

SHLD 1

Source holder for source capsules



Application area

The SHLD 1 is used as a receptacle for the gamma radiator that serves as a radiation source for radiometric mass flow, limit level as well as level and density measurement. The SHLD 1 is characterised by its compact design and low weight.

Your benefit

- Reliable shielding allows use without control areas
- Reduced space requirement and simple mounting
- Operational reliability through pneumatic ON/OFF switching

Function

The radioactive isotope inside the source holder SHLD 1 emits gamma rays. The SHLD 1 is mounted on the vessel or the pipeline, directly opposite the sensor. The source holder shields the environment against the gamma rays and protects the radioactive isotope against mechanical or chemical damage. In case of large measuring ranges, two or more source holders are used.

Technical data

Shielding material	Lead
Attenuation factor	
– Cs-137	46
Number of the half-value layers	
– Cs-137	5.5 HWS
Max. permissible activity of the radioactive source	
– Cs-137	3.7 GBq (100 mCi)
Exit angle	0°, 15°, 30°, 45° or 60°
Width of the exit channel	10° in all versions
Safety facility	Fixing screw and padlock
Attenuation of the useful beam	approx. 0.3 half-value layers (attenuation factor = 1.2)
Ambient, storage and transport temperature	-50 ... +105 °C (-58 ... +221 °F)
Surface protection	PUR textured paint RAL 1003
Weight	approx. 30 kg (65 lbs)

Materials

The housing and the flange are made of steel or stainless steel, the internal parts and the source insert of stainless steel. Lead is used as shielding material.

You will find a complete overview of the available materials in the "configurator" on our homepage at www.vega.com/configurator.

Versions

The source container SHLD 1 is available in different versions that meet the special safety requirements for source handling.

Depending on the version, the switch position ON or OFF can be secured with a padlock or a fixing screw. Versions with pneumatic actuation of the switch on/off position (remote control) are available.

Safety Interlock key switches, a solid heavy-duty version or end position switches are also optionally available.

Shipment

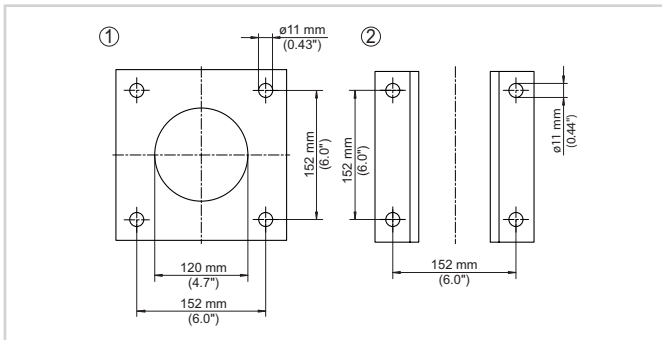
Radioactive sources can only be shipped if the customer is in possession of a handling permit or import license. Shipment is carried out in type A packaging in accordance with the European Agreement concerning the International Carriage of Dangerous Goods (ADR and DGR/IATA). The source holder is shipped in switch position OFF. The position is secured by a lock.

Adjustment

The radiation may only be switched on by qualified personnel. The radiation is switched on mechanically via a swivelling insert that is rotated clockwise by 180° or via a pneumatic switching mechanism. The switching status is clearly visible via distinct labelling. If it is used properly and the specified ambient and operating conditions are maintained, the source holder requires no maintenance or inspection.

Mounting instructions

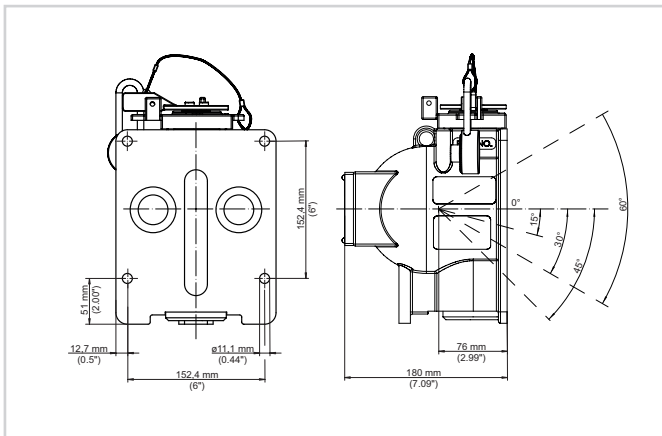
The source holder can be mounted directly on the vessel or tube (not pressurized or in contact with the medium) by means of a mounting socket. It can also be mounted, for example, on an L-profile or mounting plate. When using a mounting plate, make sure to provide a hole for the radiation beam.



Mounting facility

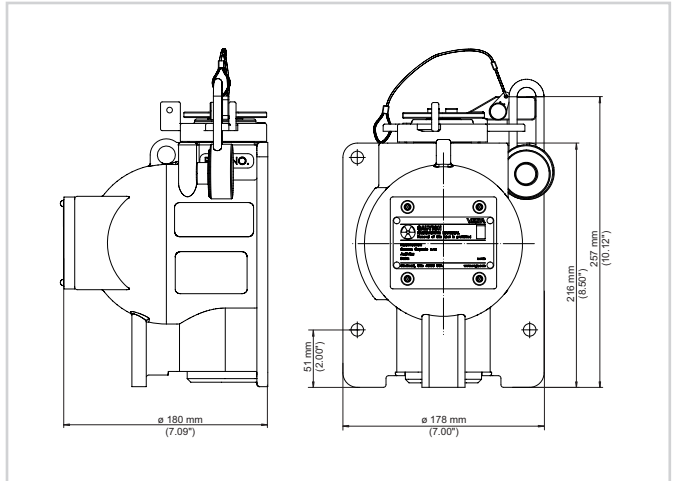
- 1 Mounting plate
- 2 L-profiles

For flow measurement, the source holder must be mounted above the conveyor belt or the screw conveyor. The radiation must be directed exactly towards the sensor mounted on the opposite side.

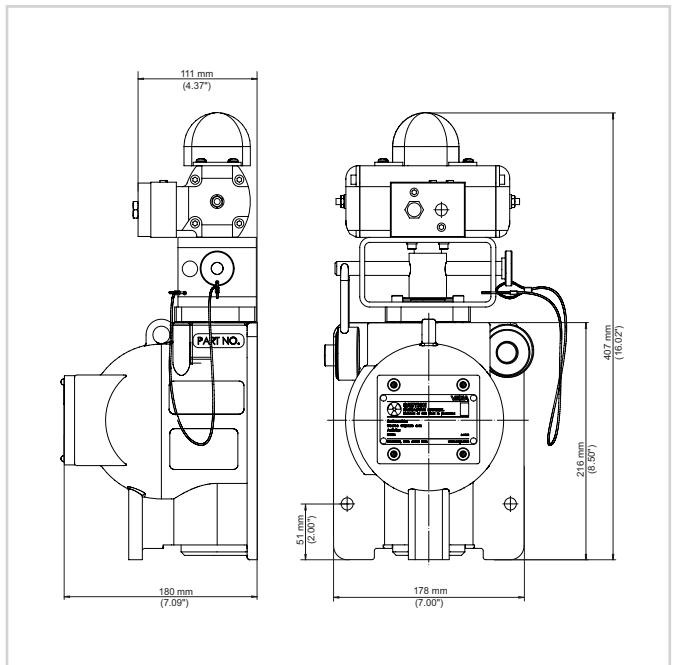


Beam exit channel (e.g. standard version)

Dimensions



SHLD 1 - standard version



SHLD 1 - version with pneumatic switching mechanism

Information

You can find further information on the VEGA product line on our homepage www.vega.com.

In the download section under www.vega.com you'll find free operating instructions, product information, brochures, approval documents, instrument drawings and much, much more.

Instrument selection

Under "Specify product" on www.vega.com and "Products" you can select the suitable measuring principle and instrument for your application.

You can find detailed information on the instrument versions in the "Configurator" at www.vega.com and "Products".

Contact

You can find your personal contact person at VEGA on our homepage www.vega.com and "Contact".