

# NORKA

## PORTABLE X-RAY INSPECTION SYSTEM

**NORKA** is an **unique** portable X-ray inspection system with a minifocus and microfocus constant potential X-ray sources. The voltage can be adjusted from 20 to 160kV. This allows inspecting objects made from different materials with various density and thickness (20-70kV is the optimal voltage for checking mail and thin objects, while 100-160kV works best for baggage and thick objects). One of the NORKA's advantages is its ability to inspect areas of an object in fine details using geometric magnification (up to 40 times if used with the RE-150MN X-ray unit).

The microfocus X-ray unit has a 30-micron focal spot rather than a 1 mm spot used in conventional portable X-ray systems. The resolution power attains an unprecedented value – 25 microns of copper wire equivalent. Moreover, the distance between an object and the X-ray source can be minimal, down to a few centimeters or even a few millimeters when using geometric magnification.



### Identification of organic and inorganic objects

The images are reproduced on a display screen of the control unit in a positive/negative form, pseudo colours, with enhanced contrast or in dual energy mode. Zooming in on any of the nine areas of the screen allows better identification. Obtained images can be stored in the control unit memory for further investigation or reference (up to 30,000 images). Stored images can also be edited and provided with additional text, graphics and voice information.

If necessary, these images can be rewritten from the D:\ images directory of a "BU-4" control unit to a USB flash drive. Universal power supply (85 - 240 VAC 50/60Hz) allows easy operation anywhere in the world. This is the only system on the market that works from -20°C to +50°C with humidity up to 90%.

The **NORKA** X-ray system is delivered in two handy carrying bags or in one case.



### Application



Dual energy option: suspicious articles (in red)



Verification of art work authenticity



Geometric magnification with microfocus generator



Explosives detection in suspicious objects

# PORTABLE X-RAY INSPECTION SYSTEM



S.E.G. Inc. has a wide range of applications in customs, law enforcement, airport security and other areas.

### It is used for:

- Inspection of mail, parcels and small articles
- Detection of Weapons, Bombs and Explosive devices
- Searching for concealed eavesdropping devices in furniture, office equipment, walls, door/window frames, etc
- Non destructive testing and evaluation of machinery, aircraft, vehicles

The RE-160 X-ray system is easy to use, reliable and completely safe to operate. It provides excellent detecting capability with no harmful effects to its users or service personnel.

### System Layout

- "BU-4" control unit is based on an industrial microprocessor and 12" TFT LCD with touch screen
- "SKB-3D" digital camera unit (1280x1024, 16-bit)
- Interchangeable X-ray converter viewing area: 300x400 mm (standard) with converter unit support. Interchangeable converters (190x250 and 410x550 mm) are available on request
- Specially designed "RE-160" and "RE-120" minifocus X-ray digital generators, "RE-150MN" microfocus and any X-ray unit from the RAP series (constant potential with the voltage up to 300kV)
- Focusing device (optional for microfocus X-ray units)
- Set of connecting cables
- PC mouse & keyboard (optional)
- USB flash drive (optional)
- Rechargeable battery & charging device
- Set of transport bags or transport case



Transport case with built-in control unit

### General specifications

X -RAY UNIT	RE-160	RE-120	RE-150MN	RAP 220-5
Operation mode	5-25 second exposures in single energy mode			
Max. X-ray tube voltage, kV	160	120	150	220
Focal spot size, $\mu\text{m}$	800	600	80	2000
Resolution (copper wire), $\mu\text{m}$	80	60	40	80
Total penetration (Al equivalent), mm	120	65	80	200
Total penetration (Fe equivalent), mm	40	24	20	60
X-RAY IMAGE CONVERTER				
Camera unit	Digital - SKB-3D 1280x1024, 16 bit			
Interchangeable converter - screening area(H x W), mm	"PR-4" - 190x250			
	"PR-5" - 300x400 (standard)			
	"PR-6" - 410x550			
CONTROL UNIT				
	"BU-4"			
Display	12" colour TFT touch screen display			
Memory size (image number )	30 000			
Battery life	2 hours, or 60 X-ray image acquisitions			
Through-put	60 pictures per hour			
Operating temperature	- 20°C to +50°C (-4°F to +122°F)			
Relative humidity	90% (35°C / 95°F)			
Weight, kg*	less than 29			

\*Standard system configuration ( with RE-160, set of transport bags, BU-4, SKB-3D, PR-5 and rechargeable battery & charging device)