

NOVASTAR: OPTIMIZED CABINET CONFIGURATION



ENHANCED DESIGN AND PERFORMANCE

SCHROFF Novastar is an innovative range of 19" cabinets and accessories for general electronic applications, including measurement control, testing systems and laboratory equipment. The cabinets provide a unique balance of function and style, even without cladding parts, deco frames or doors. Slim frame design ensures a lightweight, yet stable cabinet that is assembled, rather than welded, providing a configurable and customizable assembly with slim 553 mm width dimensions to save space. SCHROFF Novastar cabinets save the width of one cabinet for every 13 cabinets installed, offering substantial savings in relation to room space and equipment costs in a typical multi-cabinet installation. This allows additional space for critical infrastructure, such as fire protection or communication systems, without the need for additional capacity to be made available elsewhere in the building.

Maintaining enhanced design while still ensuring effective load bearing capability is a key consideration for cabinet equipment specification. Three frame types are available in the SCHROFF Novastar range to meet the demands for vibration resistance and load capacity in line with the recognized IEC Standard—Slim-Line, Heavy-Duty and Universal.

INTRODUCTION

When looking to optimize the storage of measuring equipment and instruments, striking a balance between function and aesthetics is a key consideration. To take advantage of space savings, customization, cost-effectiveness, robustness, reliability and ease of integration, requires an easily configurable solution designed to meet your specific needs.

This whitepaper examines the important design opportunities to maximize system reliability and integration with innovative cabinet configurations. Focusing on the SCHROFF Novastar platform concept from nVent SCHROFF, nVent's leading brand of electronics packaging components and systems, this document highlights the advantages of advanced technology for a broad range of applications and system designs.



The Slim-Line profile offers a static load capacity of 200 kg (440 lbs), which is increased to 400 kg (880 lbs) with the use of the Heavy-Duty profile option. A T-slot is also incorporated in the Heavy-Duty profile to mount accessories such as support arms through the use of slide-nuts. Universal profiles offer the same load-bearing capability as Heavy-Duty frames, with the option to locate the 19" plane to meet customer specifications. In additional load tests outside of the IEC Standard, SCHROFF Novastar cabinets have outperformed these requirements and are able to accommodate a much higher load without the risk of deformation or collapse. By going beyond the industry requirements, SCHROFF Novastar cabinets provide a robust and reliable solution that gives you reassurance that your equipment will perform as designed.

Customizable mounting options can be provided with the SCHROFF Novastar frame options. These enable additional stiffening, different mounting options for base plates and customer-specific parts and accessories, such as monitors or laptops, to be included within the assembly. The SCHROFF Novastar cabinet configurations also allow for the easy fixing of castors to give end users flexibility in their room layout, and further fixing options can attach the cabinet to a pallet.

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DESIGN FLEXIBILITY

System designers and end users need flexibility from their equipment. With the SCHROFF Novastar range, cabinet depth can be bespoke to your requirements by changing the intermediate profile between the front and rear frames. The mechanical features and mounting positions for the uprights, castors and ancillary accessories in the front and rear frame remain the same, enabling designers to combine a slim cabinet structure with the ideal depth to suit their specific equipment. SCHROFF Novastar is the only range of cabinets available that can be stacked without modifications, providing a breadth of options for collocation.

This ensures the same assembly can be retained that can then be stacked with other accessories to help improve customer integration. These include vertical stacking kits and side-by-side connections for modular cabinet design.

In addition to its stacking capability, SCHROFF Novastar combines clever functionality and robust design with a range of fully configurable parts and accessories with earthing included. Smart cladding parts and side panels incorporate practical, easy-to-use features, such as quick-release fasteners and no need for special tooling. Custom modifications are also available, such as cut-outs and color options, within a short lead-time of ten days.

The SCHROFF Novastar range of door panels has been extended to offer Plexiglas and perforated options to broaden the range of choices available to customers. A 180° door opening angle

provides easy access to equipment, combined with simple hinge changes that do not require specialist tools. Rear panel options include full height or shortened versions with integrated cable basing, which are easily removable without any tools.

An extensive range of top covers are also available with SCHROFF Novastar cabinets – flush, raised and with integrated fans. A high-end raised top cover option is also available to allow devices up to 50 kg (110 lbs) to be placed on top of the cabinet. Welded angles and a strengthened cover help provide additional stiffness and an improved finish, with fasteners to secure the cover plate from the inside of the cabinet.

Three base plate possibilities can be configured and selected to meet application requirements. Modular base plates can be equipped with cover panels, brushstrip and filter depending on specifications. A heavy-load base plate is able to carry up to 50 kg (110 lbs) to accommodate heavy equipment which needs to be stored on the base of the cabinet. A base plinth with levelling feet and optional brush strip protect the below edges of the cabinet

COMPLIANT WITH RECOGNIZED STANDARDS

In today's applications, it is vital that systems are fully compliant with the necessary standards. SCHROFF Novastar cabinets exceed the recognized requirements for electrical safety, static load-carrying capacity and Restriction on Hazardous Substances (RoHS) regulations. As part of the SCHROFF Novastar frame accessories range, an IP40 gasket kit can be provided for complete ingress protection from dust and water, as well as provide added noise reduction benefits by absorbing any impact between the panel, cover and cabinet frame.

nVent invests in extensive product development and testing programs to ensure compliance with industry requirements. Selecting a robust and reliable cabinet system from SCHROFF Novastar ensures proven performance to function as specified.

DESIGN YOUR STANDARD

Working with nVent to specify and select a SCHROFF Novastar cabinet provide the opportunity for extensive customization and flexibility. To respond to the increased demand across the measurement, testing and control industries for even greater personalization, nVent now provides the capability to configure customized specifications from its standard product portfolio and supply these in a rapid turnaround of ten days through its Design Your Standard service.

Modifications to customized designs are possible based on customer requirements and almost 30 different SCHROFF Novastar frame dimensions. Customers are also able to add specific requirements to their specification through nVent's Traceparts portal via CAD files, which can then be integrated into the final assembly and delivered within the same ten day period.

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ADAPTING TO A CHANGING MARKET

Changes in customer requirements have been the driving influence for innovation and change in the design and assembly of cabinets.



The SCHROFF Novastar range offers a slim and lightweight, yet robust design that is customizable and configurable to your exact needs. Used widely across a broad range of applications,

SCHROFF Novastar cabinets give you the flexibility and choice to select a solution that's tailored to your application, with the proven performance and reassurance from an experienced industry expert.

Working in collaboration with nVent enables you to benefit from unbiased guidance and technical support to take advantage of cost savings, improved system efficiency and reliable, long-term performance.

SCHROFF NOVASTAR APPLICATIONS REFERENCES

Audio, Video and Broadcasting



- Cabinets for control room equipment for global sports events, such as the Soccer World Cup

Contact:

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TESTS AND MEASUREMENT



- Supplier for racing teams in the Formula One Championship, providing one dedicated cabinet per driver to enable engineers to program each vehicle for race conditions
- Meteorological analyser units
- Fiber optic cable acceptance test unit for data analysis and tests instruments
- Measuring and analysis instrumentation for the cigarette and filter industries

DEFENSE

- Reinforced cabinets with specific accessories and shock absorbers at the bottom and rear of the cabinet for aircraft carrier



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