

Gamma modulator

For radiation-based measurement



Application area

The Gamma-Modulator enables radiation-based measurement even when interference radiation occurs. In the case of sporadically occurring interference radiation (e.g. from X-ray material tests or with radiating media), the measurement can continue without interruption.

Your benefit

- High availability and reliability of radiation-based measurement even with X-rays
- Maintenance-free
- Simple integration into existing systems
- Can also be used at high temperatures thanks to optional water cooling

Function

The Gamma-Modulator is mounted on a VEGASOURCE source holder in front of the beam exit channel.

A longitudinally slotted shaft rotates at a frequency of 1 Hz and alternately lets the gamma ray pass through or shields it. This frequency distinguishes the useful radiation from any interference radiation from other sources.

The interference radiation is thus detected and automatically compensated by the PROTRAC sensor.

Due to this modulated gamma radiation, the radiation-based measurement can be continued uninterrupted even if interference radiation occurs.

Technical data

Rotation frequency	1 Hz
Lifetime of bearings	approx. 36 years (for continuous operation)
Water cooling	
– Water pressure	4 ... 6 bar (58 ... 87 psi)
– Water flow	min. 60 L/h
Ambient temperature	-40 ... +60 °C (-40 ... +140 °F)
Ambient temperature with water cooling	0 ... +120 °C (-32 ... +248 °F)
Weight	
– Without water cooling	18 kg (39.7 lbs)
– With water cooling (empty)	21 kg (46.3 lbs)
– With water cooling (filled)	25 kg (55.1 lbs)
Voltage supply	18 ... 36 V DC
Power consumption	3.2 W

Materials

The housing and all moving parts are made of stainless steel.

Versions

Any number of devices can be synchronized.

In this case you need a controller (synchronizer) to synchronize the gamma modulators.

The Gamma-Modulator is also available as water-cooled version.

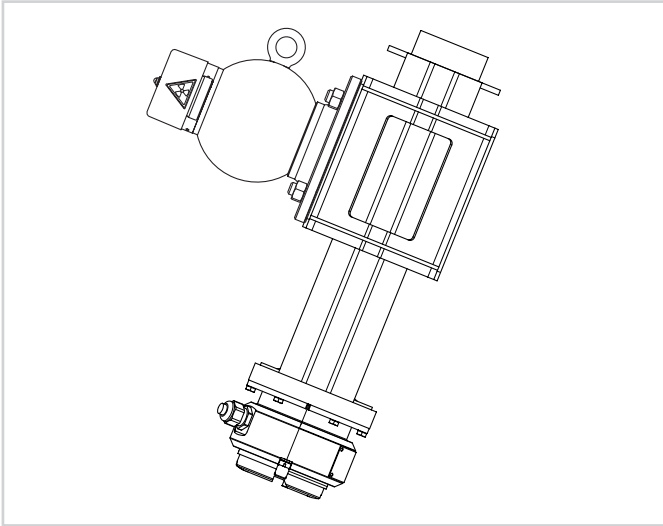
Adjustment

If the gamma modulator is used as intended and in compliance with the specified ambient and operating conditions, no maintenance or inspection of the gamma modulator is required.

If several gamma modulators are used in one measuring point, they must be synchronized. Use the controller "Synchronizer".

Mounting instructions

The Gamma-Modulator is mounted directly in front of the beam exit channel of the source holder VEGASOURCE.



Gamma-Modulator with source holder

With optional water cooling, the water must always be fed from below into the Gamma-Modulator.

Instrument selection

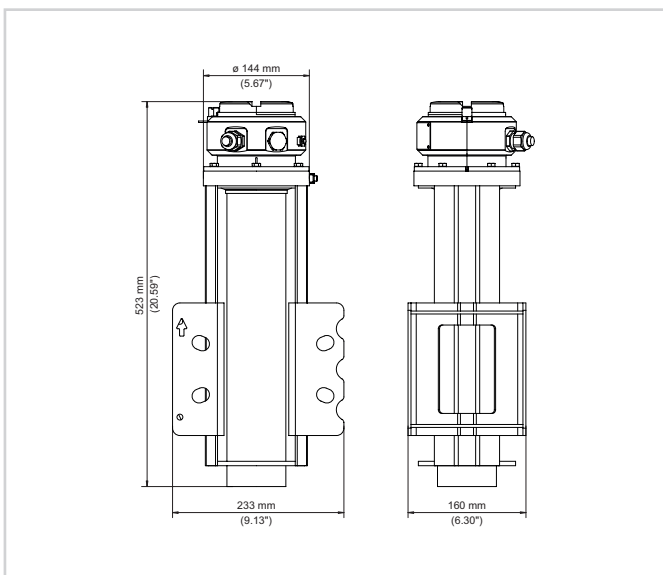
On our homepage under "Products" you can select the suitable measuring principle and instrument for your application.

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

Contact

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

Dimensions



Dimensions Gamma-Modulator

Information

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

In the download section on our homepage you'll find free operating instructions, product information, brochures, approval documents, instrument drawings and much, much more.