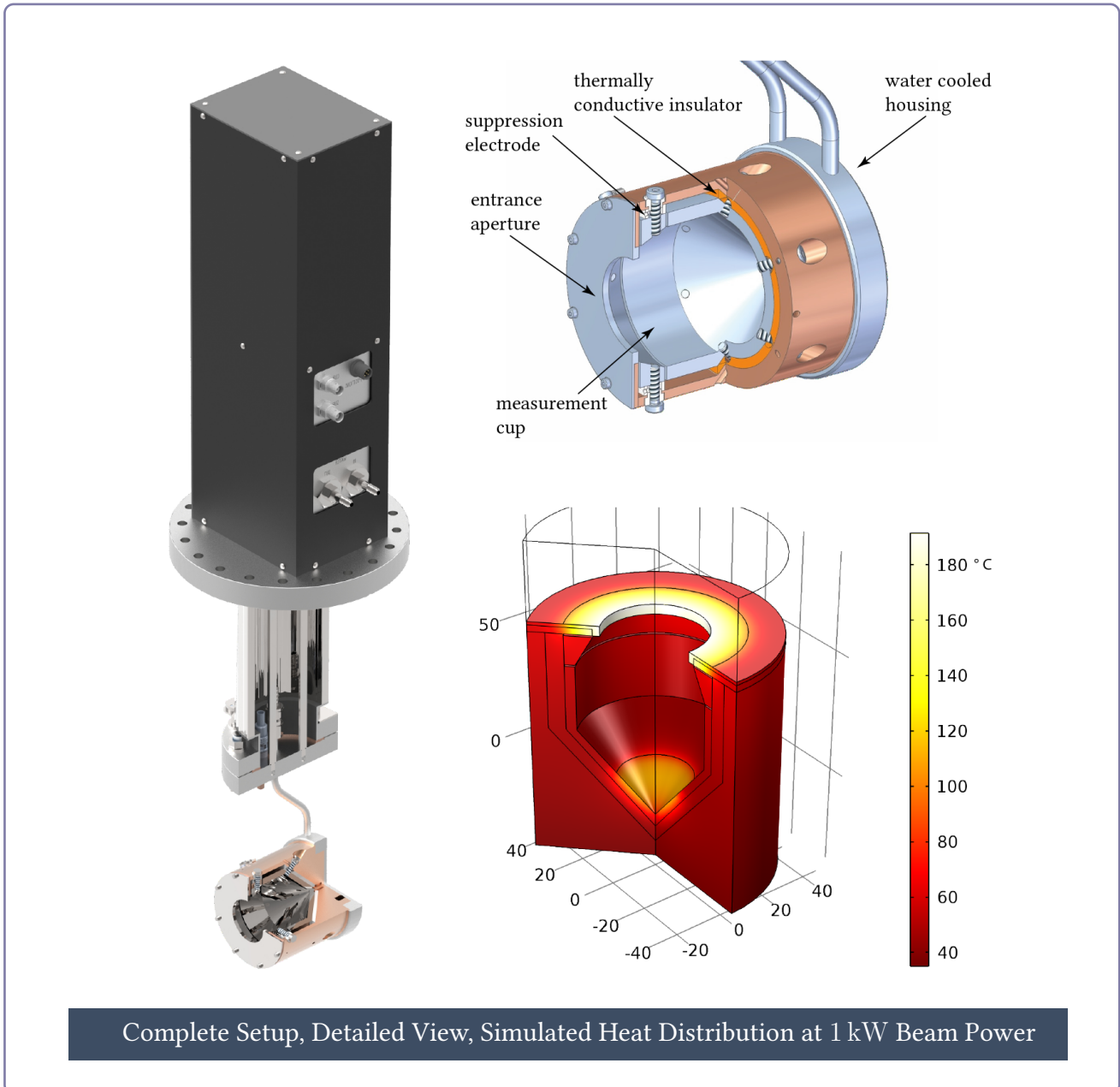


# HIGH-CURRENT FARADAY CUP

- A WATER COOLED FARADAY CUP FOR HIGH-CURRENT APPLICATIONS-



The High-Current Faraday Cup is a device for measuring high ion beam currents. The setup contains a metal back plate which is electrically insulated towards the housing but connected to a water cooling system by a thermally conductive insulator. Thus, heating power from an incident ion beam of up to 1.5 kW can be dissipated while measuring an electrical current. Furthermore, the Faraday cup features a removable aperture plate as well as a suppressor electrode for suppression of secondary electrons emitted from the cup surfaces at ion impact.

The Faraday cup is mounted on a pneumatic linear push / pull positioner on a DN 160 CF flange. The up and down position is indicated by two relay contacts. The standard travel length between both

positions is 100 mm which can be adjusted to the requirements of the customer if necessary. The cup is suitable for ultra high vacuum conditions down to  $1 \cdot 10^{-10}$  mbar.

## SCOPE OF DELIVERY

- High-Current Faraday Cup readily assembled and mounted onto a DN 160 CF flange incl. electrical feedthroughs and pneumatic linear push / pull positioner

## OPTIONAL EQUIPMENT

- vacuum chamber
- picoampere meter or electrometer for measurement of charged particle current or pulses
- control and measurement software

## TECHNICAL PARAMETERS

### FARADAY CUP PARAMETERS

aperture diameter	40 mm or customer-specific
travel distance	100 mm or customer-specific
recommended suppressor voltage	200 V
max. beam power	1.5 kW

### GENERAL PARAMETERS

height above lower flange edge	414 mm
distance lower flange edge to beam center	353 mm
support flange	DN 160 CF, other flange types available
weight	18 kg (40 lbs)
current signal	BNC connector
travel end positions	5-pole M12 connector, two relay contacts
bake-out temperature	150 °C

### INFRASTRUCTURAL REQUIREMENTS

vacuum conditions during operation	from $1 \cdot 10^{-10}$ mbar up to atmospheric pressure
pneumatic push / pull positioner	dry air, 7 bar
cooling water	1.5 l / min at 3 bar

## CONTACT

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