

SBK 160CP Portable Constant Potential X-ray Unit for Industrial Radiography



The apparatus is designed for radiographical quality control of welded joints of pipelines and building structures, castings and forgings of ferrous and non-ferrous metals both in the field and in the workshop of shipbuilding and aircraft manufacturing enterprises. The apparatus may be powered by 220V AC grid and by autonomous power sources, such as portable gasoline generator or battery power supply (BPS). The apparatus has automated built-in training system. A major modification has been implemented to allow operating temperature range of $-40^{\circ}\text{C} \div +40^{\circ}\text{C}$.

Basic set supplied with apparatus

- SBK 160CP X-ray Tube with detachable handle
- Power supply and controlling unit (PSU) mounted in a protective case
- Remote control unit (RCU)
- 5 m connection cable (Monoblock - PSC)
- 2.0 m power supply cable with euro plug
- 25 m RCU cable

Optional Items

- Battery power source (BPS) with built-in charger and 0,5 m powering cable.
All parts excluding BPS are placed in 2 instrumental cases
- Monoblock universal 0,5 m stand
- Autonomous cooling unit
- 12V car battery powered power unit with cable
- Telescope photo stand with magnet support
- Chain type pipe attachment device
- Belt type pipe attachment device



Main technical data

SBK 160CP Monoblock is x-ray radiation source with built-in x-ray insert of BPM 25-150 type, operating in following modes DC anode voltage and DC anode current during exposure with upper limit values of :

- 300 W x-ray tube anode power
- 160 kV anode voltage
- 3 mA anode current

The apparatus has isowatt power characteristics within 100-160 kV range with 300 W anode power upper limit set point ranges of x-ray tube are:

- $0,1 \div 3,0$ mA x-ray tube anode current
- $1 \div 998$ s exposure time

The apparatus radiation diagram is conical with $80^\circ \times 100^\circ$ apex angles

The beam axis is perpendicular to Monoblock axis

The size of the focal spot is $0,8 \times 0,8$ mm

The apparatus is powered by AC $90 \div 264$ V, 50 Hz

Power consumption is not more than 450 W

Range of environmental temperatures is $-40^\circ \text{C} \div +40^\circ \text{C}$

Storage temperatures range is $-50^\circ \text{C} \div +50^\circ \text{C}$

Monoblock overheating switch off temperature is $+70^\circ \text{C}$

Uninterrupted operation time is approximately 40 min in case of $+20^\circ \text{C}$ starting temperature

Full charged BPS ultimate power operation time is 28 min



Overall dimensions of basic parts:

- $\varnothing 120 \times 508$ mm of «0,3 SBK 160CP» Monoblock without detachable handle
- $580 \times 430 \times 240$ mm of power supply and controlling unit (PCU)
- $155 \times 100 \times 30$ mm of remote control unit (RCU)
- $270 \times 250 \times 120$ mm of battery power supply (BPS)

