td>
</tr>
<tr>
<td><strong>Characteristics</strong></td>
<td></td>
<td><strong>Securities</strong></td>
</tr>
<tr>
<td>Relative humidity Max</td>
<td>Rh</td>
<td>80%</td>
</tr>
<tr>
<td>Altitude</td>
<td>M</td>
<td>2000</td>
</tr>
<tr>
<td>Color Temperature °K</td>
<td></td>
<td>6000</td>
</tr>
<tr>
<td>External Dimensions cm</td>
<td></td>
<td>21 x 62 x 19,5</td>
</tr>
<tr>
<td>Size reading area cm</td>
<td></td>
<td>10 x 48</td>
</tr>
<tr>
<td>Cable length ped cm</td>
<td></td>
<td>265</td>
</tr>
<tr>
<td>Length of supply cable cm</td>
<td></td>
<td>185</td>
</tr>
<tr>
<td>Weight kg</td>
<td></td>
<td>10.5</td>
</tr>
<tr>
<td>Degree of protection IP</td>
<td></td>
<td>20</td>
</tr>
<tr>
<td><strong>Product code 03.04.00</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Portable LED Film Viewers**

Higher Intensity than Conventional Units

- Luminance: 103,000Cd/M2 (323,420Lux)
- Uniformity: 0.95, Diffusion factor: 0.95
- Weight less than: 2.5 Kg
- 12 hours continues maximum luminance, Surface temperature rise≤15°C
- Unlimited dimmer from 5%-100%

**Product code 03.05.00**
## KOWOLUX M Series mobile NDT film viewers with Power LED

### Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>KOWOLUX M1</th>
<th>KOWOLUX M2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product code</strong></td>
<td>Product code 03.06.00</td>
<td>Product code 03.07.00</td>
</tr>
<tr>
<td>Luminance, max.</td>
<td>100,000 Cd/m²</td>
<td>100,000 Cd/m²</td>
</tr>
<tr>
<td>Film density, max.</td>
<td>4.0 D</td>
<td>4.0 D</td>
</tr>
<tr>
<td>Control range</td>
<td>0.2 ... 100 %</td>
<td>0.2 ... 100 %</td>
</tr>
<tr>
<td>Viewing screen</td>
<td>225 x 80 mm</td>
<td>450 x 80 mm</td>
</tr>
<tr>
<td>(for films 10x24 cm)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rated power</td>
<td>70 W</td>
<td>140 W</td>
</tr>
<tr>
<td>Power supply</td>
<td>100 ... 240 V, 50/60 Hz</td>
<td>100 ... 240 V, 50/60 Hz</td>
</tr>
<tr>
<td></td>
<td>24 V DC, 90 W</td>
<td>24 V DC, 160 W</td>
</tr>
<tr>
<td>Dimensions</td>
<td>325 x 62 x 150 mm (WxDxH) - without carrying handle</td>
<td>552 x 62 x 150 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>2.9 kg</td>
<td>4.5 kg</td>
</tr>
<tr>
<td>Lifetime of LEDs</td>
<td>40,000 h</td>
<td>40,000 h</td>
</tr>
<tr>
<td>Color temperature of LEDs</td>
<td>5,000 K</td>
<td>5,000 K</td>
</tr>
<tr>
<td>Housing</td>
<td>anodized aluminum profile with cooling fins completely closed to environment with gaskets (IP54)</td>
<td></td>
</tr>
<tr>
<td>Viewing screen</td>
<td>crystal glass with 95 percent translucency, thermally cured</td>
<td></td>
</tr>
</tbody>
</table>

### Attachment masks:

- M1 – for films 6x24 cm [Product code 03.06.01](#)
- M1 – hole Ø 30 mm [Product code 03.06.02](#)
- M1 – Iris Ø 4 ... 75 mm [Product code 03.06.03](#)
- M1 – 30 mm slit [Product code 03.06.04](#)
- M2 – for films 10x40 cm [Product code 03.07.01](#)
- M2 – for films 10x24 cm [Product code 03.07.02](#)
- M2 – for films 7x48 cm [Product code 03.07.03](#)
- M2 – for films 6x48 cm [Product code 03.07.04](#)
- M2 – for films 6x40 cm [Product code 03.07.05](#)
- M2 – for films 6x24 cm [Product code 03.07.06](#)
- M2 – hole Ø 30 mm [Product code 03.07.07](#)
Digit-X Densitometer
Density Range: 0.00 to 4.00 D
Fibre Optic Aperture: 3mm
Resolution: 0.010D
Accuracy: 0.050D
Repeatability: 0.020D
Drift: 0.0005/min
Power Supply: 9v PP3 Battery
Battery Life: Alkaline 2500 Hrs
Size: 210x60x40mm
Weight: 175kg

Product code 03.06.00

301 Densitometer
Provides highly repeatable and accurate measurements of black and white film densities.
Large LED numerals can be read easily in bright or dim light.
Product Features:
- Measuring range: 0-5.0D with 2 and 3mm apertures;
- 0-4.0D with 1mm aperture
- Scale factor (slope) stability: ±1% per 6 months
- RS232 output (optional)

Product code 03.07.00

331C Portable Densitometer
Designed for black and white film measurement applications where portability is required. Self-contained light table accommodates film up to 11 inches wide.
Product Features:
- Measuring range: 0-3.5D (1mm) 0-4.0D (2mm)
- Battery operated
- Scale factor (slope) stability: ±1% per 6 months
- Certified step wedge

Product code 03.08.00
LEAD MARKERS
Lead markers numbers 8x2 mm
Product code 01.02.00 to 01.02.09
Lead markers letters 8x2 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 x 24, 6 x 40, 6 x 48, 7 x 40, 7 x 48
9 x 12, 10 x 20, 10 x 24, 10 x 40, 10 x 48
13 x 18, 15 x 40, 18 x 24, 20 x 30, 24 x 30
30 x 40, 35 x 43cm.

PAIR PACK LEAD SCREENS

PACK INTERMEDIATE LEAD SCREENS
0,02, 0,05, 0,10, 0,15, 0,20, 0,25mm
(Format (cm) 6 x 24, 6 x 40, 6 x 48, 7 x 40,
7 x 48, 9 x 12, 10 x 20, 10 x 24, 10 x 40, 10 x 48
13 x 18, 15 x 40, 18 x 24, 20 x 30, 24 x 30
30 x 40, 35 x 43.

RIGID CASSETTES
The x-ray cassettes are produced in alloy aluminium and special material, the edges are in plastic and aluminium.

MASKING TAPE
Black PVC Tape 25mm X 50m
White fibrin Tape 19mm X 50m
White nuclear K 226 Tape 25mm X 55m
Other sizes available on request

MARKALL BALL PAINT FIXOLID
Ball Paint Marker Red / White / Yellow
RADIATION SAFETY

Radiation Dose Rate Monitors

TRACERCO™ T402 and T402HR

**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.

**Detector:**
- Single halogen, energy compensated Geiger Muller tube.

**Case material:**
- Robust, chemical resistant polymers.

**Dose rate range:**
- T402: Digital numeric display 0-100 μSv/h
- T402HR: Digital numeric display 0-100 mSv/hr.

**Accumulated dose range:**
- T402: Digital numeric display 0-10,000 μSv.
- T402HR: Digital numeric display 0-100 mSv.

**Peak radiation dose rate:**
- T402: Digital numeric display 0-10,000 μSv/hr.
- T402HR: Digital numeric display 0-100 mSv/hr.

**Sensitivity data:**
- T402: 1.7 cps per uSv/hr.
- T402HR: 0.7 cps per uSv/hr.

**Variation with battery voltage:**
- Less than 1%.

**Battery life:**
- 100-hours typically with background radiation.

**Low battery Indication:**
- On 4 hours available life left.

**Battery:**
- Standard 9V PP3 battery.

**Ingress protection Rating:**
- Rated IP65 (dust tight and will withstand water jets).

**Humidity range:**
- 0 to 95%.

**Weight:**
- 500 grammes.

**Standard Compliance:**

**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:**
- 0-2mSv, 0-5mSv, 0-50mSv

**Detector:**
- Fiber-Electrometer mounted in an Electrically Conductive Plastic Ion Chamber

**Detector Housing:**
- Very low permeability plastics - Hermetically-Sealed

**Accuracy:**
- +/- 10% of true exposure

**Rate Response:**
- Dose rate independent for Gamma and X-Ray

**Electrical Leakage:**
- Less than 1.0% of full scale for 24 hours at 50 C

**Relative Humidity:**
- Up to 90%

**Dimensions:**
- 4.5” (12.4 cm) Length X .6” (1.5 cm) Diameter

**Weight:**
- 1.0 oz. (25 grams)
Dosimeter Charger
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: 1 μSv - 9.99 Sv or 0.1 mrem - 999 rem
  - dose rate: 5 μSv/h - 3 Sv/h or 0.5 mrem/h - 300 rem/h
- Calibration: better than ±5% (Cs-137, 662 keV at 2 mSv/h), Hp(10)
- Energy response: Hp(10), 55 keV - 3 MeV, better than ±25%, up to 6 MeV, better than ±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.

<table>
<thead>
<tr>
<th>6150AD Models</th>
<th>Additional functions</th>
<th>Ranges for dose rate and photon energy</th>
</tr>
</thead>
<tbody>
<tr>
<td>6150AD1</td>
<td>no</td>
<td>High range models: analog: 1 μSv/h - 1000 mSv/h digital: 0.1 μSv/h - 999 mSv/h »useful«: 0.2 mSv/h - 999 mSv/h 45 keV - 3 (H:2.6) MeV</td>
</tr>
<tr>
<td>6150AD5</td>
<td>yes</td>
<td>Low range models: analog: 0.1 μSv/h - 10 mSv/h digital: 0.01 μSv/h - 9.99 mSv/h »useful«: 2 μSv/h - 9.99 mSv/h 60 keV - 1.3 MeV</td>
</tr>
</tbody>
</table>

Product code 04.04.00
DOSE RATE METER X5C plus

PTB-approved dose rate measuring range : \(1.0 \, \mu Sv/h \leq H^* (10) \leq 20 \, mSv/h\)
Dose rate indication range : \(0 \, nSv/h \leq H^* (10) \leq 20 \, mSv/h\)
Dose indication range : \(0 \, nSv \leq H \leq 10 \, Sv\)
Energy range : \(40 \, keV \text{ up to } 1.3 \, MeV\)
Dose alarm thresholds : 4, free programmable in the range of
\(1 \, \mu Sv \text{ up to } 10 \, Sv\), acknowledgeable

Dose rate alarm thresholds : 4, free programmable in the range of
\(1 \, \mu Sv/h \text{ up to } 20 \, mSv/h\), acknowledgeable

Temperature range : \(-30^\circ C \text{ up to } +60^\circ C\)
Power supply : 9V battery 6LR61
Acoustic alarm : 80 dB(A) measured in 30 cm distance
Dimensions/Weight : (152 × 82 × 39) mm / approx. 400 g (with battery)

Product code 04.05.00

GammaSmart one/two

The dose 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 GammaSmart 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. The splashproof aluminium housing (IP54) ensures a shielding against electromagnetic influence. An optical battery control indicates the GammaSmart's readiness for use. A plastic clip is used for attaching the instrument to the clothing

Kind of radiation : gamma radiation / X-rays
Detector : GM tube
Sensitivity : counting rate at 3 \(\mu Sv/h\) approx. 6 counts/minute

Ambient background
Radiation : approx. 1 count in 2 minutes
Power supply : 2 batteries 1.5 V (type AAA)
Housing : aluminium
Dimensions/Weight : 72 × 60 × 22 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 H*(10)
- dose rate measurement Range: from 0.01 μSv/h to 100 mSv/h or from 1 μrem/h to 10 rem/h
- dose rate linearity: ± 10 % ±1 digit within the range of 0.1 μSv/h to 100 mSv/h or 10 μrem/h to 10 rem/h
- calibration accuracy: ± 5 % of the reading in 137Cs exposure, at 3 mSv/h, +20°C (68°F)
- energy response: ± 30 % over the range of 48 keV - 1.3 MeV
- angular response: ± 25 % within ± 45 % from the calibration direction at 48 keV
- dose measurement range: from 0.01 μSv to 1 Sv or from 1 μrem to 100 rem
- 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 μSv/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 μSv to 10 Sv (0.1 mrem to 1000 rem)
Display rate: 10 μSv/h to 10 Sv/h (1 mrem/h to 1000 rem/h) or 1 μSv/h to 10 Sv/h (0.1 mrem/h to 1000 rem/h) extended option.

Product code 04.07.00
Dose Rate Alarm Lamp GWL 10m

Kind of radiation: gamma radiation / X-rays (DC installations)
Detector: energy compensated GM tube
Measuring: ambient dose rate equivalent $H^*(10)$
Alarm thresholds: 7.5 µSv/h, 25 µSv/h, 1 mSv/h, 10 mSv/h
Acoustic alarm: > 93 dB(A) measured in 30 cm distance, can be switched off
Energy range: 40 keV up to 1.3 MeV
Temperature range: -30°C up to +60°C
Power supply: accumulator (operating time with fully charged accumulator approx. 48 hours, without acoustic alarm)
Housing: aluminium combined with high impact plastic, protection class IP65
Dimensions/Weight: (120 × 120 × 250) mm 2300 g (with accumulator)

Product code 04.08.00

Radiation Warning Signs

Controlled Area Sign A3, Rigid Plastic
Product code 04.10.00
Radiation Barrier Tape (English).
Heavy duty tape 40mm wide x 50 metres long.
Product code 04.11.00
Tape with enclosed dispenser For 40mm 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 2m long
Product code 04.12.00

Product code 04.12.00
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, 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
- 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" in 1/64" & .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 6mm, Crowns to 6mm by 0.5mm Increments. Check Undercuts/Pits, Porosity, Crowns, All Stainless Steel.

Product code 18.16.00

Pit Gauge

Undercuts/Pits to 0-2mm by 0.2mm Increments. Check Undercuts/Pits, All Stainless Steel.

Product code 18.17.00
Undercuts/Pits to 0.08", Crowns to 0.04" by 0.005" 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” x 4”
- VT (1) Plate @ 0.25”T x 4” x 8”
- UT (1) Plate @ 0.625”T x 4” x 8”
- RT (1) Pipe 4” Sch80 (0.337” wall) x 8” & (1) Plate @ 0.625”T x 4” x 4”

**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”T
- (3) Plates @ 0.625”T
- (1) Tee @ 0.375”T
- (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 Porcessing 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”T
◦(4) Plates @ 0.625”T
◦(1) Tee @ 0.375”T
◦(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

Magnetic Particle / Liquid Penetrant Testing Kit
Standard MT/PT Kit
• Material: Carbon Steel
• Kit Contains: 10 Specimens
  ◦ (8) Plates @ 0.25”T
  ◦ (2) Tee @ 0.25”T
• Flaws: 2 per specimen, 20 total
• Doc Pack Includes C of C, CAD Drawings & Test Sheets
• Carrying Case: 1 @ 6” x 16” x 20”
• Weight: ~35LBS
Product code 19.05.00

Visual Testing Kit (VT Kit)
Standard VT Kit
• Material: Carbon Steel
• Kit contains 10 Specimens: ◦(7) Plates @ 0.25”T
  ◦(3) Tee @ 0.25”T
• Flaws: 2 per specimen, 20 total
• Doc Pack Includes C of C, CAD Drawings & Test Sheets
• Carrying Case: 1 @ 6” x 16” x 20”
Product code 19.06.00
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 1 5/8"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" x 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 x Pressure (psi)
- Accuracy ASME B40.1 standard (grade B) (3-2-3%).

Product code 20.07.00

Venturi
- Replacement compressed air venturi.
- 4cfm 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
PENETRANT TESTING

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 500ml -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 500mL – 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 500mL – 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*
MAGNETIC PARTICLE EQUIPMENTS
Magnets, electro-magnets

ES-X YOKE
The ES-X Ferrous Probe is a compact, lightweight, electro-magnetic particle inspection probe for critical surface crack testing. It is a fast, reliable one-man portable inspection device and it is coated in a bright safety-orange, shock-resistant, epoxy plastic (fiberglass reinforced).

SPECIFICATIONS

<table>
<thead>
<tr>
<th></th>
<th>ESX-220</th>
<th>ESX-115</th>
<th>ESX-24</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Voltage</td>
<td>220 V – 50 Hz</td>
<td>115 V – 50 Hz</td>
<td>24 V – pulsed</td>
</tr>
<tr>
<td>Contact surface of the poles</td>
<td>25 x 25 mm</td>
<td>25 x 25 mm</td>
<td>25 x 25 mm</td>
</tr>
<tr>
<td>spacer poles</td>
<td>From 0 to 300 mm</td>
<td>From 0 to 300 mm</td>
<td>From 0 to 300 mm</td>
</tr>
<tr>
<td>Minimum tear strength</td>
<td>7 kg</td>
<td>7 kg</td>
<td>12 kg</td>
</tr>
<tr>
<td>Overall Length</td>
<td>250 mm</td>
<td>250 mm</td>
<td>250 mm</td>
</tr>
<tr>
<td>Maximum overall height</td>
<td>185 mm</td>
<td>185 mm</td>
<td>185 mm</td>
</tr>
<tr>
<td>Minimum Height</td>
<td>95 mm, removed articulated arms</td>
<td>95 mm, removed articulated arms</td>
<td>95 mm, removed articulated arms</td>
</tr>
<tr>
<td>Weight (with fixed cable 7m)</td>
<td>4.2 kg</td>
<td>4.2 kg</td>
<td>4.2 kg</td>
</tr>
</tbody>
</table>

Product code 16.20.00
Transformer for supplying electromagnets ESX kind: 220V/48V safety, security 220V/24V HWDC 220V/220V of isolation

Product code 16.21.00
Y1 ELECTRO-MAGNETIC YOKE

The Magnaflux Y1 is a lightweight yoke, ergonomically designed and is used for the detection of surface cracking in any ferro-magnetic material.
- 230 Volt 50/60 Hz
- Weight: 2.07kg

Product code 16.22.00

Y6 ELECTRO-MAGNETIC YOKE

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

Y7 ELECTRO-MAGNETIC YOKE

The Y7 Yoke offers either a constant AC field to reveal surface defects or a pulsed DC field for revealing both surface and near-surface defects. Designed for one-person portable inspection, its articulated legs contour to any part shape to assure good contact.

Product code 16.22.02

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

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: 200mm
Height: 177mm handle to leg tip
Poles: 35mm
Weight-Yoke: 3.02 Kg
Weight-With Keeper: 3.34 Kg

Product code 16.24.00
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™ 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 transreflective 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 provide improved near-surface resolution and superior signal-to-noise ratio.

Compression Wave Transducers
- Single crystal compression wave probes are used to measure thickness and detect flaws on plates, bars, forgings and castings.
- Twin crystal compression wave probes are suitable for use on corroded and pitted surfaces, thickness measurement, brazed joint testing and for lamination detecting. High gain and resolution are achieved with a very low cross-talk.

Thickness Gages

27MG
The 27MG 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 45MG 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™ 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 8cm (3.1inch) RGB TFT colour screen with backlight Right/left handed set up

Material Velocity Selection Preloaded via Drop-Down menu, or user defined.
Transducer Dual Element
Pulse Rate Standard transmit pulse rate of 4Hz Adjustible from single shot up to 8Hz
Receiver Bandwidth 1MHz to 15MHz (-3dB points)
Frequency 4MHz, 3mm up to 100mm (0.01in to 3.9in)
Accuracy +/- 0.05mm (0.01in)
RFID Tag Reader • Operates with 13.54MHz passive tags
• Detection range up to 5cm (1.9in)
• Supports ISO/IEC 15693-2, ISO/IEC 18000-3 tag formats
Battery Details • Lithium thionyl chloride primary 3.6V cell
• 100 hours continuous operation with back light restrictions
• Low battery warning
Operating Temperature -10 to +50C (14°F to 122°F)
Weight 1.1Kg (2.4lb)

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 0.1 mm (0.005”) or 0.05 mm (0.002”)
The Triterg Multigauge 5500 has been manufactured to comply with British Standard BS EN 15317:2007, which covers the characterisation 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 178 g
- Overall dimensions (LxWxH) 274x168x36 mm
- Power supply: replaceable batteries (AA type, 8 pieces)
- Operation time at a brightness of 50% (using belt with additional external power supply unit) 12 hours (40 hours)
- Temperature range whilst in operation -10°C up to +50°C
- Temperature range of the test object (in basic design) -20°C up to +720°C
- Measurement unit millimeter
- Measurement range 1.5 – 100 mm
- Precision 0.01 mm
- Accuracy 0.001 mm
- Distance from test object up to 4 mm**
- Transmission rate 4 MHz
- Type of ultrasonic wave transversal
- Gain 80dB
- Dead band at 4 MHz max. 4 μs
- Pulse Repetition Frequency (PRF) at least 150 Hz
- Hz ultrasonic speed 1000-9999 m/sec
- NVRAM 1 MB
- Sampling rate 40 MHz
- 4.3” colour TFT screen with adjustable lighting 480x272 Pixel

* Depending on transducer and time measured
** Depending on the surface coating and probe specifications

Product code: 17.11.00
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 ± 4 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

Equotip Leeb Impact Devices:

Measuring range 1-999 HL
Measuring accuracy ± 4 HL (0.5% at 800 HL)
Resolution 1 HL; 1 HV; 1 HB; 0.1 HRA; 0.1 HRB; 0.1 HRC; 0.1 HS; 1 MPa (N/mm²)
Impact direction Automatic compensation (excl. DL probe)
  › 11.5 Nmm for D, DC, E, S probes
  › 11.1 Nmm for DL probe
Impact energy
  › 3.0 Nmm for C probe
  › 90.0 Nmm for G probe
  › 5.45 g (0.2 ounces) for D, DC, E, S probes
  › 7.25 g (0.26 ounces) for DL probe
Mass of impact body
  › 3.10 g (0.11 ounces) for C probe
  › 20.0 g (0.71 ounces) for G probe
  › Tungsten carbide, 3.0 mm (0.12”) diameter for C, D, DC probes
  › Tungsten carbide, 2.78 mm (0.11”) diameter for DL probe
Ball indenter
  › Tungsten carbide, 5.0 mm (0.2”) diameter for G probe
  › Ceramics, 3.0 mm (0.12”) diameter for S probe
  › Polycrystalline diamond, 3.0 mm (0.12”) diameter for E probe
Operating temperature −10°C to 50°C (14 to 122°F)
# 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 into one simple motion.

**Product code 24.02.00**

### Technical Data

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Testing method</strong></td>
<td>Leeb rebound</td>
</tr>
<tr>
<td><strong>Impact energy</strong></td>
<td>11.5 Nmm (impact body Equotip D)</td>
</tr>
<tr>
<td></td>
<td>11.2 Nmm (impact body Equotip DL)</td>
</tr>
<tr>
<td><strong>Spherical test tip</strong></td>
<td>Tungsten carbide, 3 mm diameter</td>
</tr>
<tr>
<td><strong>Minimum radius of surface curvature</strong></td>
<td>10 mm</td>
</tr>
<tr>
<td><strong>Testing range</strong></td>
<td>150-950 HLD</td>
</tr>
<tr>
<td></td>
<td>250-970 HLD</td>
</tr>
<tr>
<td><strong>Resolution</strong></td>
<td>1 HL; 1 HV; 1 HB; 0,1 HRC; 0,1 HRB; 0,1 HS</td>
</tr>
<tr>
<td><strong>Accuracy</strong></td>
<td>± 4 HL (0,5 % bei 800 HL)</td>
</tr>
<tr>
<td><strong>Dimensions</strong></td>
<td>147,5 x 44 x 20 mm</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>110 g</td>
</tr>
<tr>
<td><strong>Housing material</strong></td>
<td>scratch proofed anodized aluminum</td>
</tr>
<tr>
<td><strong>Display</strong></td>
<td>large, high contrast LCD</td>
</tr>
<tr>
<td><strong>Internal data storage</strong></td>
<td>not applicable</td>
</tr>
<tr>
<td><strong>Communication</strong></td>
<td>not applicable</td>
</tr>
<tr>
<td><strong>PC application</strong></td>
<td>not applicable</td>
</tr>
<tr>
<td><strong>Battery</strong></td>
<td>Lithion, charges through device USB port, over ~ 20,000 impacts on a full charge, intelligent wake-up/sleep mode</td>
</tr>
<tr>
<td><strong>Operating temperature</strong></td>
<td>-10 to +60 °C</td>
</tr>
<tr>
<td><strong>Humidity</strong></td>
<td>max. 90 %</td>
</tr>
</tbody>
</table>
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**

**Technical Data**

- **Testing method**: Leeb rebound
- **Impact energy**: 11 Nmm (Equotip D probe)
- **Spherical test tip**: Tungsten carbide, 3 mm diameter
- **Minimum radius of surface curvature**: 10 mm
- **Testing range**: 150 - 950 HL
- **Resolution**: 1 HL; 1 HV; 1 HB; 0.1 HRC; 0.1 HRB; 0.1 HS; 1 MPa (1 N/mm²)
- **Accuracy**: ± 4 HL (0.5% at 800 HL)
- **Dimensions**: 147.5 x 44 x 20 mm (5.71 x 1.75 x 0.79 in.)
- **Weight**: 110 g
- **Housing material**: scratch proofed anodized aluminum
- **Display**: large, high contrast LCD
- **Internal data storage**: ~ 2,000 readings (non-volatile memory)
- **Communication**: USB, bidirectional, incl. remote control and operator lock through Piccolink software
- **PC application**: Piccolink software included
- **Battery**: Li ion, charges through device USB port, over ~ 20,000 impacts on a full charge, intelligent wake-up/sleep mode
- **Operating temperature**: -10 to +60 °C (14 to 140 °F)
- **Humidity**: 90% max
Leeb Hardness Tester HM-6561

Technical Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display</td>
<td>12.5mm LCD with back light</td>
</tr>
<tr>
<td>Accuracy</td>
<td>Display error ±0.8% at LD=900</td>
</tr>
<tr>
<td>Measuring range</td>
<td>200-900L</td>
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<tr>
<td>Conversion</td>
<td>HL-HRC-HRB-HB-HV-HSD</td>
</tr>
<tr>
<td>Materials</td>
<td>9 different common materials</td>
</tr>
<tr>
<td></td>
<td>With RS232C interface</td>
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<tr>
<td>Memory</td>
<td>250 data can be stored and re-readable</td>
</tr>
<tr>
<td>Impact device</td>
<td>D Will handle the majority of hardness testing applications</td>
</tr>
<tr>
<td>Weight</td>
<td>75g</td>
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<tr>
<td>Power supply</td>
<td>2x1.5V AAA size battery</td>
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<tr>
<td>Dimension</td>
<td>146×65×36mm</td>
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<tr>
<td>Weight (not including batteries)</td>
<td>130g</td>
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<td>Working temperature</td>
<td>-10℃/+50℃</td>
</tr>
</tbody>
</table>

Product code 24.10.00

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.

- 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 kg (3.62 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
MOBILE / MODULAR / MULTIFUNCTIONAL

- Mobile inspection system, suitable from Ø 100 mm to 1400 mm
- Depending on the requirements various carriages and cameras can be used
- Cable drum with 300 m single-wire cable
- Modular design, ideally suited for mobile use and vehicle development
- Light, compact and easy to transport with ergonomic transport handles
- Integrated anti-glare industrial PC with SSD hard drive, suitable for daylight, 31 cm/12,1 inches
- Folding cover with an integrated anti-glare observation monitor, suitable for daylight, 31 cm/12,1 inches
- Inclusive basic software WinCan ProTouch Lite
- Optionally with complete sewer TV inspection software

Product code 23.01.00

31 cm/12.1 inches
capacitive multi-touch

itPC monor
suitable for daylight and anti-glare
brightness: 800 cd/m²
resolution: 1024 × 768 pixels
contrast: 900:1

observation monitor
brightness: 800 cd/m²
resolution: 1024 × 768 pixels
contrast: 900:1

processor
Intel® Core™ i5

hard drive
SSD 240 GB

internal memory
DDR3 4 GB

operating system
Windows 8.1 Professional 64 Bit

USB
2 × 3.0, 6 × 2.0

LAN
RJ-45

analogue video output
(3 x) 2 × S-Video, 1 × RPP® video output

data interface
USB (B)

weight
55 kg (without carriage and camera)
Lifting Equipment

The Handifor

The Handifor electronic mini weighing Scale is perfect for weighing and measuring loads up to 200kg.

Built to a robust specification, the innovative and compact design of the Handifor makes it easy to operate and store:

- Operating life batteries 100h
- Lightweight (ONLY 220g)
- 2x AAA 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!

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
-------|---------------------|-------
LLX1 0.5T | 0.2 | 1.1
LLX1 1T | 0.5 | 1.1
LLX1 2T | 1 | 1.3
LLX1 3.2T | 1 | 1.5
LLX1 5T | 2 | 2.3
LLX1 6.3T | 2 | 2.3
LLX1 12.5T | 5 | 4.3
LLX1 20T | 10 | 7

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.

2018 Version 1.0

IPSI 63
Features:
- 0.25 - 20 Tonnes
- 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°C to +40°C
- Weatherproof and dustproof in accordance with EN 60 529: IP65
- Body in painted aluminium alloy
- Power supply: 3 x 1.5 V, AA or R6 (diameter 14 x 50 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 Tigrrip Crane Weigher TZR (0-100 Tonnes)

The new generation of Load Indicators designed and manufactured by industry experts, Yale. These are quality and extremely 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
Portable 3D scanners: HandySCAN 3D

When accuracy meets portability.
Introducing the HandySCAN 3D laser scanners.

Metrology-grade measurements: accuracy of up to 0.030 mm (0.0012 in.), resolution of up to 0.050 mm (0.002 in.), high repeatability and traceable certificate.

Accuracy in real-life conditions: regardless of environment conditions, part set-up or user

Pipecheck corrosion software module for NDT

To help non-destructive testing service companies and operators make the safest decisions, Creaform has integrated a mechanical damage assessment software module into Pipecheck. Combined with the HandySCAN 3D portable scanners, Pipecheck is the only NDT software on the market to offer a one-click button solution for strain-based assessments.

Dents with stress risers can also be analyzed to separate the impact on pipeline integrity caused the dent from the ones caused by material loss.

- Interaction rules are automatically applied
- Burst pressure calculations (ASME B31G, B31G Modified and Effective Area methods)
- Worst-case-profile and customizable grid resolution for all features
- Feature dimensions (length and width) and maximum depth extracted for all features
- Snipping tool for additional reporting information
- Depths extracted from Creaform's virtual pit gauge tool
- Assessment performed on internal and external surface Of the pipeline or on the true wall thickness

Product code 21.01.00
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