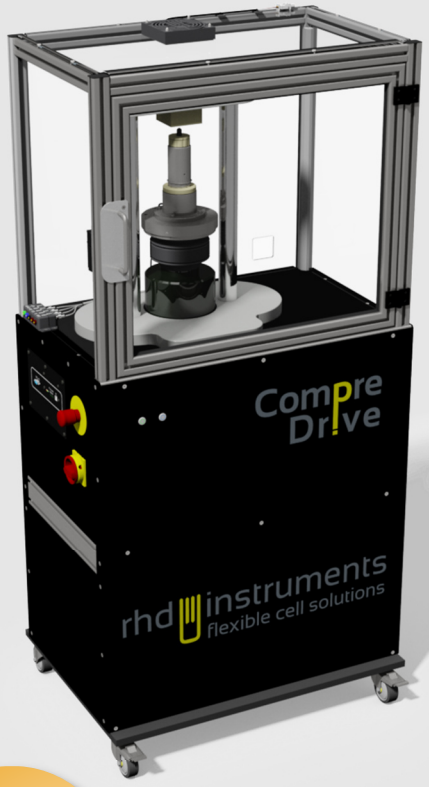
CompreDrive

Force • Temperature • Precision



High-pressure electrochemistry

- Active force regulation
- Uniaxial force application
- Variable forces up to 75 kN
- Compatible with various measuring cells

Precise conditions, hot and cold

- Active force & temperature control with high accuracy
- Heating and cooling from -40 °C to +250 °C
- Significantly enhanced reproducibility

Ideal for sensitive samples

- Specialized cell design for multiple applications
- Air-tight, glovebox compatible cell setup
- Variable cell materials and sizes

Fully automated measurements

- User-friendly & intuitive interface
- Automated measurements and full manual control
- Hard- and software-based synchronization with analyzers

Supported by:

Federal Ministry for Economic Affairs and Energy

ZIM Zentrales Innovationsprogramm Mittelstand

on the basis of a decision by the German Bundestag

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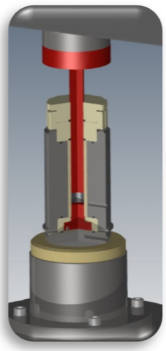
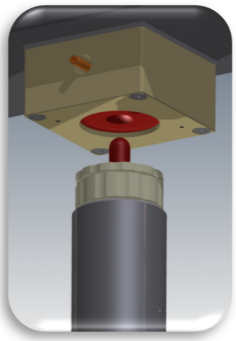
In-situ high-pressure electrochemistry



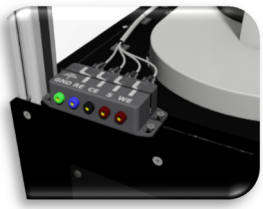
Well-defined force application

- Uniaxial force application
- Load-bearing parts made from hard-metal
- Pressures up to 1.7 GPa (Ø 6 mm, 50 kN)
- Force application via high-precision servo-motor instead of hydraulics

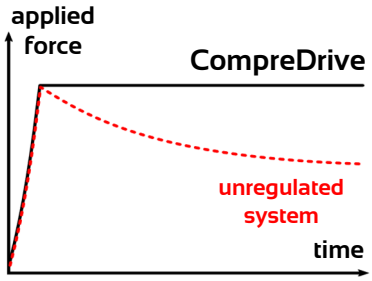


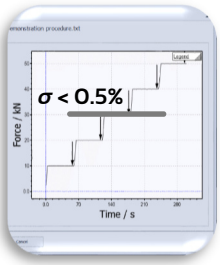
Ideal for electrochemical *in-situ* characterization

- Plate-plate geometry
- Connectable with all potentiostats
- Sandwich-type material stacks possible
- Electrical contact via plunger and bottom plate
- Chemically inert & electrically insulated inner sleeve



Precisely controlled pressure and temperature conditions



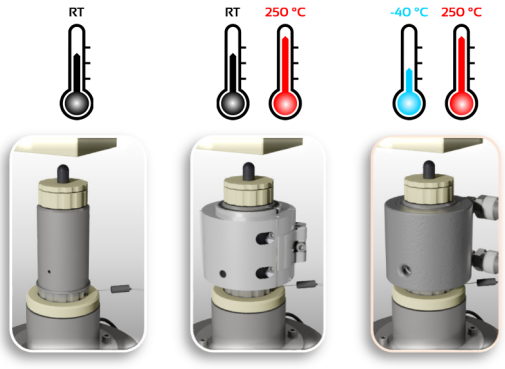


Active force regulation

- Applied force is constantly measured and adjusted as long as required
- Constant within ±0.1 kN
- Force setpoints can be applied manually, via procedure or software interface

Accurate temperature control

- Possible setups:
  passive/ electrical heating/ fluid cooling & heating*
- Enables temperature-dependent analyses
  from -40 °C* to +250 °C** (±0.1 °C)
- High quality Pt-100 temperature sensor



CompreDrive | CompreDrive H | CompreDrive HC*

*external circulator required
**depending on sleeve material

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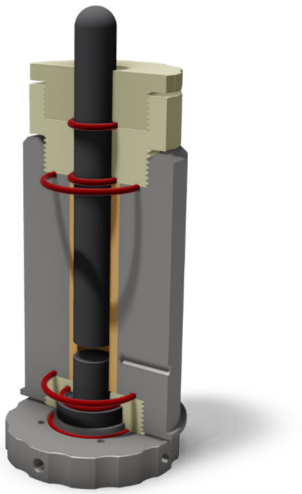
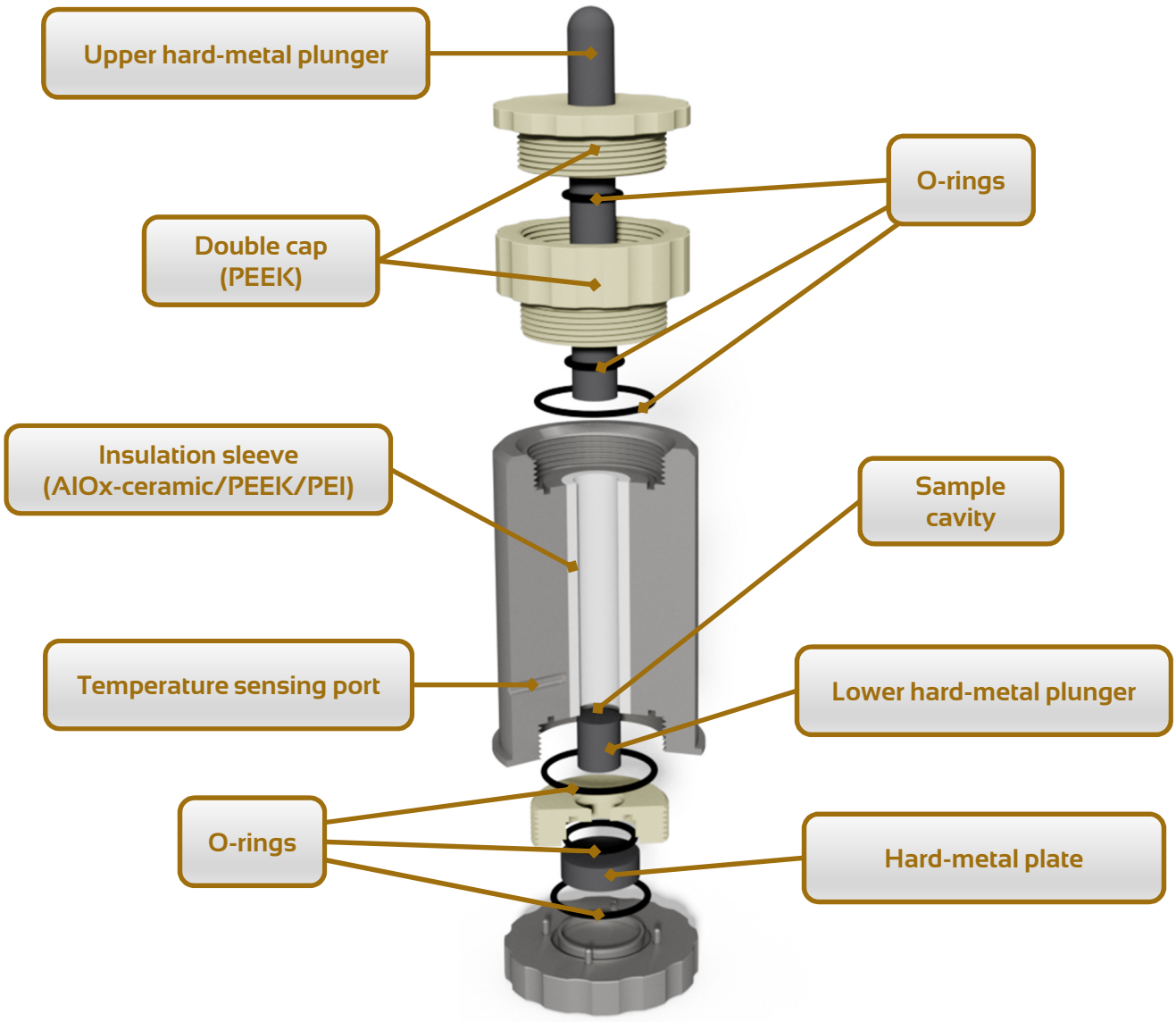
The CompreCell – Handling of sensitive samples

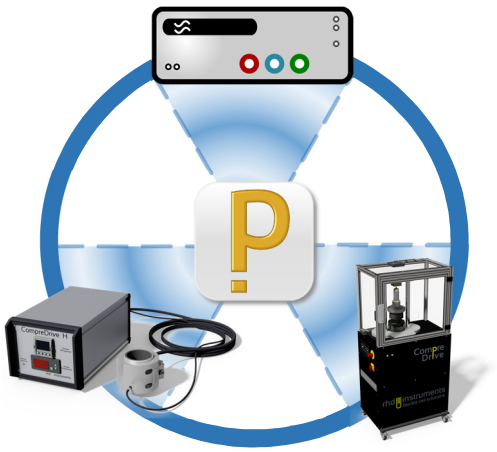
Easy to use, air-tight setup

- Handling of air-/moisture-sensitive samples
- Easy, glovebox compatible assembly/disassambly
- Exchangeable insulation sleeves available (PEEK/PEI)
- Customizable to meet your requirements
- Helium-leakage rate < 10^{-7} mbar l s^{-1} (at 250 °C)





CompreDriveControl – Automate your measurements



Many devices – connected by one program

- Interconnection of thermocontroller, analyzer software and CompreDrive
- Definition of individual, automated procedures

Comprehensive control and software interface

- Full manual control over force and temperature setpoints
- Extensive data recording and export options
- Ability to implement and record additonal devices via plugins
- Set force or pressure using built-in cell definitions

Automated measurement routines

- Procedures defined by setpoint lists
- Customizable end-conditons for setpoint steps
- Synchronization with analyzers by trigger signals

HTTP-based software interface

- Control the CompreDrive with HTTP request from external software
- Remote setpoints directly from analyzer software (if supported)

System requirements (recommended)

Operating system:	Windows 10
RAM:	2 GB
Hard disk space:	200 MB
Ports:	USB 2.0 (for CompreDrive)

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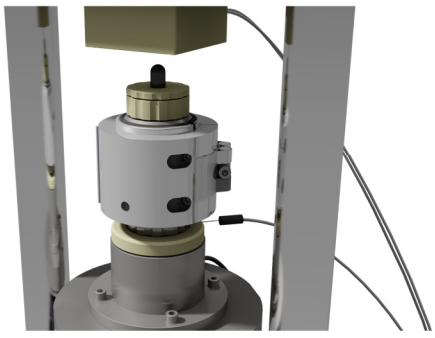
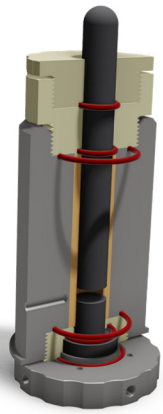
Compre Drive

Specifications:

Maximum force:	75 kN
Force precision:	±0.1 kN
Maximum pressure:	1.7 GPa (Ø 6 mm)/663 MPa (Ø 12 mm)
Temperature compliance range:	-40 °C ↔ +250 °C** **depending on sleeve material
Temperature accuracy:	±0.1 °C
Materials in sample contact:	Hard-metal, AlOx-ceramic/PEEK/PEI
Sample diameter:	6 or 12 mm
Sample height:	≤ 10 mm
Drive type:	Servo-driven lifting spindle
Power supply:	1-phase AC 110-230 V, 50/60 Hz
Maximum total cell height:	149 mm
Dimensions:	167 x 81 x 58 cm
Total weight:	180 kg





For questions, quotes and orders
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