

High Pressure Cell for Magnetometry

DynaCool (D421) / PPMS (P421) / VersaLab (V421)

Often a sample's magnetic properties evolve under the application of substantial hydrostatic pressure. The pressure cell option for magnetometry is manufactured by HMD, a leading Japanese supplier of pressure cells. A simplified design requires neither copper sealing rings or a hydraulic press to achieve the maximum available pressure of 1.3 GPa, while its BeCu construction affords a minimized, uniform magnetic background.

Key Features:

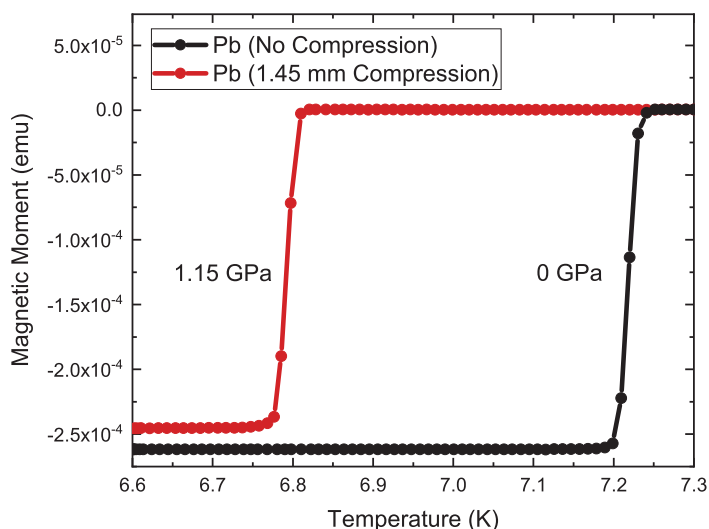
- Complete kit includes required tools and materials for mounting samples, applying pressure to the cell, and measuring pressure
- Included manometer materials are tin and lead whose superconducting transition temperatures can be used to infer actual cell pressure
- BeCu construction provides minimal background signal and is also compatible with AC susceptibility measurements at suitably low frequencies



High Pressure Cell



Pressure Cell Kit



Temperature-dependent magnetization ($H = 2$ Oe) of elemental lead (Pb) depicting the suppression of the superconducting transition with applied pressure. For a given compression length of the cell the transition temperature can be measured and the pressure calculated using an equation of state.

High Pressure Cell (Magnetometry) Specifications

Pressure [P]

Maximum Sample Pressure: 1.3 GPa

Sample Space Parameters

Diameter: 1.7 mm, 2.2 mm
Length: 7 mm

Magnetic Moment [m]

Background Signal: $4 \cdot 10^{-7}$ emu/T

Operational Range

1.8 to 400 K; 0 to 9 T

Specifications are subject to change without notice.