



attocube

WITTENSTEIN group



IGLU Compressor

helium compressor for closed-cycle cryocoolers

CRYOGENIC INSTRUMENTS

cool tools for cold science

Pushing industrial cryogenics to the next level.

infrastructure autonomy for sub 4K applications



Driving Industrial Cryogenics

The patented IGLU technology revolutionizes the compression of the refrigerant for cryogenic systems. In a clean and robust process, pure compression of helium takes place without the previously common admixture of oil. For the control of usual closed-cycle cryostats the system can integrate a single-phase driver or a filtered three phase driver.



Air Cooling & Full Rack Integration

The compressor system is fully designed for the integration into 19-inch racks. The low heat generation allows the usage in most vented or climatized rooms without additional cooling infrastructure. The system does not require cooling water.



Robust & Reliable for Mobile Application

The first Helium compressor system for sub-4K applications that allows real mobile application. It not only offers easy portability without transport locks, but can be moved, tilted and even can resist light shocks during operation.



Smart, Autonomous & Sustainable

The compressor is controlled by an embedded system that allows for versatile application, deep diagnostics and remote control. The cryocooler including the three-phase motor driver can be adjusted in the cooling power to allow for energy saving operation and standby modes enhancing the lifetime of the full compressor and the coldhead.

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In order to scale up sub-4K applications, compact, autonomous, and low power cryogenics are a vital key condition. With the IGLU compressor, attocube offers exactly that: The compressor allows to avoid the hassle of cooling water and high-power requirements, thus liberating the user from previous severe constraints in terms of infrastructure, space, and energy costs.

Revolutionary compressor technology for 4K applications

- air-cooled, low heat generation (1kW), single phase
→ autonomous from special infrastructure
- 19" rack compatible, orientation-free operation, robust against shocks
→ truly compact & mobile
- remote adjustable power and cold head speed
→ energy saving operation and standby modes



IGLU Compressor

technical specifications



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System Description

helium compressor for closed-cycle cryocoolers

orientation free operation

speed regulation - „adaptive power“

air cooling

ethernet interface for remote control

Electrical Specifications

maximum input power

< 1.3kW

AC input voltage and line frequency

single phase 230V, 50Hz/60Hz
110V option with external transformer

inverter driven pump incl. EMC filter

General Specifications

pressure range

0..25 bar / 0..362 psi

ambient temperature

10..30 °C (non-condensing)

dimensions rack configuration

446 x 266 x 641 mm (483 mm front panel), 17.5" x 10.5" x 25.25"

dimensions stand-alone configuration

446 x 336 x 755 mm (483 mm front panel), 17.5" x 13.2" x 29.7"
(including wheels and handles)

weight

approx. 70kg

country of origin

Federal Republic of Germany



attocMC

Ultra-compact, complete 2.3K cryostat system. Designed for easy integration, OEM supply and industrial applications.

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