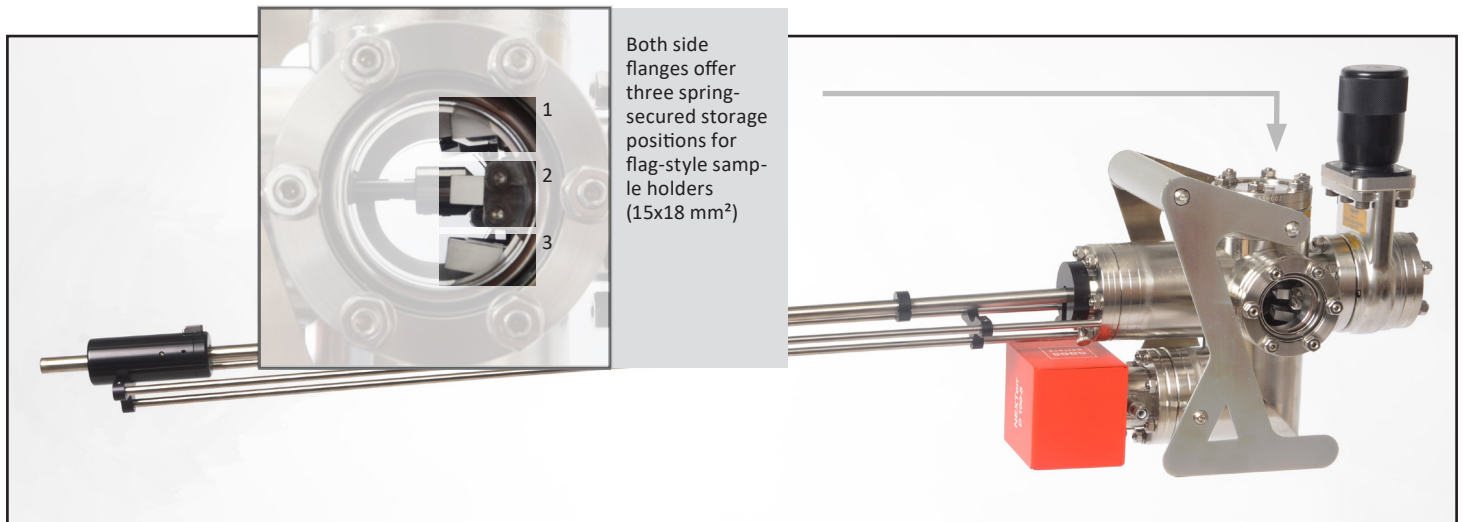


UHV Suitcase

Safe, convenient and versatile sample transfer



Super compact, true UHV conditions and ample storage space – Scientia Omicron’s new UHV suitcase.

The ever-increasing complexity of sample preparation and analysis requires collaborations between research groups, including sharing equipment such as synchrotrons or nano-structuring tools or even using a specialist’s MBE capabilities. Sometimes sample exchange between incompatible systems within the same building also requires a UHV transport container, for example, to avoid connection of vibration-sensitive analysis equipment to production MBE systems with cryo-pumps.

Such a UHV transport container must fulfill the following requirements:

- Keep samples safe from external influence, minimize degradation by optimal UHV conditions, prevent samples from being touched or dropped
- Have a convenient and flexible design that is compact and lightweight, require little space on host systems, provide for a flexible sample transfer concept, and ensure short duration from mounting to sample transfer (i.e. pump-down and bakeout of intermediate tubing)
- Allow for easy and inexpensive transport by plane, car, foot, in person or by a freight forwarder

Scientia Omicron’s new UHV suitcase meets these demands with a base pressure in the 10^{-11} mbar range and storage space for up to six flag-style sample holders, securely held in place by spring-loaded acceptor stages. With its combined ion/non-evaporable getter (NEG) pump, the suitcase has a weight of only 9.2 kg and a size of only 940 mm (L) x 150 mm (W) x 340 mm (H). The pump’s NEG element will continue to pump the suitcase even without external power, including during transport. The offering is completed with an optional system integration kit and tailor-made flightcase, which provides a robust outer packaging when samples are shipped without the personal attention of the scientist.

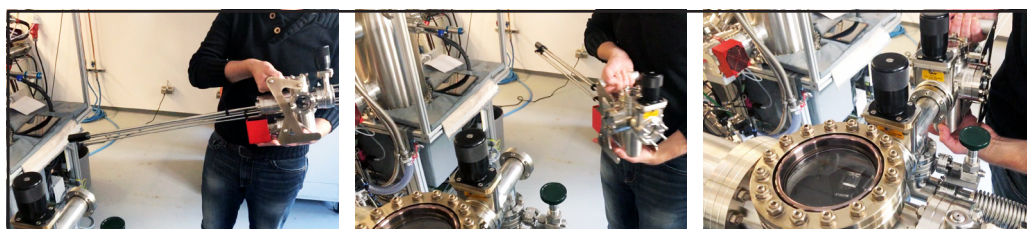
UHV Suitcase Advantages:

- Compact and lightweight (9.2 kg)
- True UHV conditions ($< 1 \times 10^{-10}$ mbar)
- Six secure storage positions for sample flags

Easy Handling & System Integration

Due to its small size and low weight, it is easy for a single user to unmount the UHV suitcase from one host system, carry it to the next system by hand, and then mount it without any additional tools or the help of a second person.

Unless the suitcase is mounted onto a loadlock chamber, the system integration requires a DN40CF tee with a pumping line to a turbo pump to evacuate the volume between suitcase and UHV chamber.

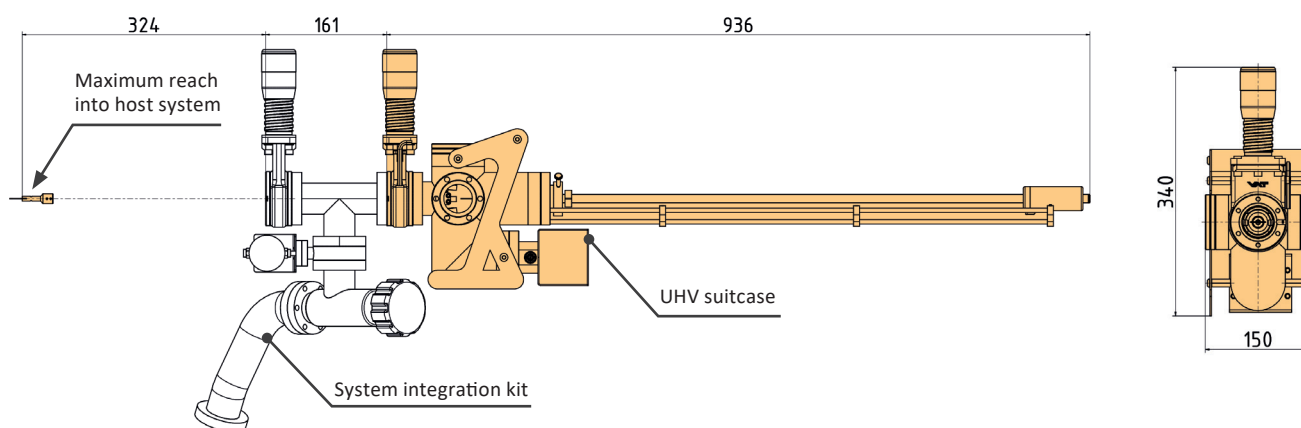


The UHV suitcase is compact and lightweight enough to carry it from one system to the next and to mount it without the help of a second person or any additional tools.

A system integration kit with all necessary vacuum components (tee, valves, pumping line, etc., but no pump and pressure gauge) is available as an option.

Its compactness reduces the risk of collisions with other components and allows the use of the vacuum suitcase on many UHV systems, including self-built, 3rd party and old Scientia Omicron systems.

Technical Data



Guaranteed base pressure:	Factory acceptance <math><1 \times 10^{-10}</math> mbar Site acceptance if part of a system: <math><3 \times 10^{-10}</math> mbar
Weight:	9.2 kg (without pump controller and flightcase)
Dimensions:	Approximately 940 mm (L) x 150 mm (W) x 340 mm (H)
Sample storage:	6 spring-secured positions for Scientia Omicron's flag-style sample holders (base plate size: 15 x 18 mm ² , max. height: 8 mm)
Maximum reach into host system:	appr. 320 mm (with standard suitcase and system integration kit)
Bakeout equipment:	Bakeout cover with integrated heater element included
Max. bakeout temperature:	>180°C
Pump controller:	24 V DC, 1.8 kg, 288 mm (L) x 110 mm (W) x 82 mm (H)
Standard accessories:	System integration kit, flightcase, power supply for NEG activation, bakeout enclosure (others on request)

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