



GEMIS®
Air-insulated medium-voltage
switchgear

GEMIS® - General

GEMIS®, the air-insulated, metal-clad medium-voltage switchgear, can be used universally in industry, in public buildings, in the chemical industry and power supply companies.

The system design was developed on the basis of the **IEC 62271-200** and complies with the demanding requirements in terms of personal safety, operational availability and ease of use.



This makes the GREINER **GEMIS®** medium-voltage switchgear suitable for both the implementation of power distribution boards and for specific complex applications up to **12 kV, 31,5 kA**.

Due to the modular configuration the customer is able to determine the cubicle sequence and equipment and can also choose between major manufacturer of withdrawable units.

The cubicle design consists of galvanised, strong foldet sheet steel that is screwed together to form a torsionally rigid construction. The individual cubicles are separated by double-walled sheet steel.



The busbar barriers between the cubicles consist of a GRP insulating panel with three bushings. Within the cubicle the **triple separation** with internal metal partitions delivers maximum **personal safety and operational availability**. Each unit consists of 3 power compartments and 1 auxiliary compartment where all the instruments and cabeling are housed.

Busbar compartment①

Cable terminal compartment④

Circuit breaker compartment③

Low-voltage / auxiliary compartment②



The doors on the front are **internal arc-proof** and also feature safety glass and an ergonomic single-hand door lock for convenient access to the circuit breaker, cable terminal and low-voltage compartments. Except for the low-voltage compartment, each compartment is equipped with a pressure release duct with a flap at the top that safely limits any pressure increase in the cubicle in the event of a malfunction.



GEMIS® - Regulations and Operating Conditions

Regulations

The GEMIS® medium-voltage switchgear is a **factory-assembled** system that is **type-tested** at a renowned test institute using a direct mains connection in accordance with **IEC 62271-200**.

The installed switching devices are designed in accordance with the corresponding switching device standards.

The installation and operating conditions are defined within IEC 60694, section 2.

Operating conditions

The panels of this **withdrawable design** are intended for closed electrical operating areas that are only open to qualified personnel and individuals who have been appropriately instructed (degree of **accessibility A**, IEC 62271-200, section 6.106). The standard version of the system is suitable for a maximum site altitude of 1000 m above mean sea level.



For higher site altitudes a modified variant with a higher rated insulation level must be selected. The **IP 4X** degree of protection guarantees the highest levels of safety for indoor installation. Category **LSC2B** operational availability permits simplified maintenance or replacement of the main switching devices while the high-voltage cables are live.

GEMIS® - Personal Safety

All switching operations and moving of the circuit-breaker can be carried out with the door closed. The **GEMIS®** medium-voltage switchgear complies with internal arc class **IAC A FLR 31.5 kA, 1 s** to IEC 62271-200 annex A. Depending on the capacity and the ceiling height of the switch room, different options for pressure reduction are available:

Lateral flashings

Absorber

Pressure release duct



Pressure-resistant viewing windows in the doors permit inspection of the cubicles and position of the switching devices. Different **locking options** guarantee maximum operational safety.

GEMIS® - Equipment Options

- **Withdrawable vacuum circuit breaker with visual isolating distance**



- **Earthing switch; motor drive optional**



- **Current and voltage transformers**



- **Surge arrester**

- **Mechanical interlocking options of the devices prevent inadvertent operation**



- **Ergonomic single-hand locking system of the pressure-resistant doors**



- **Variable low-voltage compartment**



- **Mimic diagram**

- **Various RAL colours available**

GEMIS® - Technical Data

Technical data:			
Rated voltage	U_r	12 kV	24 kV
Rated lightning impulse withstand voltage	U_p	75 kV	
Rated short-time power frequency withstand voltage	U_d	28 kV	
Rated operating current	I_r	2500 A	
Rated short-time withstand current	I_k	31.5 kA	
Rated short-circuit duration	t_k	3 sec.	
Rated peak withstand current	I_p	80 kA	
Rated frequency	f_r	50 Hz	
			soon available
Dimensions:			
Width	W	650, 800, 1000 mm	
Height	H	2200 mm	
Depth	D	1250 mm	
Operational safety:			
Accessibility		A	
Internal arc class to IEC 62271-200	IAC	FLR-31,5 kA, 1 sec.	
Operational availability	LSC	LSC2b	
Degree of protection	IP	IP 4X	

GEMIS® - Advantages

- ✓ **Highest levels of personal safety**
- ✓ **Maximum operational availability**
- ✓ **Type-tested to IEC 62271- 200,
factory-assembled**
- ✓ **Compact dimensions**
- ✓ **Modular design with many options**
- ✓ **Installation-friendly cable terminal
compartment**
- ✓ **Ergonomic single-hand locking system of
the pressure-resistant doors**
- ✓ **Variable low-voltage compartment**
- ✓ **Simple extension of the system**
- ✓ **Individual application options**