

Pulserad™

FLASH X-RAY SYSTEMS

300 kV
MODEL 43733A

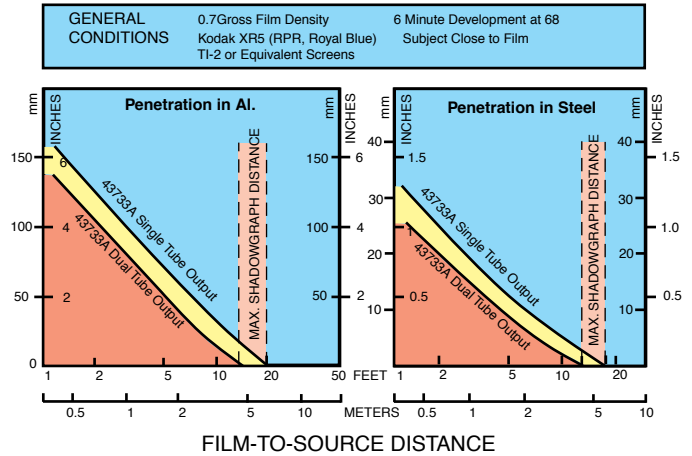


DESCRIPTION

The Model 43733A Flash X-ray System provides a 30 nanosecond burst of 300 kV X-rays. This 300 kV system is ideal for ballistic ranges and stop-motion radiography applications.

The X-ray tube may be installed inside the pulser (the basic system configuration), or in a remote tubehead (option 032). A configuration with two X-ray tubes in remote tubeheads (option 035) is also available. In this dual configuration (option 035), both tubes are fired simultaneously by the same pulser and can be used to obtain orthogonal radiographs of rapidly moving objects. The resulting radiographs enable accurate position location of the object under study. By using the optional soft X-ray tubes, very low density objects may be imaged.

The Model 43733A system comes standard with all hardware required for operation, including the X-ray tube and a Model 43210A X-ray Controller (XCON) which provides both a delayed trigger for the X-ray pulser and a pulsed event timer to monitor the actual firing time of the pulser. The XCON provides a firing time delay variable from



zero to 1000 milliseconds in 100 nanosecond increments and monitors the actual pulser firing time with 10 nanosecond accuracy. Delay time setting and pulsed event time monitoring can be accomplished with the users PC via an Ethernet connection. Customer furnished items are limited to regulated dry air and ac power (117 Vac, 60 Hz).

Up to three additional 300 kV X-ray generators (option 001) can share the same control cabinet and power supply to minimize cost and floor space. Option 008 permits operation at 220 Vac, 50-60 Hz line voltage.

SYSTEM CHARACTERISTICS

Output Voltage (nominal)	300 kV
Pulser Current (nominal)	5000A
Dose at 38 cm—tube in pulser	45 mR
Dimensions (pulser)	
Diameter	457 mm (18")
Length	864 mm (34")
Weight (pulser)	146 kg (325 lbs.)

SYSTEM SPECIFICATIONS

Effective Source Size	
Single tube/tube in pulser	5 mm
Dual tube	4 mm
Exposure Time (pulse width)	<30 x 10 ⁻⁹ sec
Penetration curve verified at 2.5 meters (8 ft.) through 38 mm (1.5") aluminum	

MAJOR OPTIONS AND ACCESSORIES

MAJOR OPTIONS

- Option 001–Add-on Channels
- Option 008–220 Vac, 50-60 Hz Operation
- Option 020–Added Length Console-to-Pulser Cable
- Option 032–Single Remote Tubehead
- Option 034–Added Length Tubehead Cable
- Option 035–Dual Remote Tubehead
- Option 036–Soft X-ray Capability, Single
- Option 037–Soft X-ray Capability, Dual
- Option 042–Electron Beam Modification (contact factory)
- 130-314700-#700–Computer Remote Control of H.V. Power Supply
- Special Option—Demountable x-ray tube with variable source size - contact factory

ACCESSORIES

- Model 43113B Pulsed Event Timer
- Gas Regulators

BASIC FIRST (SINGLE) CHANNEL SYSTEM

A fully operational, stand-alone system

Includes:

- Control console cabinet
- AC power panel wth Surge Protector
- High-voltage power supply
- Dielectric gas pressurization controls
- XCON (X-ray controller)
 - Delay trigger generator
 - Trigger amplifier
 - Pulsed event timer
- Trigger transformer
- Trigger initiation pendant
- Pulse generator
- Pulser-mounted X-ray tube
- 6.1m (20 ft.) control-console-to-pulser cable
- Resistive load and interconnecting cabling

ADD-ON CHANNELS (No. 2, 3, and 4)

For operation only in conjunction with basic (first) channel system

Includes:

- XCON (X-ray controller)
 - Delay trigger generator
 - Trigger amplifier
 - Pulsed event timer
- Trigger transformer
- Pulse generator
- Pulser-mounted X-ray tube
- 6.1m (20 ft.) control-console-to-pulser cable
- Resistive load and all interconnecting cabling

Note: Remote X-ray tubehead with nominal 6.1 meter (20 ft.) pulser-to-tubehead interconnecting cable assembly available for basic and add-on channels as an optional accessory.

Contact the Pulserad FXR Product Manager if system of more than four channels is required.

