

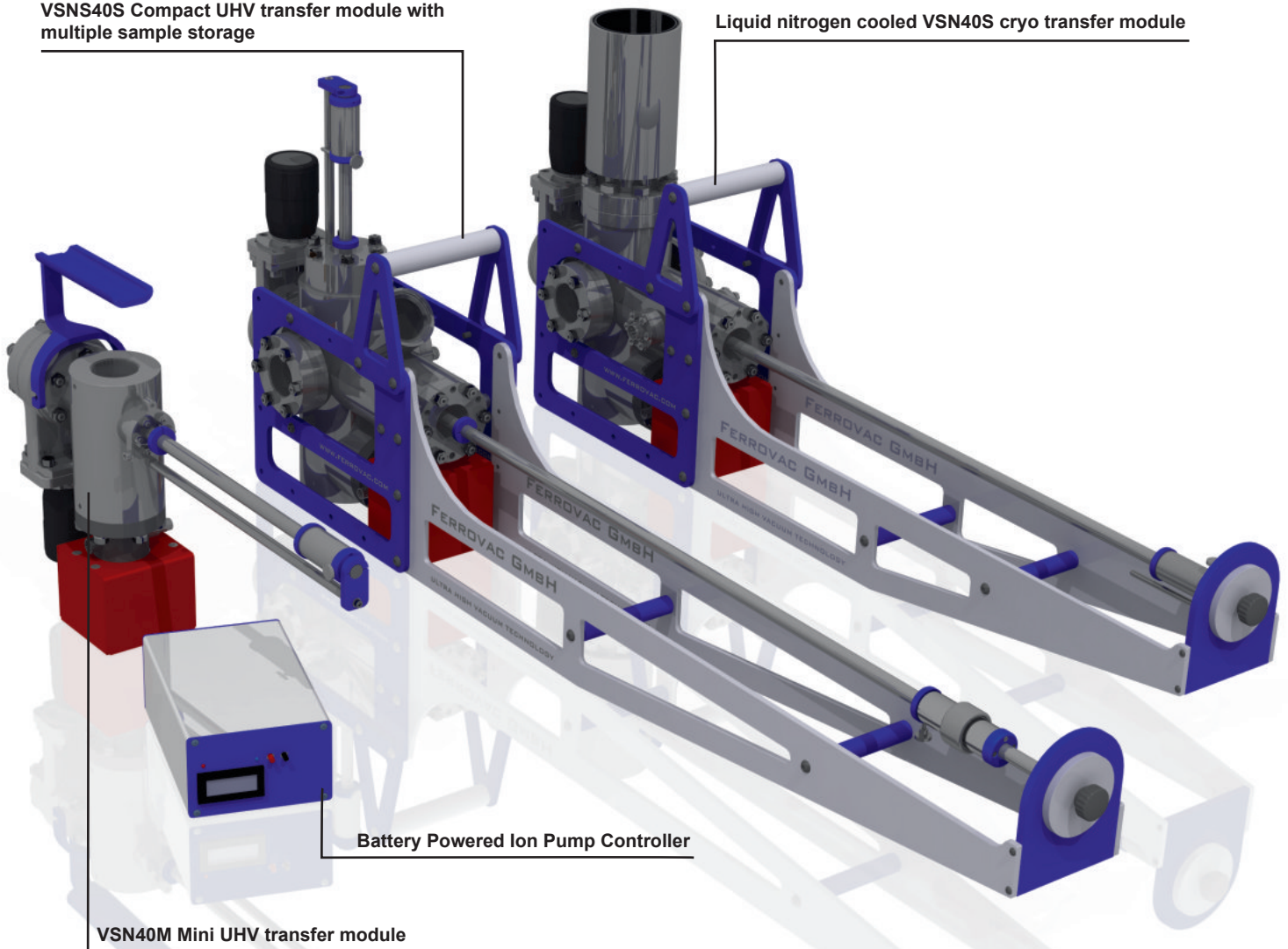
## VSN40 UHV SUITCASE

To ultimately control the environment of a sample to prevent its change from the native state prior to analysis is a demand of nearly every analytical method. A careful control of external conditions of the specimen in terms of atmosphere, pressure and temperature is crucial for obtaining meaningful experimental results. Very often, it is also a necessity to apply complementary analytical techniques on the same specimen. New concepts are therefore needed, to transport and transfer samples between all involved preparation- and analytical instruments while maintaining ultra high vacuum (UHV) conditions and in many cases ultimate temperature control. Here we present UHV and cryo transfer modules that can be implemented to a theoretically unlimited number of participating instruments.

REV 20190626

VSNS40S Compact UHV transfer module with multiple sample storage

Liquid nitrogen cooled VSN40S cryo transfer module



VSN40M Mini UHV transfer module

Battery Powered Ion Pump Controller

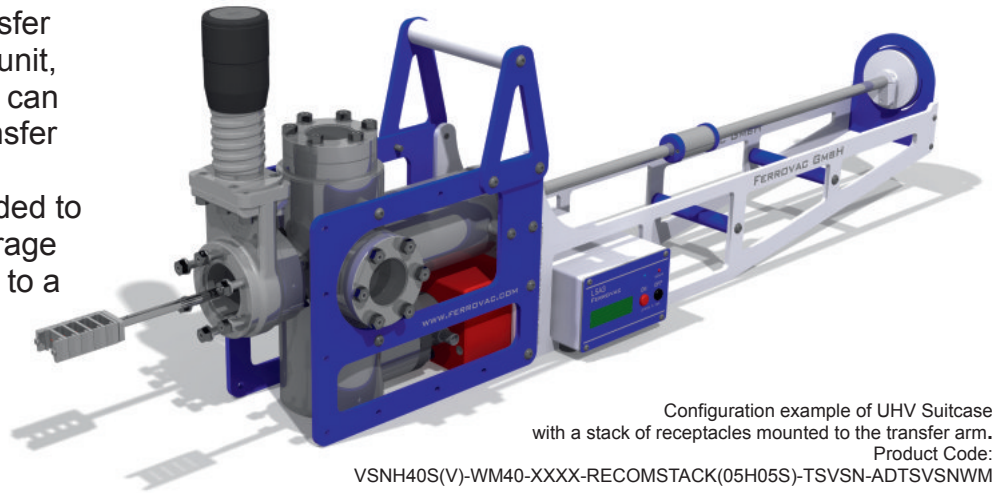
The modular concept of our transfer modules allows for a high level of customization. Please visit our website to learn more about the concepts of specimen transfer between independent instruments or contact us directly at [suitcase@ferrovac.com](mailto:suitcase@ferrovac.com) for a detailed discussion of your requirements.

Ferrovac transfer modules are shipped under true ultra high vacuum conditions.

### Storage Sample Transfer

Instead of a single sample transfer mechanism, a sample storage unit, such as a stack of receptacles, can be mounted on the sample transfer manipulator.

An external manipulator is needed to grab the samples from that storage once the suitcase is connected to a system.



Configuration example of UHV Suitcase with a stack of receptacles mounted to the transfer arm.

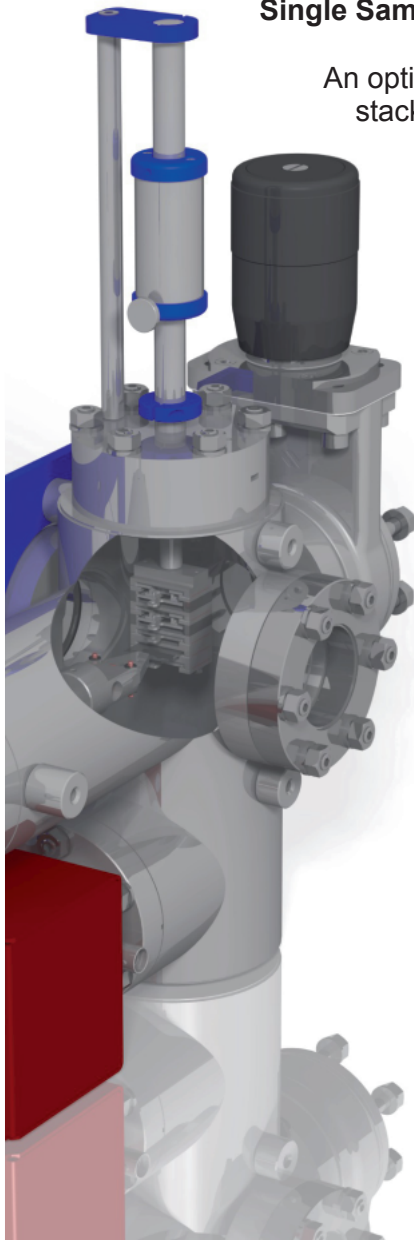
Product Code:

VSNH40S(V)-WM40-XXXX-RECOMSTACK(05H05S)-TSVSN-ADTSVSNWM

### Single Sample Transfer with sample storage option

An optional key feature is to install an additional linear/rotary feedthrough featuring a stack of receptacles serving as storage for multiple samples.

This allows the user to store and transport multiple samples under UHV conditions in one go. While connected to a host system, a larger number of samples can be exchanged sequentially.



Configuration example with single sample transfer and sample stack storage unit.

Product Code:

VSNH40S(V)-WM40-XXXX-PGWS(OMH)-TSVSN-ADTSVSNWM-MD40(Y0)-RECOMSTACK(S3D2)-TSMDDH

### References:

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- L.T. Stephenson et al., PLoS ONE 13 (2018), pp. 1-13.
- S.S.A. Gerstl et al., Microscopy and Microanalysis 23 (2017), pp. 612-613.
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