D.I.S

D.I.S Germany GmbH

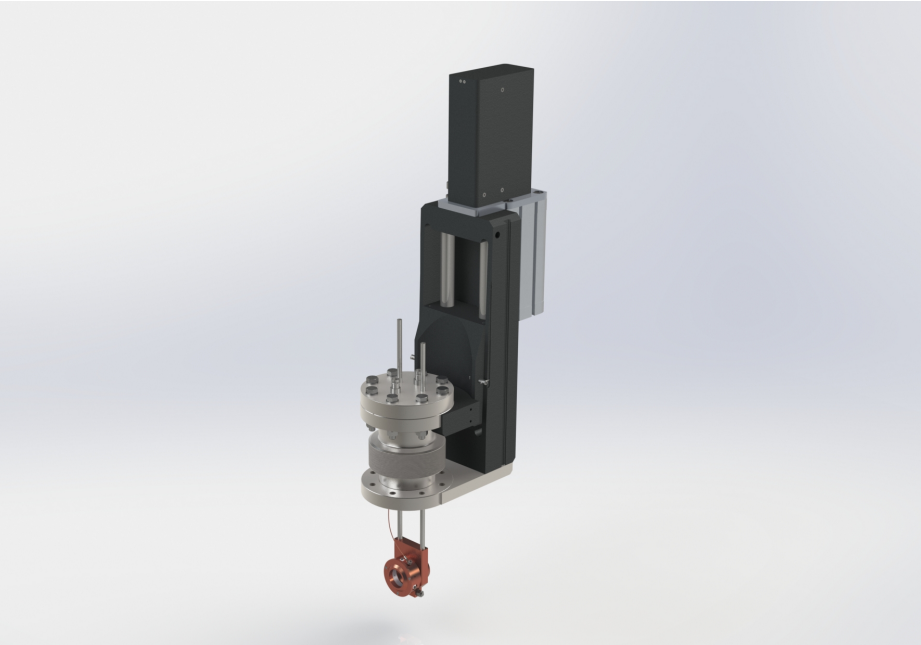
Faraday Cup, CF63, water cooled

931-S7-09-00011-A-01

Faraday cups are used for measuring electrical currents of charged particle beams in real time in broad pressure ranges, down to ultra-high vacuum conditions.

The Faraday cup is equipped with an exchangeable aperture, a suppressor electrode for compensation of secondary electron emission, and a measurement electrode.

It can be used for currents of fA up to mA at beam power loads of several watt depending on the cooling solution.



Faraday cup with fixed perpendicular mounting and water cooling.

further reading:

- *https://www.dis-eng.de/products/charged-particle-beam-diagnostics/faraday-cup/*

Special Features:

- linear feedthrough
- CF63 base flange
- aperture with a diameter of 25 mm
- designed for an electron beam energy of up to 8 MeV
- water cooling for thermal power loads up to 60 W

Optional Supplementing Devices:

- power supply for the suppressor voltage
- current measurement device for beam currents of fA up to mA
- additional apertures

Please do not hesitate to contact us for additional support.

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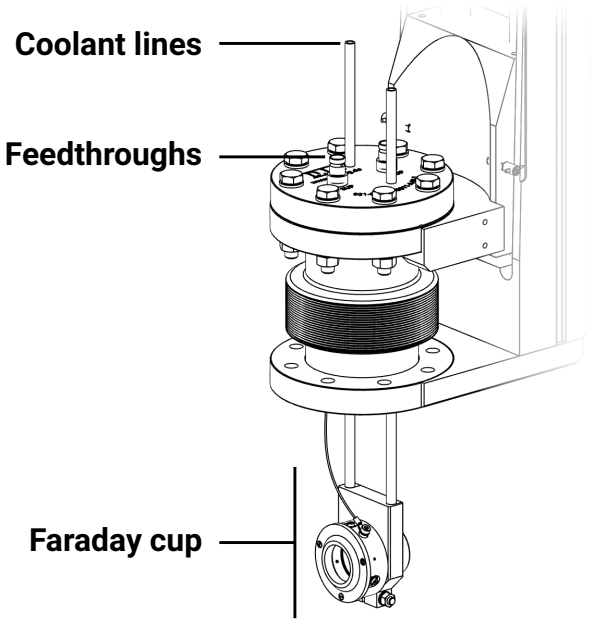
FARADAY CUP 931-S7-09-00011-A-01



Sketch of the Faraday cup with labelled components.

TECHNICAL DATA

mounting flange	DN63CF
mounting style	perpendicular
maximum beam power	up to 60 W
current measurement range	fA up to mA @ up to 8 MeV
aperture dimensions	25 mm
connectors	BNC connectors
vacuum pressure operating range	down to 1×10^{-10} mbar
coolant pressure drop between inlet and outlet	5 bar
coolant temperature	<28 °C
maximum bakeout temperature	150 °C
approx. box size (length x width x height)	120 mm x 270 mm x 650 mm
Use case	power load in Faraday cup: 60 W coolant inlet pressure: 7 bar coolant outlet pressure: 2 bar coolant temperature: 28 °C resulting Faraday cup temperature: <60 °C

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