D.I.S

D.I.S Germany GmbH

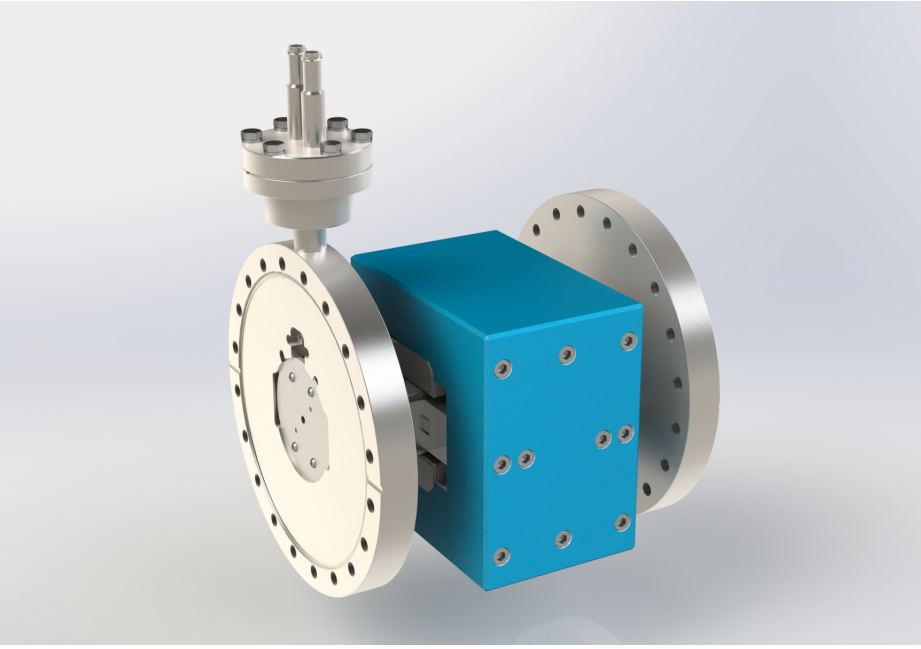
# Wien Filter CF160

933-S7-09-00001-C-01

Generally, Wien filters are used for separating charged particle beams by velocity using orthogonally superimposed magnetic and electric fields.

The Wien filter features different entry and exit apertures for defining mass and charge state resolution and for collimating the beam.

It can be used for beam power loads of up to 30 W in broad pressure ranges, down to ultrahigh vacuum conditions.



*Exemplary view of the Wien filter.*

*further reading and related products:*

*M. Schmidt, H. Peng, G. Zschornack, and S. Sykora, „A compact electron beam ion source with integrated wien filter providing mass and charge state separated beams of highly charged ions", Review of Scientific Instruments, vol. 80, no. 6, p. 063301, 2009*

**Special Features:**

- suitable design for operation with light, single-charged ions with energies around 5 keV
- 5 mm diameter entry and exit aperatures
- beam-stressed parts (e.g. electrodes, collimator, apertures) are made of sputter resistent materials
- electrodes, magnetic yoke and magnetic flux are optimized to fit customer needs regarding beam energy and beam diameter
- SHV 5 kV electrical feedthrough on single DN40 CF flange

**Optional Supplementing Devices:**

- additional entry apertures (1 mm to 15 mm)
- additional exit apertures (1 mm to 15 mm)
- high voltage power supply for electrodes, high voltage cable

Please do not hesitate to contact us for additional support.

document no. 933-S7-08-00004- E-01

D.I.S

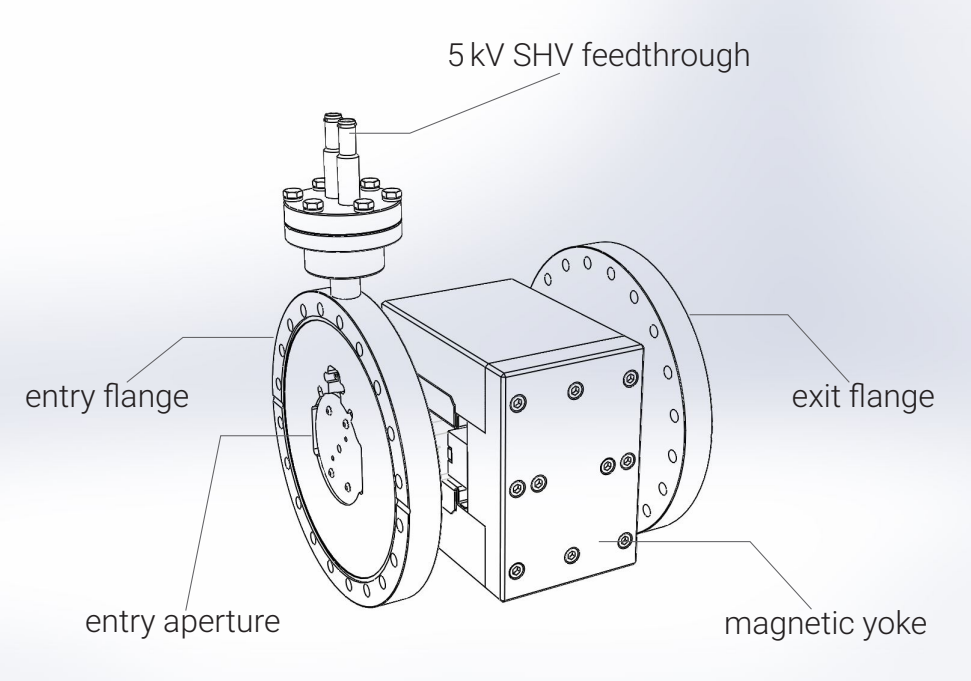
D.I.S Germany GmbH

**Address**
*Lohmener Str. 13 d*
*01796 Pirna*
*Germany*

**Contact**
*Phone: +49 3501 5823-00*
*Mail: sales@dis-eng.de*
*Web: www.dis-germany.com*

# Wien Filter CF160

933-S7-09-00001-C-01




*Sketch of the Wien filter, its components and interfaces, please refer to the manual for more details.*

| TECHNICAL DATA | |
|---|---|
| maximum beam power | 30 W with passive cooling |
| applicable beam current | up to 1 mA at 30 keV |
| entry and exit mounting flange | DN160 CF |
| electrical connections | SHV 5 kV on DN40 CF flange |
| peak magnetic field along beam axis | ≈200 mT |
| effective filter length | 110 mm |
| electrode distance | 10 mm |
| collimator diameter | 15 mm |
| aperture diameter | 4 mm |
| maximum voltage per electrode | ±5000 V |
| maximum bakeout temperature | 100 °C |
| weight | 25 kg |
| box size (length x width x height) | 250 mm x 210 mm x 310 mm |

document no. 933-S7-08-00004- E-01



**Address**
*Lohmener Str. 13 d*
*01796 Pirna*
*Germany*

**Contact**
*Phone: +49 3501 5823-00*
*Mail: sales@dis-eng.de*
*Web: www.dis-germany.com*