

CONNECT AND PROTECT

Varistar Cabinet Platform


nvent

SCHROFF

Cabinets – Varistar Platform

TWO LOAD-CARRYING CLASSES, ONE ACCESSORY RANGE: THE VARISTAR FRAMES



Varistar is the only cabinet platform that allows identical accessories to be combined with two basic frames. The cabinet is available in Slim-Line (narrow) or Heavy-Duty (robust) profiles.

SLIM-LINE PROFILE

The Slim-Line version is based on very thin steel profiles in order to obtain the greatest opening width between the uprights. This frame can accommodate either 19" equipment or metric components to ETS 3000-119-3. With a maximum load of 400 kg* on the 19" plane the frame is still highly robust and suitable for demanding applications in electronics or data and network technology.

HEAVY-DUTY PROFILE

The Heavy-Duty frame, on the other hand, is designed for use with heavy loads or in regions susceptible to earthquakes. It offers on the one hand maximum stability for a load of up to 800 kg* on the 19" plane and, thanks to its high bending stiffness, can meet the shock and vibration requirements such as occur in railway and traffic signal installations, in the control of rotating machines, on commercial ships or in low-level military installations. In the IEC 61587-2 earthquake test the Heavy-Duty frame qualified for use in Bellcore Zone 3. Equipped with very simple, low-cost strengthening brackets, the Varistar Seismic version meets the demands of Bellcore Zone 4.



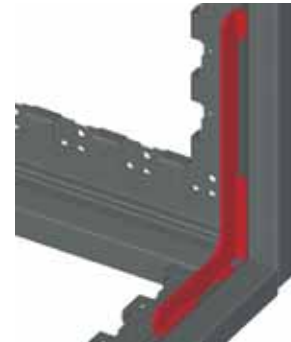
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Slim-Line profile



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Heavy-Duty profile



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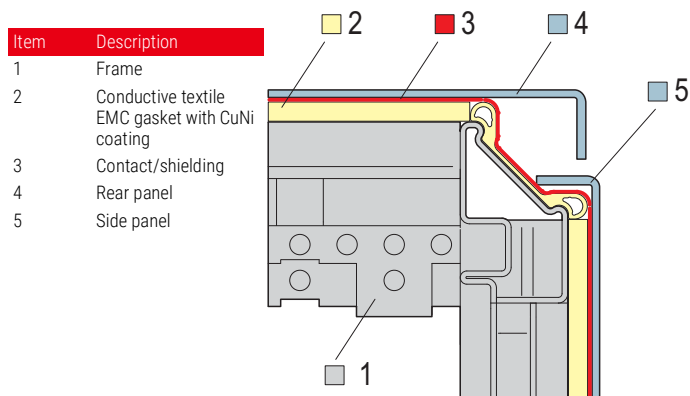
Heavy-duty profile with strengthening bracket

| | Standard | Slim-Line | Heavy-Duty |
|-------------------------------|-------------|--|--|
| Static load-carrying capacity | IEC 61587-1 | 400 kg * | 800 kg * |
| Type of protection | IEC 60529 | IP 20, IP 55 | IP 20, IP 55 |
| Shock test | IEC 61587-1 | Maximum acceleration: 5 g Duration: 11 ms | Maximum acceleration: 5 g Duration: 11 ms |
| Vibration test | IEC 61587-1 | Frequency: 5 Hz -100 Hz Acceleration: 1 g | Frequency: 5 Hz -100 Hz Acceleration: 1 g |
| Earthquake test | IEC 61587-2 | | Standard: up to Bellcore Zone 3, acceleration: 3 g, Frequency: 1 Hz ... 5 Hz With strengthening: up to Bellcore Zone 4, acceleration: 5 g, Frequency: 2 Hz ... 5 Hz |
| EMC shielding | IEC 61587-3 | 60 dB at 1 GHz, 40 dB at 3 GHz | 60 dB at 1 GHz, 40 dB at 3 GHz |
| Installing options | | 19" or ETS | 19" |

* The figures for static load-carrying capacity are based on the test procedure of IEC 61587-1. In this procedure the cabinet must withstand being moved about on the floor and dropped from a height of 1000 mm onto a hard surface while carrying the maximum load, without sustaining substantial deformations to the frame or to the 19" panel/ slide mounts. The possible loading for the Varistar frame is therefore, under normal operating conditions, considerably higher than the test value given under IEC 61587-1.

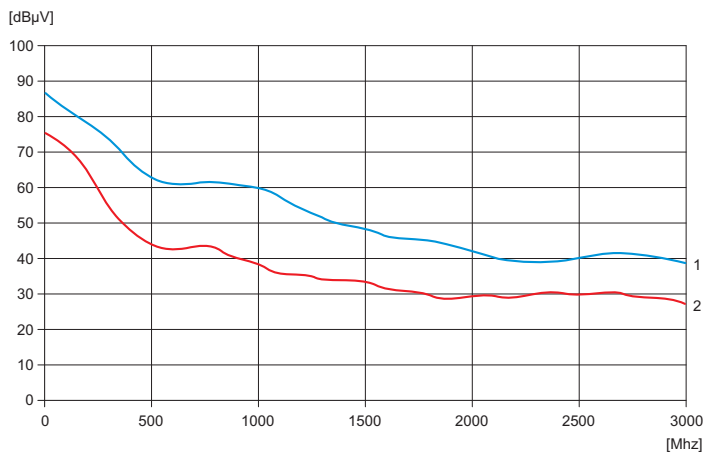
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DECIDEDLY DIFFERENT: THE VARISTAR SEALING AND SHIELDING CONCEPT



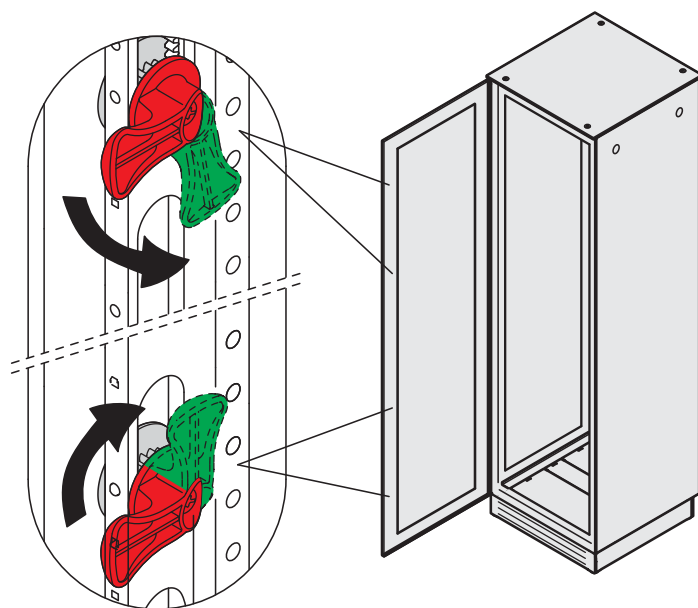
In most shielding designs currently available, conductive seals or springs connect the cover parts to the cabinet frame. The points of contact have thus to be kept conductive and corrosion-free. With VARISTAR, however, the conductive textile gaskets connect the cladding parts together directly, with two results: A considerably better shielding performance of 60 dB at 1 GHz (and 40 dB at 3 GHz) is obtained than with conventional designs. There is no longer any need for expensive treatment of the frame surface. The textile EMC gasket is at the same time also a shield against dust and water to IP 55. Where no shielding is required, a rubber gasket offering the same IP 55 protection is used. Both gaskets are fitted to the 45°-angled surface of the exterior of the frame.

Shielding up to 3 GHz



1: Cabinet with solid door 2: Cabinet with perforated door

SMOOTH-RUNNING AND ABSOLUTELY TIGHT: THE VARISTAR LOCKING SYSTEM

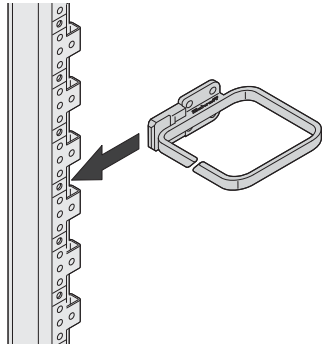


The latching system also contributes to protection class and shielding. The innovative locking bar accepts a variable number of deadbolts, depending on the cabinet height, to ensure the most even compression of the gaskets. And best of all: Activating the locking bar causes the latches to move in the opposite direction. Thus the frictional forces of the bolts are balanced out and a resulting lopsided vertical force on the door is avoided. The doors close easily and with an absolute seal. EMC doors are fitted with 4-point locking, IP and server doors with 3-point locking.

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PEERLESS AND EFFICIENT: THE VARISTAR PROFILE (SLIM-LINE AND HEAVY-DUTY)

19" brackets are fixed without depth members



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The VARISTAR profile has fixing holes in all three axes (height, width, depth), following a 25 mm grid. This allows for the greatest variability in the fitting of components and accessories. Thus for example 19" panel/slide mounts may be installed in a 600 mm wide cabinet without additional depth members. This saves costs and provides stability on the 19" plane. The intricately shaped form of the profile offers further new assembly possibilities. Cable eyes, for instance, can be plugged directly into the frame whilst fixing themselves.

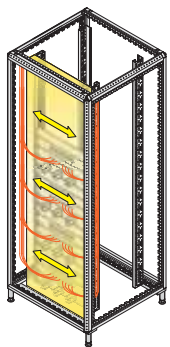
Self-fixing cable eyes

NEW AND WELL THOUGHT OUT: VARISTAR CABLE MANAGEMENT

Schroff has divided the available space in the VARISTAR into zones and given a simple description of the position and use of these zones. The coloured arrows show the direction of the cable ducting.

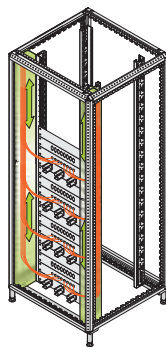
For each zone a range of accessories has been developed to suit the conditions in the cabinet, which simplifies cabling and thus helps to include as many connections as possible in a distribution cabinet. The VARISTAR profile with its many fixing options has thus proved a real boon.

Zone 1



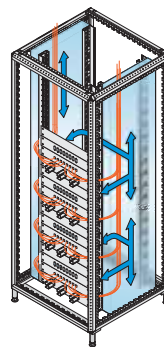
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Zone 2



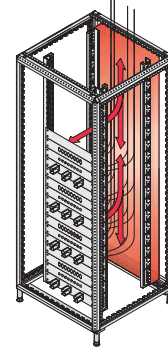
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Zone 3



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Zone 4



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- In front of the 19" plane
- In this zone the patch cables are ducted horizontally between the distribution fields

- On the right and left hand side, next to the 19" plane
- In this zone patch cables are ducted vertically in a kind of channel to the individual components

- Zone 3 is located laterally behind the 19" plane across the cabinet depth, mainly for 800 mm wide cabinets
- In this zone entering cable bundles are fixed in the cabinet, parted and ducted to the rear of the distribution fields

- Zone 4 is located in the rear across the cabinet width
- Alternative to zone 3 for only 600 mm wide cabinets or when cable entry is at the rear of the cabinet

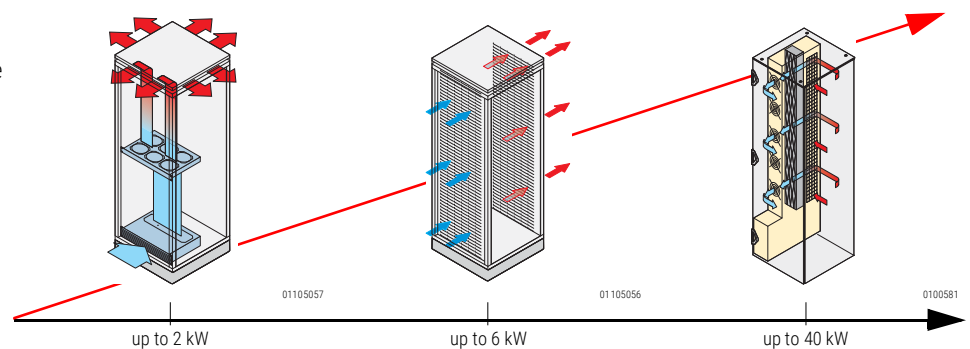
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HEAT DISSIPATION TO EXACT REQUIREMENTS: COOLING CONCEPTS FOR VARISTAR

Depending on installed heat dissipation and the surroundings, VARISTAR offers various cooling options and also good conditions for problem-free operation of the installed equipment.

Either top cover fans are used to assist the heat dissipation or perforated doors with 78 % air throughput are fitted.

Additionally, VARISTAR LHX 20/40 with assembled air/water heat exchanger allows to cool especially strained appliances with water. And that for up to 40 kW per cabinet.



Fan unit, positioned inside



78 % air throughput



Air/water heat exchanger

CLASSIC AND CONSISTENT: VARISTAR COLOUR AND DESIGN

As well as its functional aspects, in the development of VARISTAR the design of the individual components and their combined effect on the appearance of the cabinet was always a priority. The cabinet gains its characteristic, unmistakable look from the high narrow door with the memorable hinges and the very thin, almost inconspicuous top cover edge. While rack, base and cover are offered in black grey (RAL 7021) for all standard cabinets, a choice of two colour options are available - even in our standard programme - for side panels, doors and rear panels:

Either entirely black grey (RAL 7021), as is the contemporary look in data centres and recording studios. Or in light grey (RAL 7035), whereby an attractive combination of mainly light surfaces with a few dark accents is obtained.

Alternatively, VARISTAR can be supplied in many RAL colours within 15 working days, or even as a combination of two special colours. The current range of colours can be seen online at www.schroff.de/modification.



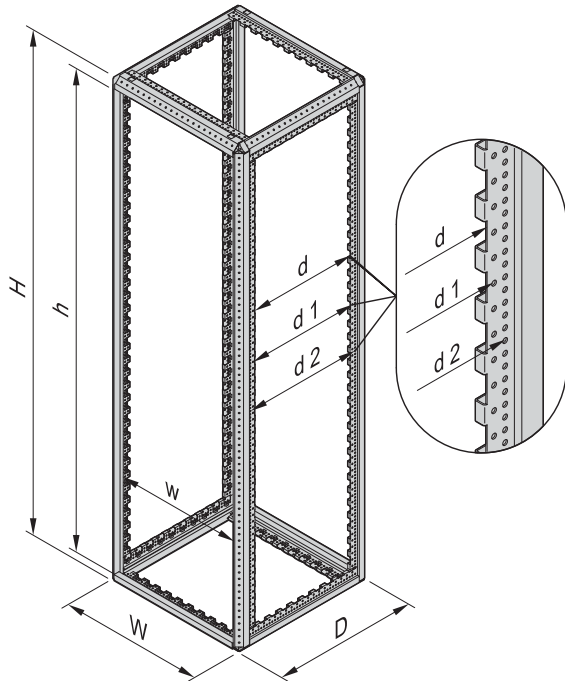
Colour RAL 7021 (black grey)



Colour combination RAL 7035/RAL 7021 (light grey/black grey)

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FRAME DIMENSIONS



Height

| Cabinet height | | Frame | |
|----------------|----|-------|------|
| mm | U | H mm | h mm |
| 1200 | 24 | 1192 | 1102 |
| 1400 | 29 | 1392 | 1302 |
| 1600 | 33 | 1592 | 1502 |
| 1800 | 38 | 1792 | 1702 |
| 2000 | 42 | 1992 | 1902 |
| 2200 | 47 | 2192 | 2102 |

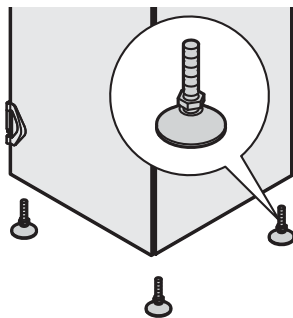
Width

| Cabinet width | Frame W | Slim-Line w | Heavy-Duty w |
|---------------|---------|-------------|--------------|
| mm | mm | mm | mm |
| 600 | 592 | 535 | 502 |
| 800 | 792 | 735 | 702 |

Depth

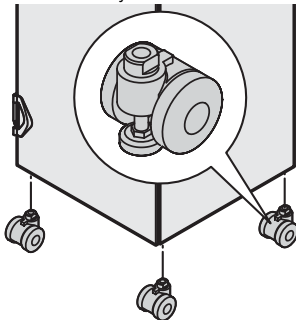
| Cabinet depth | D | Frame d | d ₁ | d ₂ |
|---------------|------|---------|----------------|----------------|
| mm | mm | mm | mm | mm |
| 300 | 292 | 128.8 | 150 | 175 |
| 600 | 592 | 428.8 | 450 | 475 |
| 800 | 792 | 628.8 | 650 | 675 |
| 900 | 892 | 728.8 | 750 | 775 |
| 1000 | 992 | 828.8 | 850 | 875 |
| 1100 | 1092 | 928.8 | 950 | 975 |
| 1200 | 1192 | 1028.8 | 1050 | 1075 |

Adjustable feet

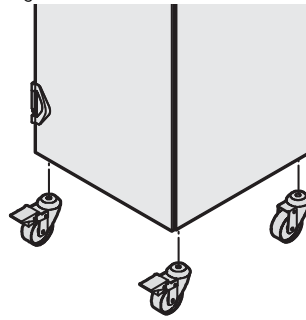


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Castors with adjustable feet



Locking castors

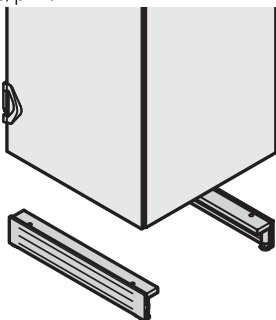


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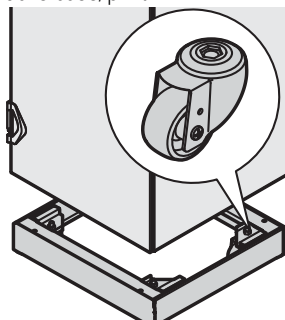
Height of adjustable feet, castors, base/plinth

| | |
|------------------------------|--------------------|
| Adjustable feet | 20 ... 40 mm |
| Locking castors | 85 mm |
| Castors with adjustable feet | 85 ... 95 mm |
| Base/plinth (feet) | 112 ... 132 mm |
| Base/plinth, mobile | 126.5 ... 134.5 mm |

Base/plinth



Mobile base/plinth

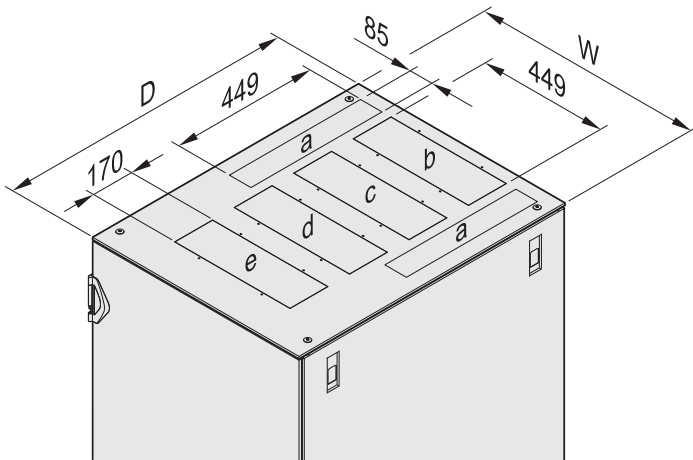


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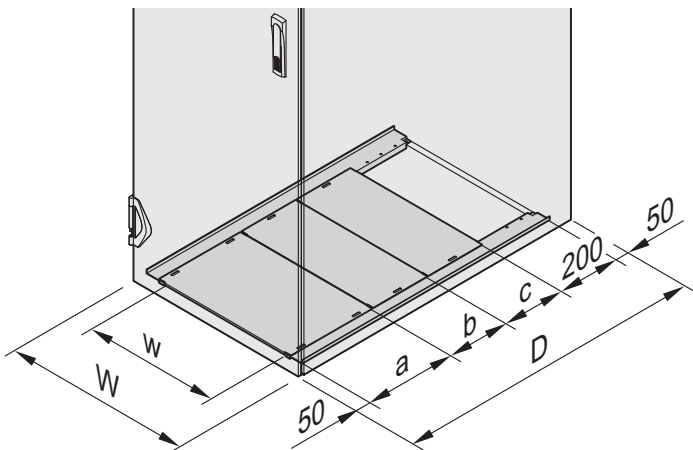
TOP COVER WITH CUT-OUT ZONES



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| D | W = 600 mm | | | | | W = 800 mm | | | | |
|------|------------|---|---|---|---|------------|---|---|---|---|
| | a | b | c | d | e | a | b | c | d | e |
| 600 | - | ✓ | ✓ | - | - | - | ✓ | ✓ | - | - |
| 800 | - | ✓ | ✓ | ✓ | - | ✓ | ✓ | ✓ | ✓ | - |
| 900 | - | ✓ | ✓ | ✓ | - | ✓ | ✓ | ✓ | ✓ | - |
| 1000 | - | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 1100 | - | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 1200 | - | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

BASE PLATE, MULTI-PIECE



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| D | Depth in mm | | |
|------|-------------|-----|-----|
| | a | b | c |
| 600 | 300 | - | - |
| 800 | 300 | 200 | - |
| 900 | 300 | 300 | - |
| 1000 | 300 | 200 | 200 |
| 1100 | 300 | 300 | 200 |
| 1200 | 300 | 300 | 300 |

| Cabinet width W mm | Opening width w mm |
|--------------------------|--------------------------|
| 600 | 426 |
| 800 | 626 |

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