



LB 8010 Shielding for Nuclear Sources

100% Stainless Steel Shield for highly corrosive environments



Berthold Technologies LB 8010 Heavy Duty Source Shield

Berthold Technologies' new LB 8010 Heavy Duty Source Shield is the answer for the most rugged process measurement requirements. Designed to be used in corrosive and abrasive environments, the LB 8010 uses 100% stainless steel construction and a tungsten source holder. The LB 8010 is especially suited to applications with heavy vibration and extreme temperatures.

The LB 8010 is constructed of 4 main stainless steel parts: The main body, shutter mechanism, shutter mechanism handle and bottom plate. The main body provides shielding of the radiation source in all directions when the shutter is in the closed position. The shutter mechanism consists of a rotatable cylinder with a shaft installed through the center of the cylinder. The shaft is double welded to the cylinder at the top and bottom of the cylinder. The cylinder also has a hole through it for the gamma beam to exit the device when the shutter is in the open position. When assembled, the shutter mechanism shaft extends through the main body of the device and is secured to a shutter handle by the use of a pin going through the shutter shaft. The shutter handle has a red colored arrow for positive positioning to indicate the open or closed condition of the device.

The rugged design and construction of the LB 8010 Heavy Duty shield makes it uniquely applicable for use in high pressure hydraulic fracturing lines. It is routinely used for high pressure lines up to 15 kpsi.

Though originally designed for the rigors of this application, the LB 8010 Heavy Duty Source Shield has the capability for use in abrasive and corrosive environments where a stainless steel device is required. These would include, but not be limited to, those in the Pulp and Paper, Chemical, Refining and other similar industries.

Technical Data

Mechanical

Construction—304 Stainless Steel
Dimensions—Approximately 7.5 X 7.5 X 9 inches
Container type—Type A
Registration authority—State of Tennessee, USA
Weight 37 kg (82 pounds)
Shutter security—Padlock through hole in plunger on shutter handle
Maximum source activity—50 mCi Cs137 (1.86 GBq)
Beam angle—Approximately 11 degrees

Operational

ISO Classification—ISO/99/C66646
Operating temperature—maximum 200 degrees C
Drop Test—Compliance with 9.1 meters *(app. 30 feet)
Fire Tested—Compliance to 1150C* (2102 F)
Dose rates: (Shutter closed with 50 mCi Cs137 source))
Surface 79.5 mR/h
5 cm (2 inches) 40.5 mR/h
30 cm (12 inches) 5.1 mR/h

*Testing done by independent Test Lab, Contact Berthold Technologies USA for further information



LB 8010 Transportation Collar

US DOT regulations mandate that all nuclear source shieldings that are moved from one location to another have transportation collars around the device. Designed to be used in transport mode only, the collar must have all USDOT markings and regulatory information in a specified format. Berthold Technologies' Transportation Collar (Part number 187497-20) contains all regulatory symbols and verbiage to fully comply with USDOT regulations and requirements. For further information, contact Berthold Technologies, USA.



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