D.I.S Germany GmbH

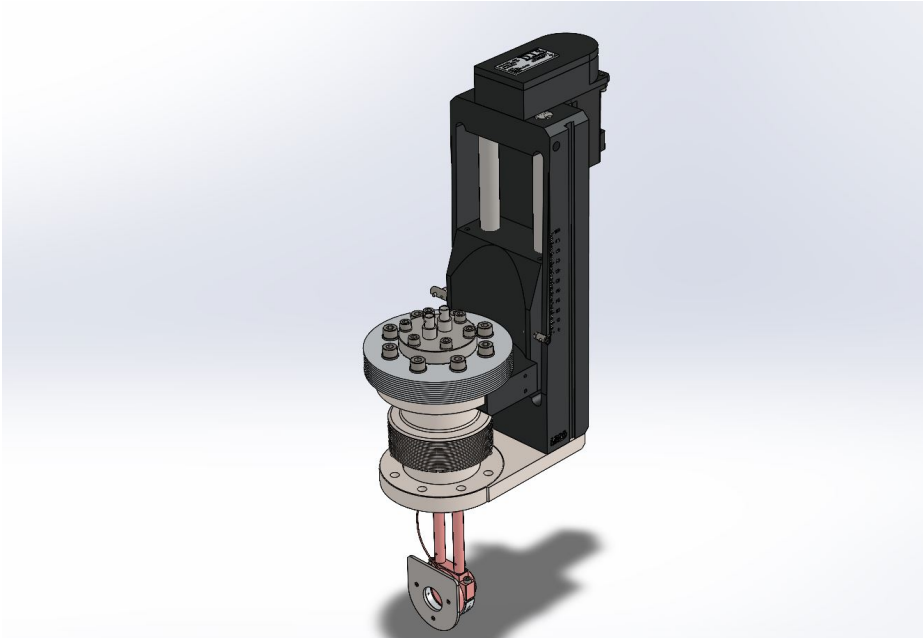
Faraday Cup, CF63 Air cooled

931-S7-09-00009-B-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 Watts delivered depending on the choosen cooling solution.



Faraday cup with perpendicular mounting and passive air cooling.

further reading:

- *https://dis-germany.com/product-categories/faraday-cup/*

Special Features:

- linear feedthrough
- CF63 base flange
- aperture with a diameter of 20 mm
- applicable for an electron beam energy of up to 8 MeV
- passive air cooling for thermal power loads up to 30 W ($0.1\ \frac{W}{cm^2}$)
- retractable/positionable via linear feedthrough (motorized) with 100 mm stroke

Optional Supplementing Devices:

- power supply for the suppressor voltage
- current measurement device for beam currents of fA up to mA
- control device for motorized cup positioning
- additional apertures (different material & diameter: $\leq$ 25 mm)

Please do not hesitate to contact us for additional support.

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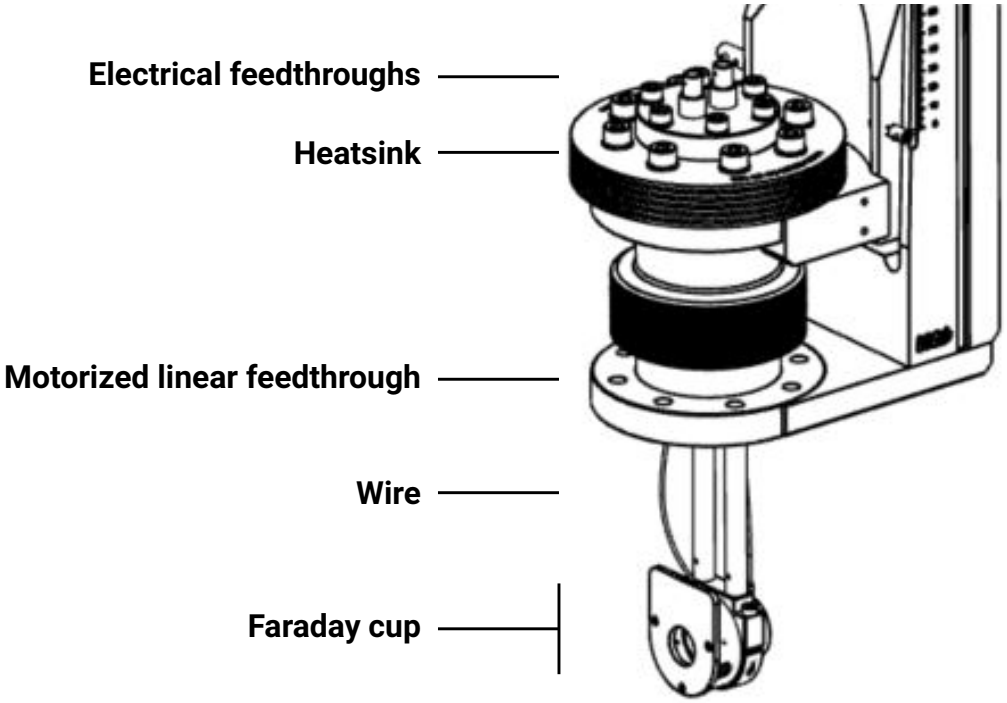

Sketch of the Faraday cup with labeled components.

TECHNICAL DATA	
mounting flange	DN63 CF
mounting style	perpendicular, retractable (100mm stroke)
maximum distance of mounting flange to cup lower edge	(150 ± 2) mm
maximum distance of mounting flange to cup center	(125 ± 2) mm
thermal power load	up to 30 W ($\leq$0.1 $\frac{W}{cm^2}$)
current measurement range	fA up to mA
aperture dimensions	$\leq$ 25 mm
electrical connectors	BNC connectors
coolant interface	passive cooled heatsink
vacuum pressure operating range	down to 1×10^{-10} mbar
maximum bakeout temperature	150 °C
approx. box size (length x width x height)	143 mm x 255 mm x 500 mm

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