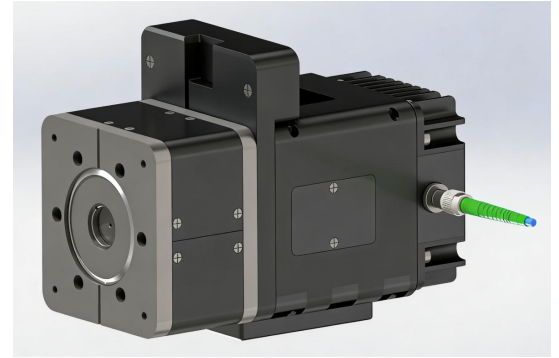


Two-Dimensional Magneto-Optical Trap

Plug-and-Play 2D MOT Cold Atom Beam

- **Ultra-High Flux** Stable atomic beam flux exceeding $1 \times 10^9/s$, dramatically shortening cold atom loading time in science chambers.
- **Fixed Optical Path** Internal optical components are pre-aligned and fixed at the factory to optimal condition, eliminating time-consuming beam alignment.
- **Plug-and-Play** Connect the laser via optical fiber and power the magnetic field coils to output a stable 2D cold atom beam. Portable with the vacuum system, improving flexibility while significantly reducing cold atom system maintenance costs.
- **Ultra-Compact** A fraction of the size of traditional lab-built table-top systems, ideal for portable quantum sensors and neutral atom quantum computing platforms.
- **Industrial-Grade Stability** Designed for long-term operation in harsh environments with exceptional environmental adaptability.
- **Active Coil Design** Low power consumption minimizes coil heat generation, improving thermal stability. Supports rapid tuning and switching for complex experimental timing sequences.
- **Rapid Atom Source Replacement** Innovative modular atom source design enables quick replacement and combination of different atom sources in atmospheric conditions, greatly expanding experimental diversity and reducing maintenance costs.



Product Specifications

Dimensions	100 mm x 125 mm x 160 mm
Weight	3.2 kg
Vacuum Interface	CF35
Differential Pumping Stages	3 (Replaceable and customizable)
Optical Clear Aperture	10 mm (with removable end caps)
Fiber Optic Interface	FC/APC
Central Magnetic Field Gradient	0~25 G/cm (Adjustable)
Center Height	60 mm
Atomic Species	⁸⁷Rb, ⁸⁵Rb, ¹³³Cs (Optional)
Atomic Beam Flux	$\geq 1 \times 10^9/s$
Relative Magnetic Permeability (Housing)	≤ 1.05

Application Fields

- **Quantum Sensing** High-performance cold atom source for cold atom interferometers, gravimeters, magnetometers, and gyroscopes.
- **Atomic Clocks** Atom supply for laboratory-grade and portable atomic frequency standards.
- **Fundamental Physics Research** Rapid preparation of Bose-Einstein Condensates (BEC) and Fermi-degenerate gases.
- **Quantum Computing** Front-end of neutral atom array-based quantum processors.

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*"We transform cutting-edge technology into batch-deliverable standard products through engineering — so you can focus on **exploring physics** instead of **building systems**."*