

Medium voltage switchgears type G.I.S.E.L.A and MINEX

SF₆ insulated
rated voltage 12, 17.5, 25 and 36 kV
rated current 400 and 630 A



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ISO 9001
BUREAU VERITAS
Certification



Technical benefits



Concrete type packaged substation

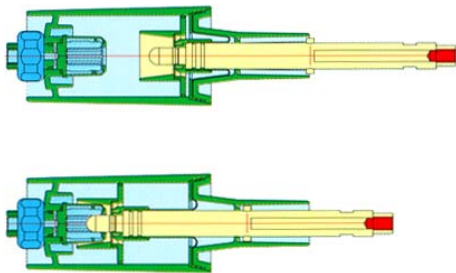


Kiosk substation

Due to the small cubicle width of 210 mm (cable cubicles) the SF₆ switchgear type MINEX-C is the ideal switchgear for the installation into compact stations.

Complete modification sets for the installation into concrete- and steel stations of older types are available.

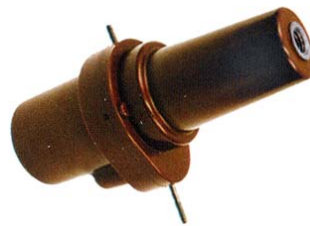
Sealed arcing chamber system



The quenching of the arc takes place in separate, hermetically sealed arcing chambers. That means the quenching medium and the insulating medium are arranged in separate sections, independent from each other.

The full switching capacity is always guaranteed.

Plug-in cones with capacitive coupling electrode

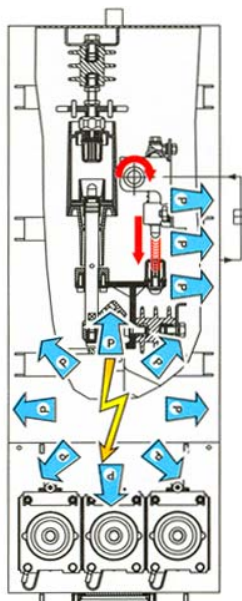


The connection cones are made of reinforced cycloaliphatic epoxy resin. An electrode for the capacitive coupling is embedded in the epoxy resin, parallel to the live part of the bushing. By using high-quality epoxy resins and latest cast-iron technology, the maximum safety is given regarding the insulation strength of the dielectric and the protection against accidental contacts. Outside cones to DIN 43636 or inside cones to DIN 47637 can be used as per choice.

Active protection for persons and objects

Type MINEX

Each SF₆ switchgear type MINEX is equipped with an arc fault-limiting device offering a maximum protection to persons and objects in case of internal faults. Said protection is realized via quick acting earthing switches installed in the cable cubicles. These are automatically actuated in case of an arc fault and this in few milliseconds.



Type G.I.S.E.L.A

At SF₆ insulated switchgear, which will open via bursting discs with high energy potential in case of an internal arc fault, the resulting environmental effects have especially to be considered.

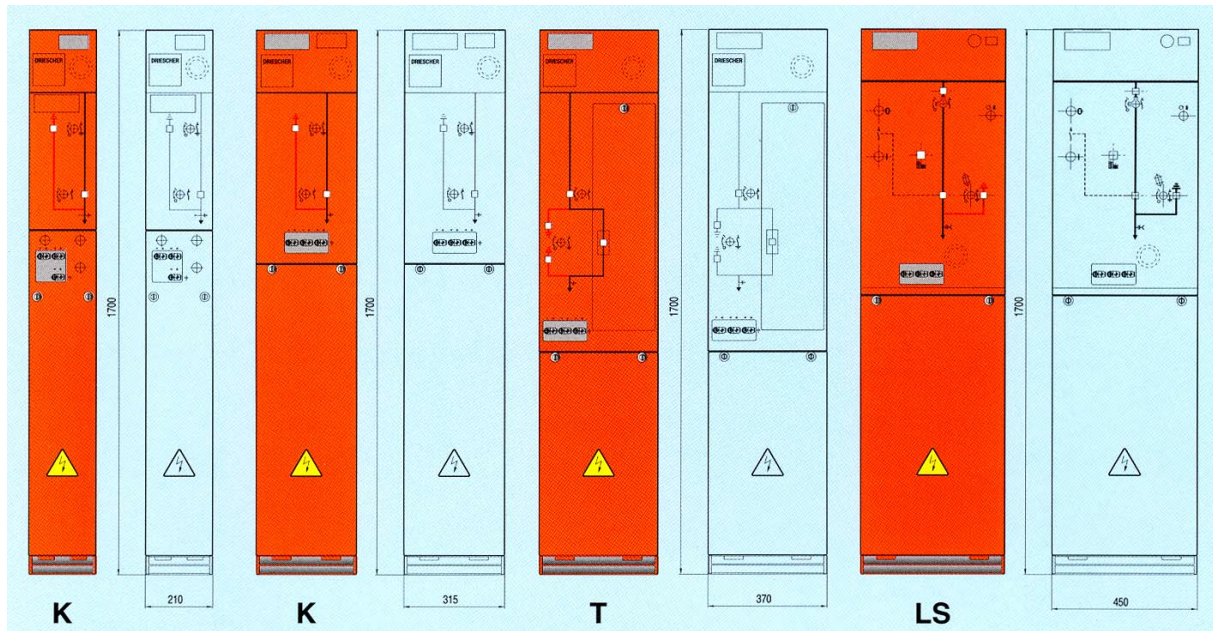
For safety reasons, the operating pressure of the bursting disc was selected quite low at our SF₆ insulated switchgear type G.I.S.E.L.A.

For the installation of our G.I.S.E.L.A. switchgear in factory-assembled stations made by Driescher, test reports are available regarding arc fault tests. Before installing this switchgear into stations produced by other manufacturers, the pressure resistance of the stations has to be checked first with the relevant manufacturer. Alternatively, an arc fault absorber, made by Driescher, can be used.

Advantages of the arc fault limiting device:

- No outlet of hot gas out of the SF₆ insulated compartment, that means optimum protection to persons, objects and environment.
- No pressure wave to the housing, that means simple and thus economical housing constructions.
- As an option, the arc fault limiting device can be installed in the cable connection compartment. That means, limitation of the damage extent and after inspection the switchgear can further be operated after faults which arised in the connection area.
- Switchgears of older design can easily be replaced, as no pressure-wave effects have to be taken into consideration.

Technical data



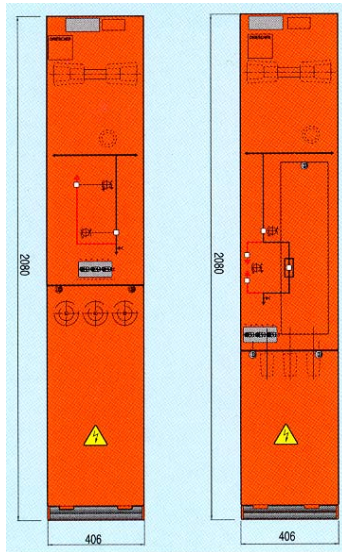
K – cable cubicle, T – transformer cubicle, LS – circuit breaker cubicle

voltages of 12 – 25 kV	cable cubicle MINEX-C	cable cubicle GISELA, MINEX	transformer cubicle GISELA, MINEX	circuit breaker cubicle
cubicle width	210 mm	315 mm	370 mm	450 mm
cubicle depth	528 mm	518 mm	553 / 703 mm	685 mm
cubicle height	1300 / 1700 mm	1300 / 1700 mm	1300 / 1700 mm	1700 mm
weight	90 kg	100 kg	140 kg	270 kg
connection via straight connector	•		•	
connection via elbow connector		•	•	•
connection via inside cone	•		•	
switchgear extension via normal cable connector (optional)		•		

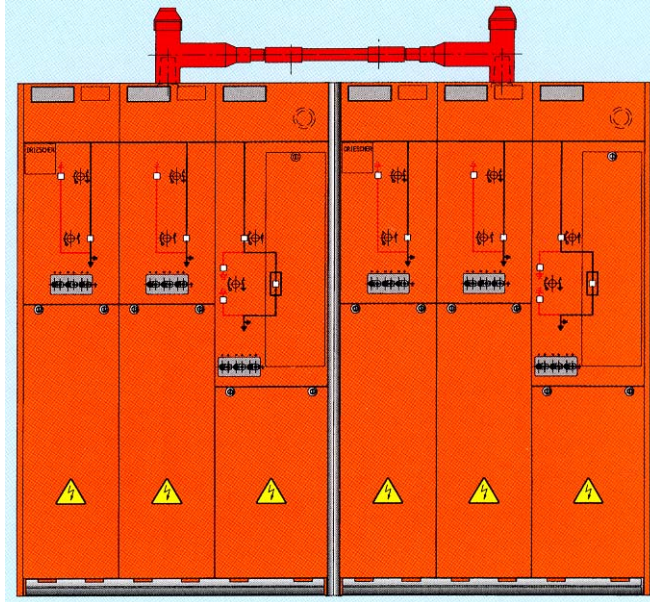
voltages of 12 – 25 kV	cable cubicle and transformer cubicle			circuit breaker cubicle		
rated voltage	12 kV	17.5 kV	25 kV	12 kV	17.5 kV	25 kV
rated current	630 A	630 A	630 A	630 A	630 A	630 A
rated short time current	25 kA	20 kA	20 kA	20 kA	20 kA	16 kA
rated making current	63 kA	50 kA	40 kA	50 kA	50 kA	40 kA
rated short circuit breaking current	-	-	-	20 kA	20 kA	16 kA
rated mainly active load breaking current	630 A	630 A	630 A	-	-	-
rated closed loop breaking current	630 A	630 A	630 A	-	-	-
rated line-charging breaking current	25 A	25 A	25 A	-	-	-
rated overhead line breaking current	10 A	10 A	10 A	-	-	-
rated no load transformer breaking current	10 A	10 A	10 A	-	-	-
rated breaking current under earth-fault conditions	300 A	300 A	300 A	-	-	-
rated lightning impulse withstand voltage	125/145 kV	125/145 kV	125/145 kV	125/145 kV	125/145 kV	125/145 kV
rated power frequency withstand voltage	50/60 kV	50/60 kV	50/60 kV	50/60 kV	50/60 kV	50/60 kV
ambient temperature						

Extra implementation examples

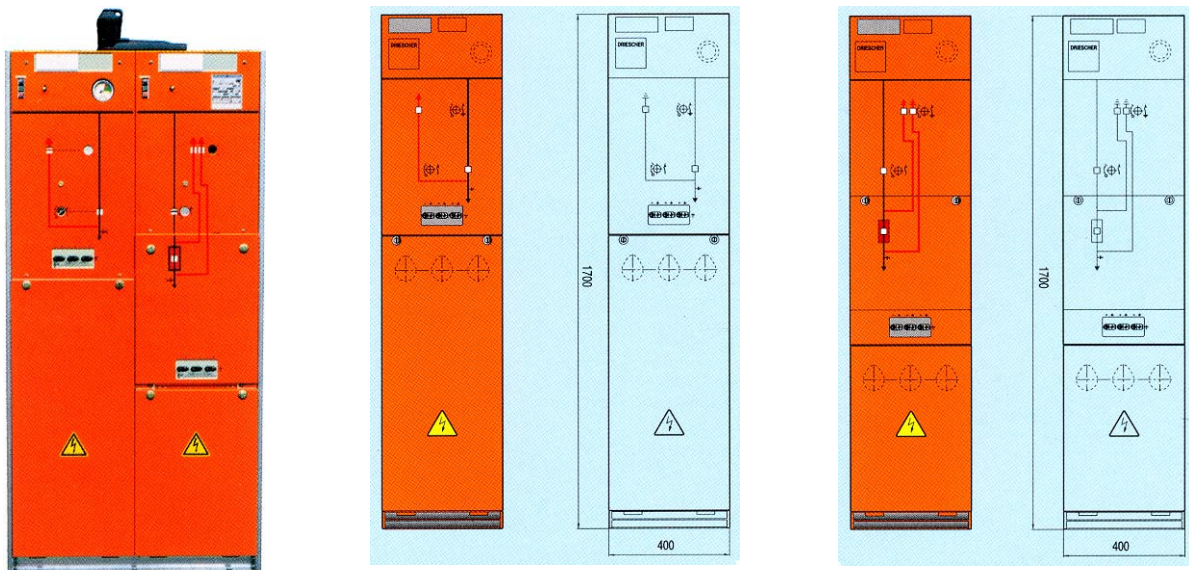
Single cubicles with busbar connection via cone coupling adaptor
(arrangement possibilities on request)



Switchgear extension by interfacing via cable connector
(switchgear extension only possible with relevant prepared switchgears)



Switchgear example for rated voltage of 36 kV – technical data



voltage of 36 kV	transformer cubicle	cable cubicle
rated voltage		36 kV
rated current		630 A
rated short time current		20 kA
rated making current		40 kA
rated mainly active load breaking current	400 / 630 A	
rated closed loop breaking current	400 / 630 A	
rated line-charging breaking current		20 A
rated overhead line breaking current		6 A
rated no load transformer breaking current		6 A
rated breaking current under earth-fault conditions		300 A
rated lightning impulse withstand voltage		170 / 195 kV
rated power frequency withstand voltage		70 / 80 kV
cubicle width	400 mm	400 mm
cubicle depth	903 mm	548 mm
cubicle height	1700 mm	1700 mm
weight	210 kg	130 kg
connection via elbow connector	•	•
switchgear extension via normal cable connector	•	•
ambient temperature		

Specifications are subject to change without notice.

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