research instruments

# If you can think it, we can build it.

Custom-designed high-performance components, systems, and solutions for science and industry.

# RI Research Instruments

- Founded in 1994 as ACCEL Instruments GmbH
  since 2009 named RI Research Instruments
- Annual revenue: 90 million € (2024)
- Majority (52%) owned by Bruker EST
  Management team are additional shareholders
- Headquarters in Bergisch Gladbach, Germany
  (close to Cologne)
- Main high-tech business fields
  - Super conducting & normal conducting particle accelerators
  - Fusion
  - Semicon EUV tools
  - Semicon supply chain
- More than 150 employees are physicists or engineers

**400 and growing**

**Bergisch Gladbach & Dortmund, Germany**

**Customers in >25 countries**

**30 years of innovation**

# Our Sites

**Bergisch Gladbach TBG (Headquarter)**

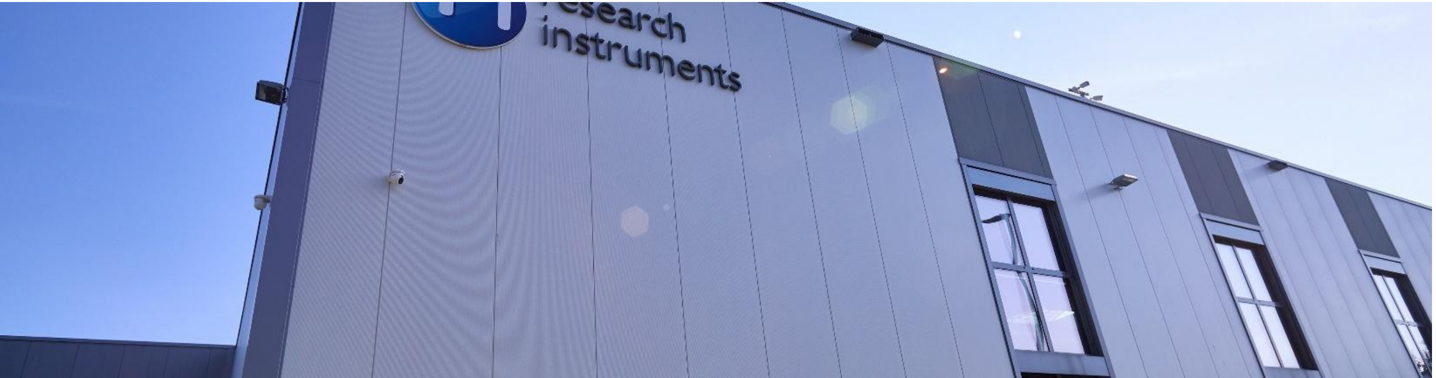
- Engineering & administration
- 6,000 m² production area
- Fusion production & assembly

**Bergisch Gladbach OE (since 2022)**

- 1,600 m² Semicon supply chain production area
- 4,200 m² „Manufaktur“ production area
- More property for expansion

**Dortmund (acquired 2019)**

- Electronics and control systems
- 1,200 m² production area




# Products & Solutions

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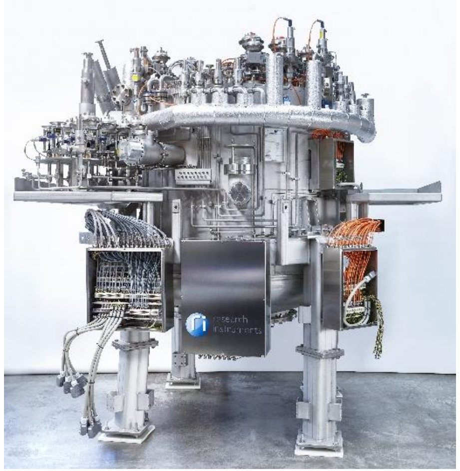
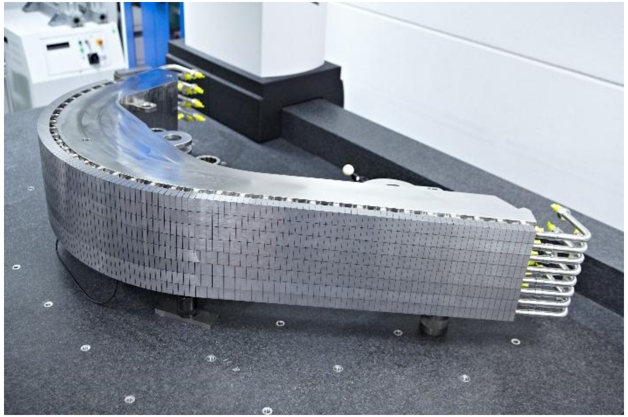
Exceptional vacuum/cryo





EUV & SemiCon

Particle Accelerators (NC & SC)



Nuclear Fusion

# Customers

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KIT / KATRIN

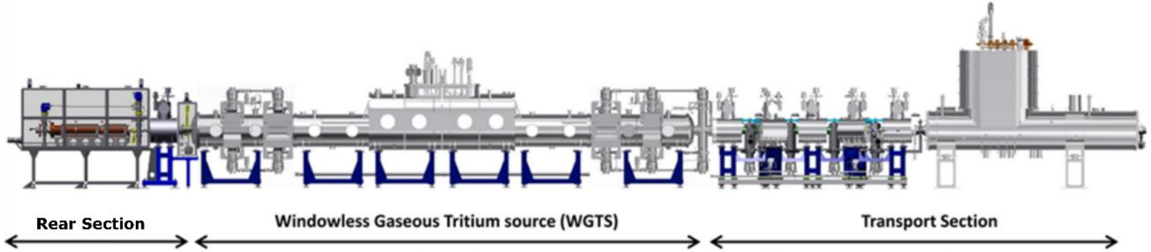
CERN / HighLumi LHC

Semicon Industry

XFEL / DESY


F4E / ITER

# WGTS for KATRIN @KIT




Tritium!
L=10m, ∅=90mm
T = 27K (+/- few mK)
$B_S$ = 3,6 T
$(\Delta\rho d/\rho d) < 10^{-3}$

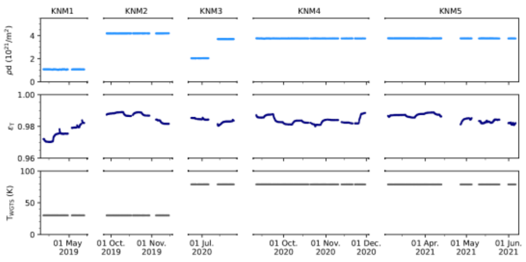
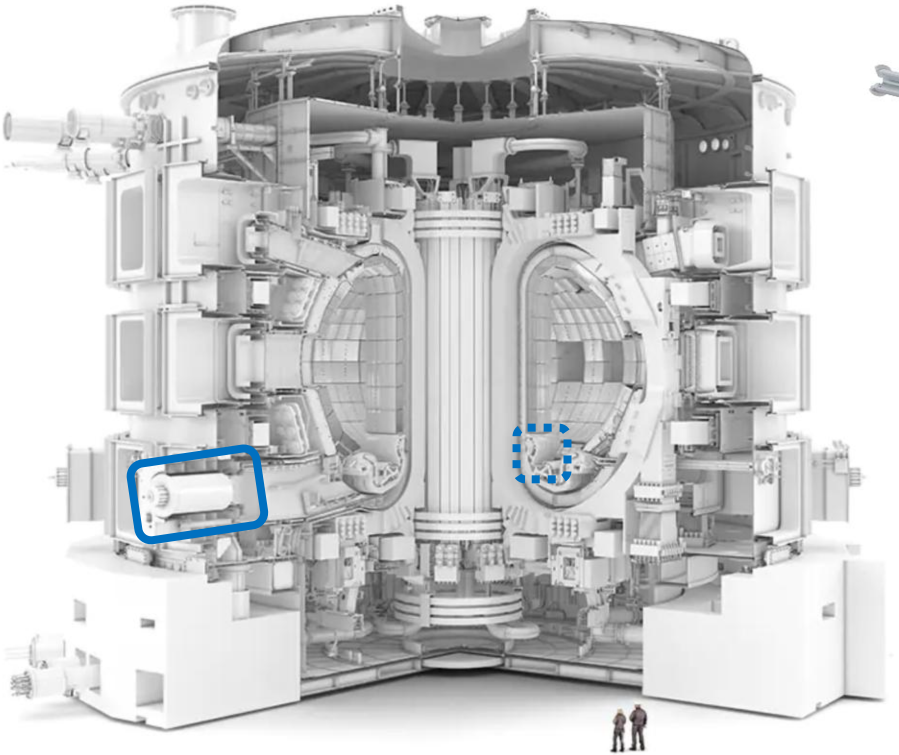
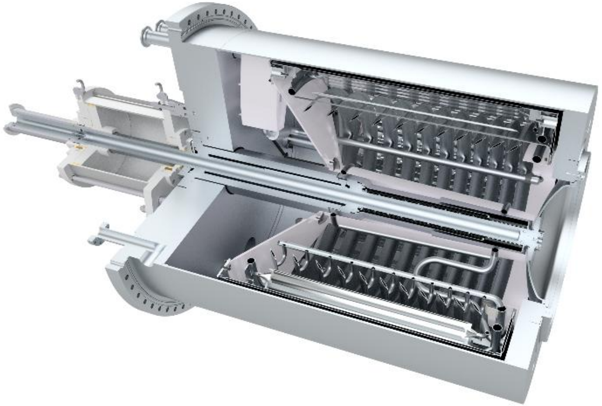



**Figure 5:** Evolution of source operating parameters throughout the first five measurement campaigns. The column density $\rho d$ (top), tritium purity $\varepsilon_T$ (center), and source temperature $T_{\mathrm{WGTS}}$ (bottom) are shown. Each data point corresponds to one scan, the uncertainties are too small to be visible.

Science 10 Apr 2025
Vol 388, Issue 6743, pp. 180-185
DOI: 10.1126/science.adq9592

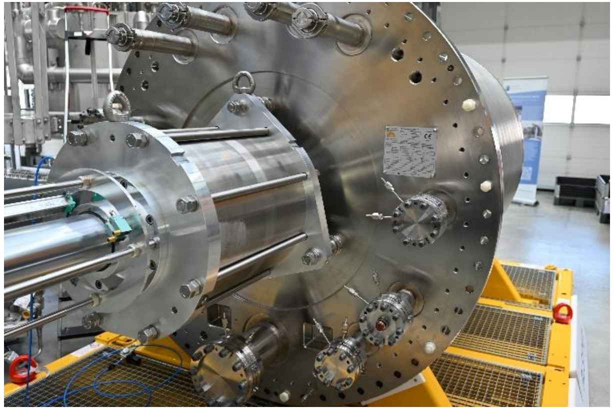
# Cryo Pumps @ITER/F4E





8 pc., 8 ton each
100m³/s
T: 4K – 200°C
800 mm all metal valve
Tritium: 1st confinement
>20 a development

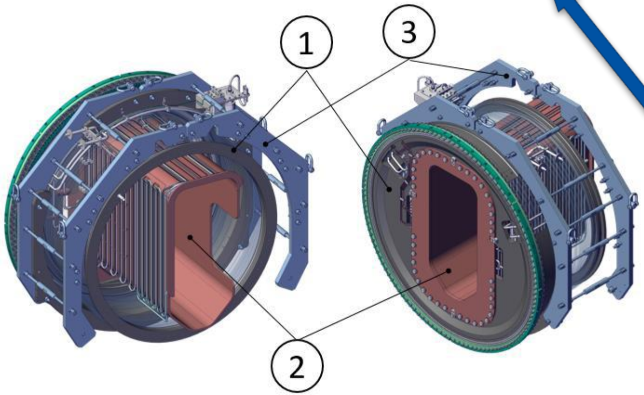
# Cryo Pumps @ITER/F4E




# Our Contribution to your big science projects?



## Engineering




## Fabrication


## Communication

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