



B A T E L
e l e k t r o m e k a n i k

Product Catalog



BATEL
elektromekanik





BATEL has a tradition of switching technologies over many years.

BATEL offers varieties of specializations in Medium Voltage Metal Enclosed Cubicle & Metal-Clad Switchgear equipments such as MV Vacuum Circuit Breaker & Vacuum Interrupters, SF6 Gas Circuit Breaker, SF6 Gas Load Break Switch, SF6 Gas Disconnecter etc. and is committed to supply electrical energy to our living and industry.

Due to the belief of technology and progress, **BATEL** invests on the state-of-art-technologies. **BATEL** is introducing products which incorporate new technologies with technological know-how, which have been accumulated over the long time, and trust of the market, and to focus on gaining international trust through aggressive overseas markets.

BATEL is ready to serve to all customers needs.



BNA *SF6* GAS DISCONNECTOR
TYPE 12-24-36 kV





General Specifications

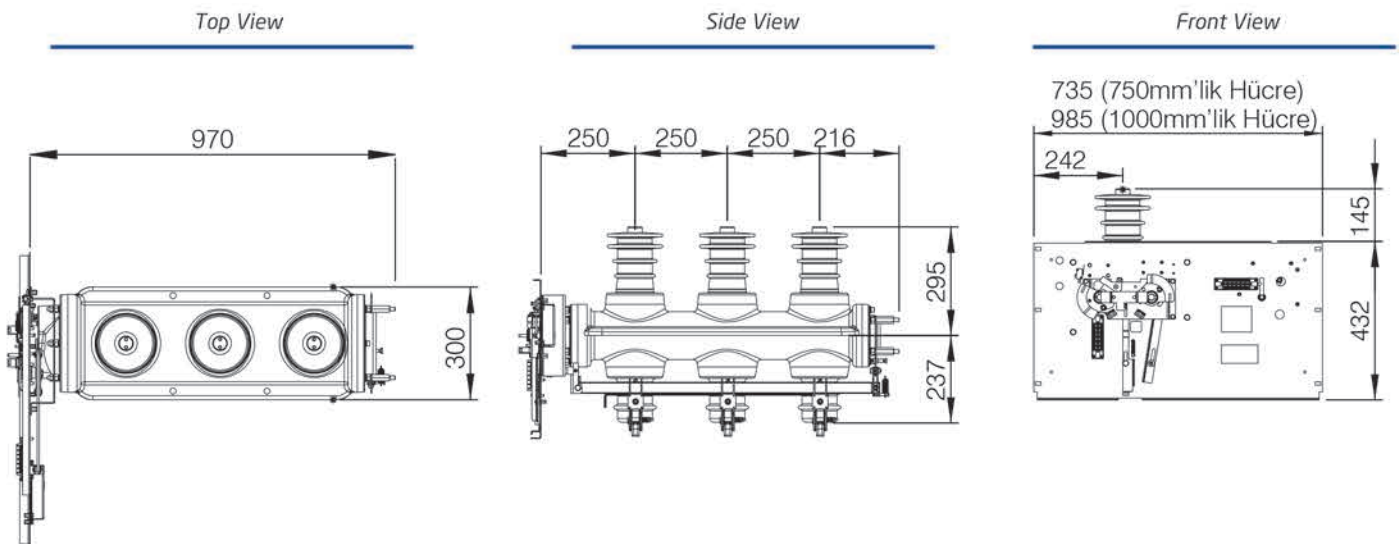
- The main contacts of the disconnector are in the epoxy resin enclosure which is filled with 1.5 bar SF6 gas and this sealed pressure system guaranteed for its life.
- The disconnector contacts can be in one of the two positions; closed / open.
- The earthing switch is outside of the enclosure, and its position clearly and safely can be observed directly. Its operation is interlocked with the mechanism of the main contacts.
- The safety of the gas filled enclosure is secured by the membrane system positioned at back side. Auxiliary contacts indicating the position of the main contacts and for the earthing switch are present.
- Key type interlocks are possible.
- SF6 Gas Disconnector can be optionally equipped with VB640 type hermetically sealed temperature compensated digital pressure indicator with two alarm contacts.

BNA SF6 GAS DISCONNECTOR

TYPE 12-24-36 kV

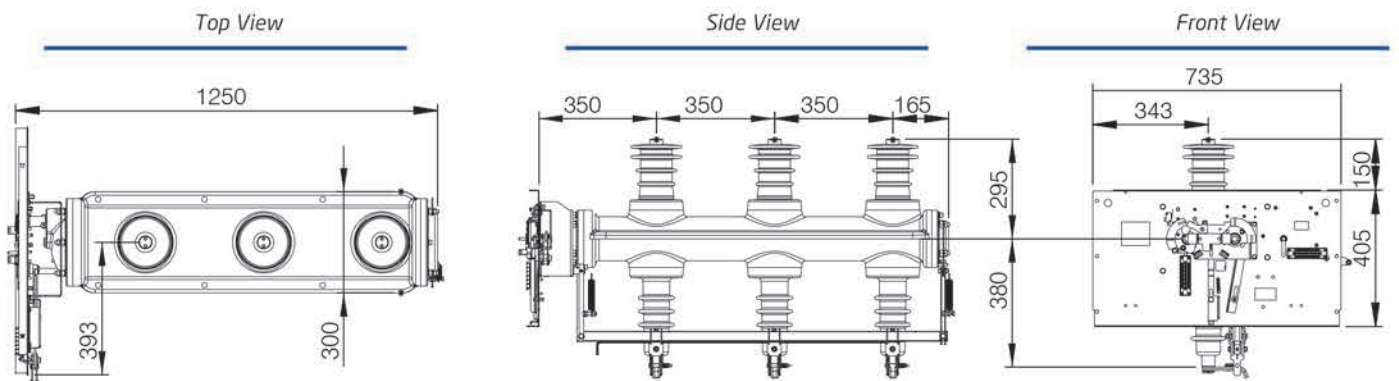
BNA 12 - 24 kV 630-1250A DISCONNECTOR

Weight : 55-67 kg



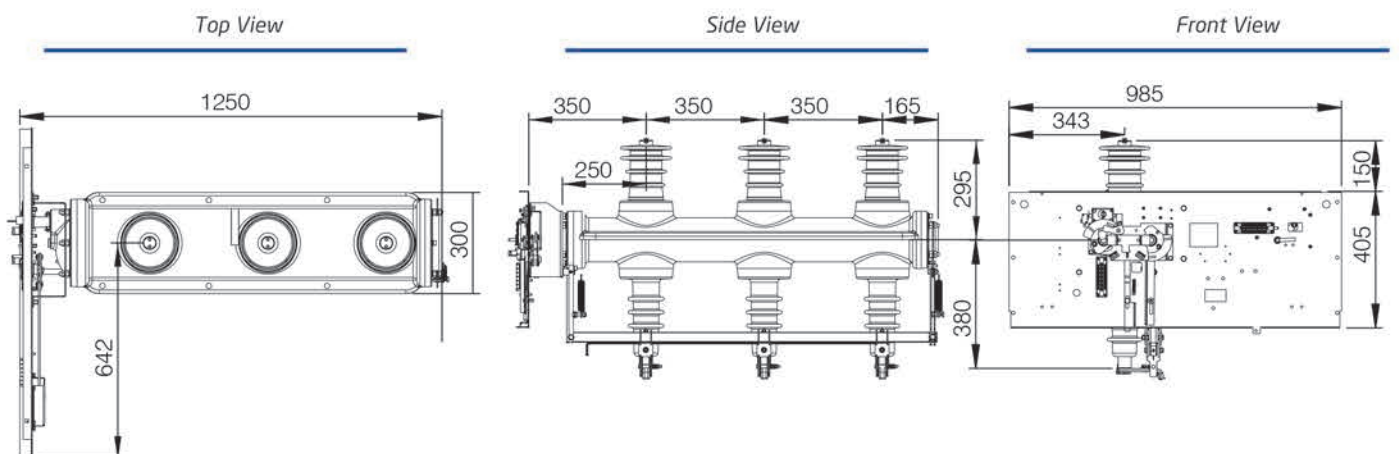
BNA 36 kV 630-1250A DISCONNECTOR (width: 750mm)

Weight : 68-78 kg



BNA 36 kV 630-1250A DISCONNECTOR (width: 1000mm)

Weight : 70-80 kg





BNA 36 kV

630-1250A DISCONNECTOR



BNA 12 - 24 kV

630-1250A DISCONNECTOR



Technical Characteristics

Rated voltage	kV	12	24	36
50 Hz, 1 min Insulation voltage	kV rms	28	50	70
50 Hz, 1 min isolation voltage	kV rms	32	60	80
1.2/50μs insulation voltage	kV peak	75	125	170
1.2/50μs isolation voltage	kV peak	85	145	195
Rated frequency	Hz	50	50	50
Rated current	A	630/1250	630/1250	630/1250
Short time withstand current	kA, 1s	16/20/25	16/20/25	16/20/25
Related Standard	IEC 62271-102			
Mechanical endurance class	M2 (2000 operations)			
Ambient temperature for working	°C	- 5 / + 40		

BYA SF6 GAS LOAD BREAK SWITCH

TYPE 12-24-36 kV





General Specifications

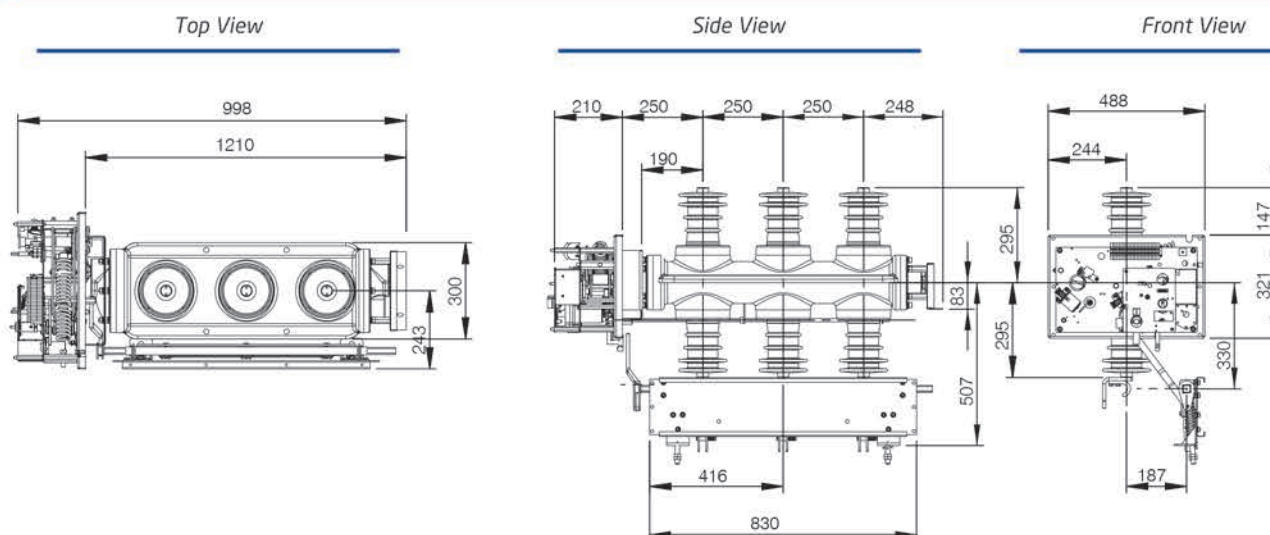
- The main contacts of the switch in the epoxy resin enclosure which is filled with 1.5 bar SF6 gas and this sealed pressure system guaranteed for its life.
- The switch contacts can be in one of the two positions; closed / open. The earthing switch is outside of the enclosure, and its position clearly and safely can be observed directly. Its operation is interlocked with the mechanism of the main contacts.
- The safety of the gas filled enclosure is secured by the membrane system positioned at back side. Auxiliary contacts indicating the position of the main contacts and for the earthing switch are present. Operating mechanism can be charged manually by lever or optionally by motor. Charged mechanism has stored energy for closing and opening.
- Closing and opening functions can be done by the push-buttons or by the release coils. Fuse-trip system optionally can be equipped. Key type interlocks are possible.
- SF6 Gas Load Break Switch can be optionally equipped with VB640 type hermetically sealed temperature compensated digital pressure indicator with two alarm contacts.

BYA SF6 GAS LOAD BREAK SWITCH

TYPE 12-24-36 kV

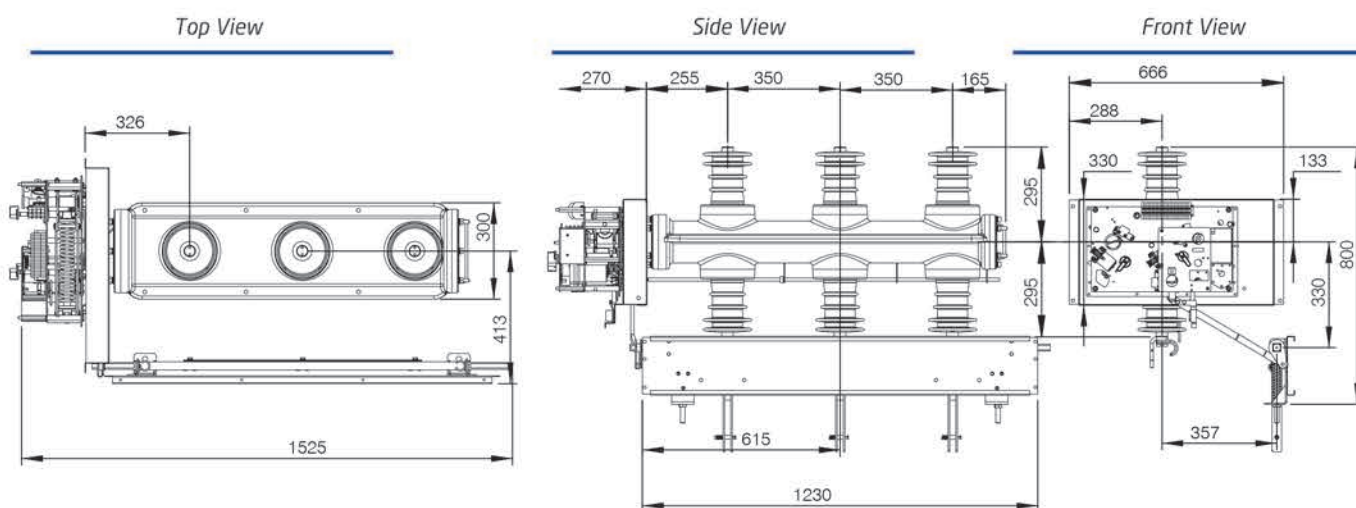
BYA 12 - 24 kV 630A LOAD BREAK SWITCH

Weight : 82 kg



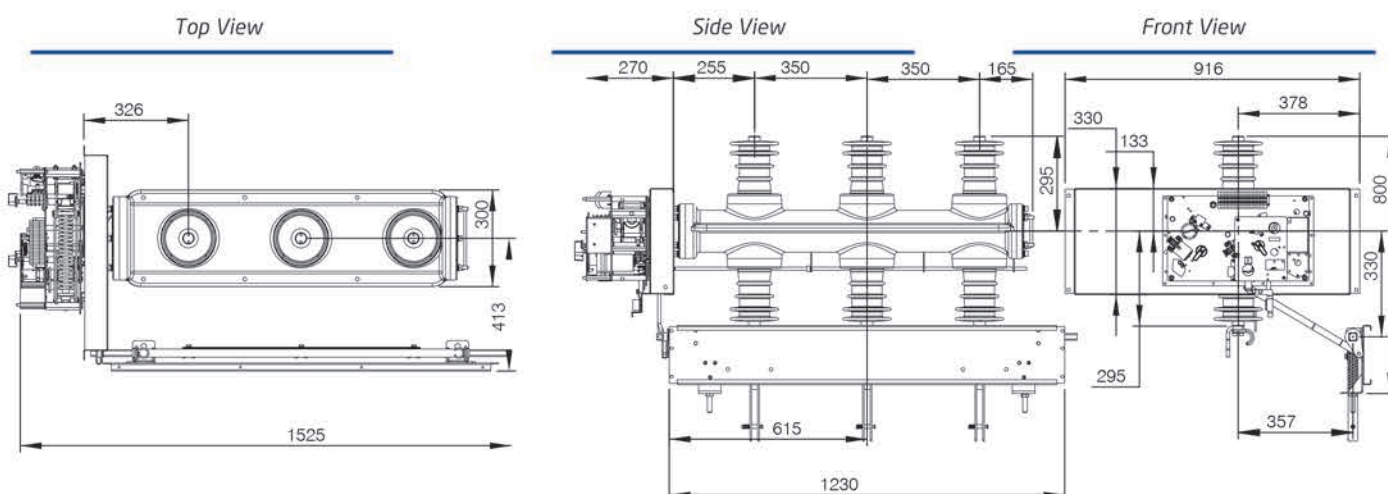
BYA 36 kV 630A LOAD BREAK SWITCH (width: 750mm)

Weight : 93 kg



BYA 36 kV 630A LOAD BREAK SWITCH (width: 1000mm)

Weight : 95 kg





BYA 36 kV

630 A LOAD BREAK SWITCH



BYA

12 - 24 kV

630 A LOAD BREAK SWITCH



Technical Characteristics

Rated voltage	kV	12	24	36
50 Hz, 1 min Insulation voltage	kV rms	28	50	70
50 Hz, 1 min isolation voltage	kV rms	32	60	80
1.2/50μs insulation voltage	kV peak	75	125	170
1.2/50μs isolation voltage	kV peak	85	145	195
Rated frequency	Hz	50	50	50
Rated current	A	630	630	630
Short time withstand current	kA, 1s	16	16	16
Related Standard	IEC 62271-103, IEC 62271-105			
Electrical endurance class	E3 (100 breaks)			
Mechanical endurance class	M1 (1000 operations)			
Earthing switch class	E2 (5 making)			
Ambient temperature for working	°C	- 5 / + 40		

Release coil and charging motor options :
Power supply

24 V DC - 48 V DC - 110 V DC - 220 V AC

BVI *VACUUM INTERRUPTERS*

TYPE

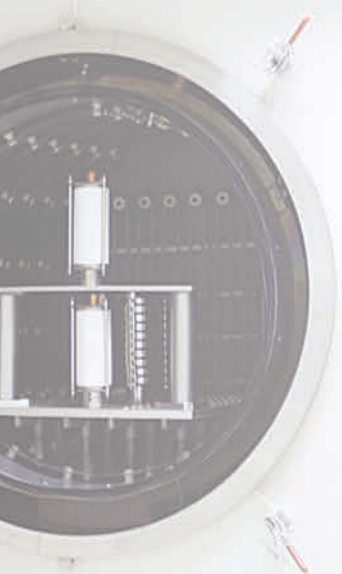




BATEL is a pioneer company in electromechanical industry, offering environmentally friendly medium voltage vacuum interrupters that manufactured under latest technologies for high quality mass-production with ISO 9001 & 14001 quality assurance systems in BATEL facilities.

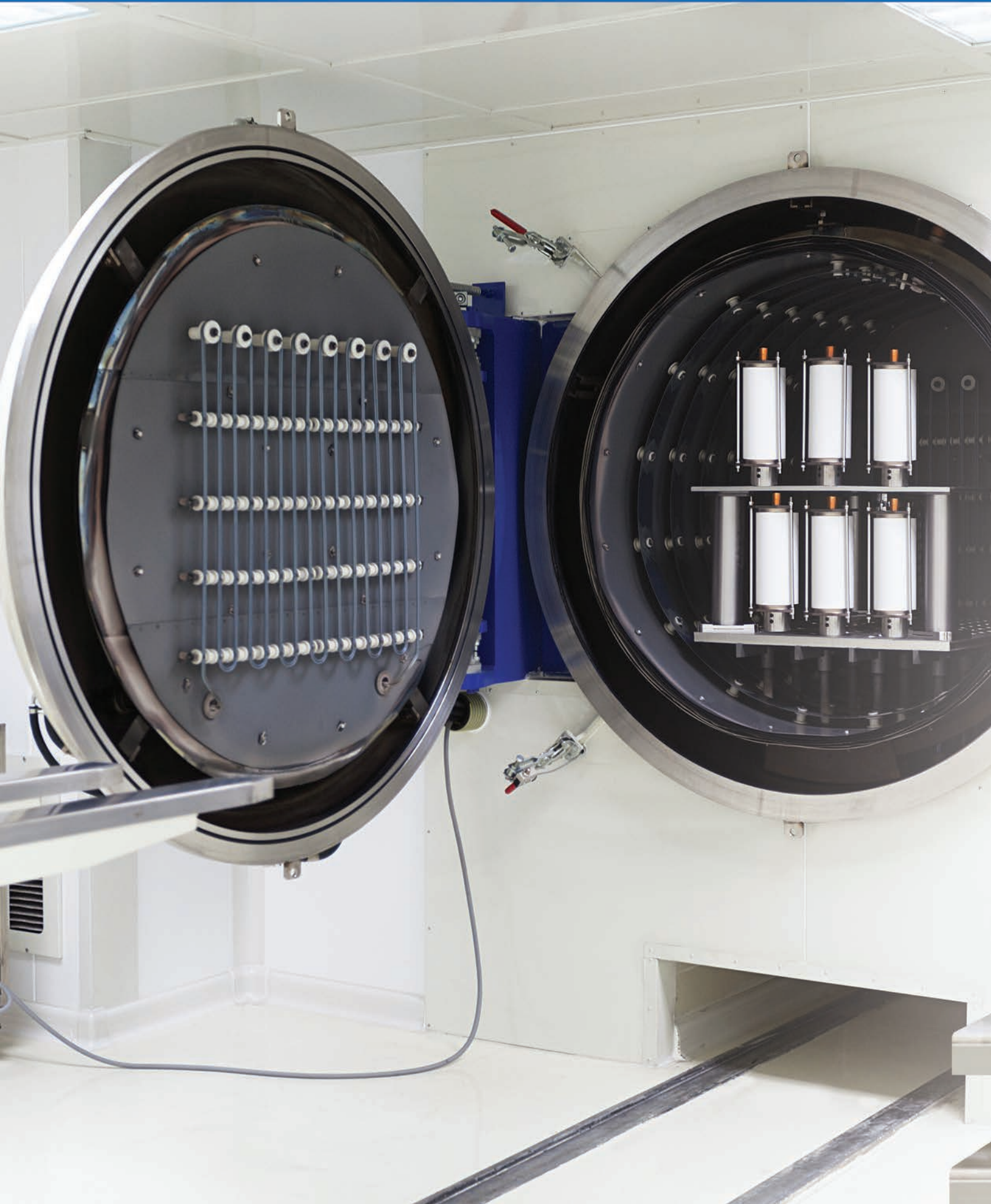
BVI type Vacuum interrupters' unique compact and robust design provides long life and low maintenance, save space, and reduce costs.

BVI type Interrupters fully type tested under severe conditions.



BVI *VACUUM INTERRUPTERS*

TYPE





Technical Specifications

	Unit	Value
Rated Voltage	U_r (kV)	36
Power Frequency Withstand Voltage, 50 Hz, 1 min.	U_d (kV)	70
Rated Impulse Withstand Voltage, 1.2/50 μ s	U_p (kV)	170
Rated Frequency	f (Hz)	50
Rated Current	I_r (A)	1250 - 2000
Rated Peak Withstand Current	I_p (kA)	40

Breaking Capabilities

	Unit	Value
Rated Short Circuit Breaking Current	I_{sc} (kA)	16
DC Component Percentage for Rated Short Circuit Breaking Current	%	42
Rated Short Circuit Making Current	I_{ma} (kA)	40
Rated Duration of Short Circuit	sec	3
Rated Short Time Withstand Current	I_k (kA)	16
Max. Contact Resistance at Minimum Closing Force	$\mu\Omega$	16



BGK *SF6* CIRCUIT BREAKER
TYPE 12-24-36 kV





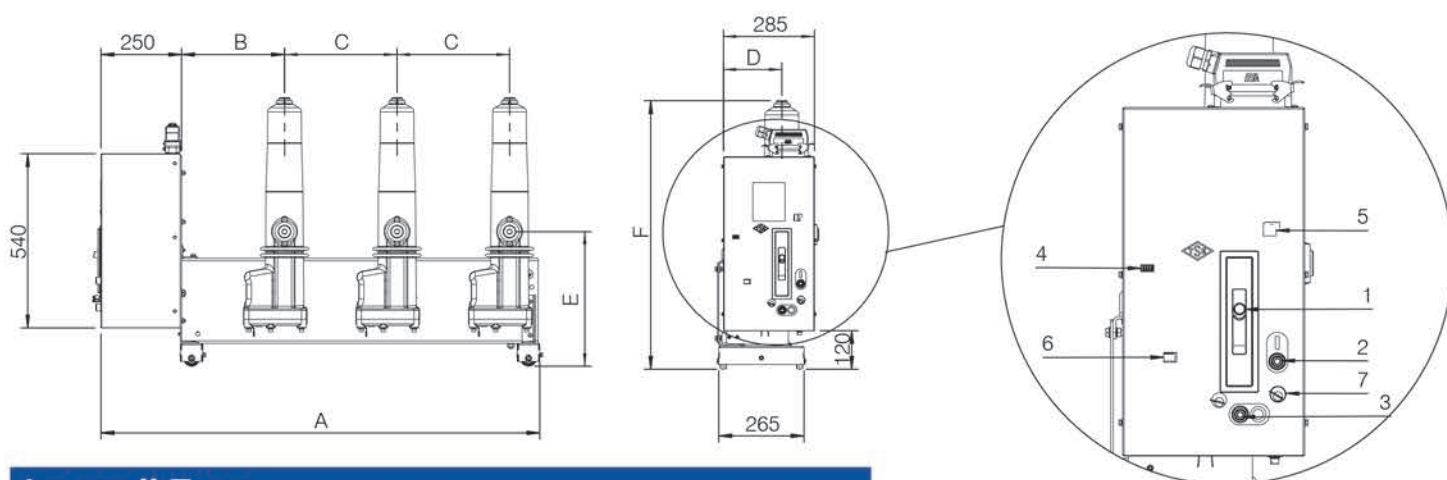
General Specifications

- BGK type SF6 circuit breakers guarantees high level of safety and reliability due to applied SF6 arc quenching technic and BATEL's experience in medium and high voltage switchgear production more than 35 years.
- By these means BGK circuit breakers provide high level continuity and availability for the electricity distribution systems. These specifications also obtain longer operational endurance and less maintenance. 3 separate poles have epoxy resin insulated enclosure which are filled with SF6 gas and this sealed pressure system guaranteed for its life.
- The safety of the gas filled pole enclosure is secured by the membrane system on the bottom cap.
- Operating mechanism can be charged manually by lever or by motor. Charged mechanism has stored energy for closing and opening. Closing and opening functions can be done by the push-buttons or by the release coils.
- BGK circuit breakers have both frontal mechanism and lateral mechanism versions.
- Circuit breaker poles can be optionally equipped with pressure switch or pressure indicator for alarm and low pressure conditions.
- For OPEN / CLOSED positions, 4NO + 4 NC or 6 NO + 6 NC auxiliary contacts can be selected optionally.

BGK SF6 CIRCUIT BREAKER

TYPE 12-24-36 kV

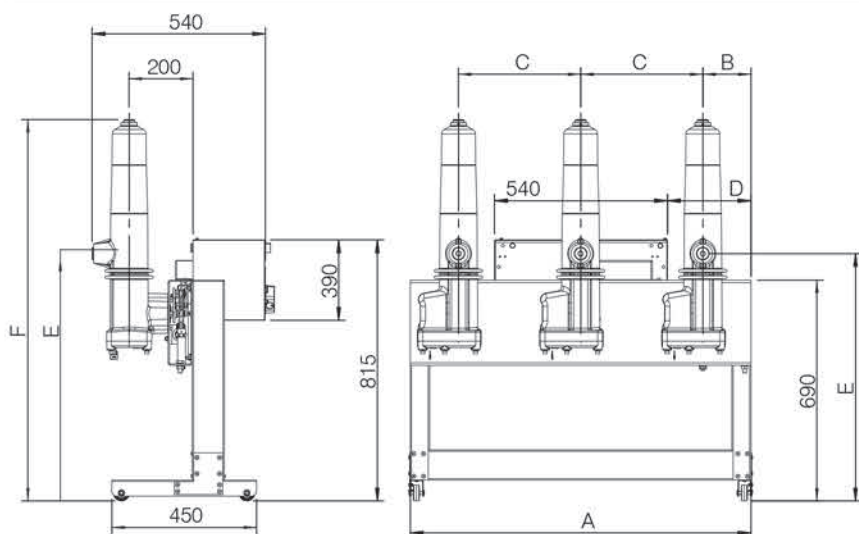
BGK 12 - 24 - 36 kV



Lateral Type

Rated Current (A)	Rated Voltage (kV)	Dimensions (mm)						Weight (kg)
A		A	B	C	D	E	F	
630	12-17,5	750	125	220	180	770	1190	95
	24	860	150	280	180	770	1190	100
	36	1060	150	380	180	770	1190	105
1250	12-17,5	740	150	220	180	760	1240	105
	24	860	174	80	180	760	1240	110
	36	1020	126	380	180	760	1240	115

1. Charging arm
2. Closing button
3. Opening button
4. Counter
5. Position indicator
6. Spring indicator
7. Mechanical lock



Frontal Type

Rated Current (A)	Rated Voltage (kV)	Dimensions (mm)						Weight (kg)
A		A	B	C	D	E	F	
630	12-17,5	750	125	220	125	770	1190	100
	24	860	150	280	160	770	1190	105
	36	1060	150	380	260	770	1190	110
1250	12-17,5	740	150	220	125	760	1240	115
	24	860	174	280	160	760	1240	120
	36	1020	126	380	212	760	1240	125



BGK 24 kV

CIRCUIT BREAKER



BGK 36 kV

CIRCUIT BREAKER

Technical Characteristics

Rated voltage	kV	12	17,5	24	36
Power frequency withstand voltage 50 Hz, 1 min	kV rms	28	38	50	70
Lightning impulse withstand voltage 1.2/50 μ s	kV peak	75	95	125	170
Rated frequency	Hz	50	50	50	50
Rated current	A	630/1250	630/1250	630/1250	630/1250
Short circuit breaking current	kA	16/20/25	16/20/25	16/20/25	16/20/25
Short time withstand current	kA, 3s	16/20/25	16/20/25	16/20/25	16/20/25
Short circuit making current	kA peak	40/50/62,5	40/50/62,5	40/50/62,5	40/50/62,5
Operating sequence		0 - 0.3 s - CO - 3 min -CO			
Related Standard		IEC 62271-100			
Electrical endurance class		E1 (E2 for non-recosing)			
Mechanical endurance class		M1 (2000 operations)			
Capacitive current switching class		C2			
Ambient temperature for working	°C	- 15 / + 40			

Release coil and charging motor options :

Power supply

24 V DC - 48 V DC - 110 V DC - 220 V AC

BVK VACUUM CIRCUIT BREAKER

TYPE 12-24-36 kV

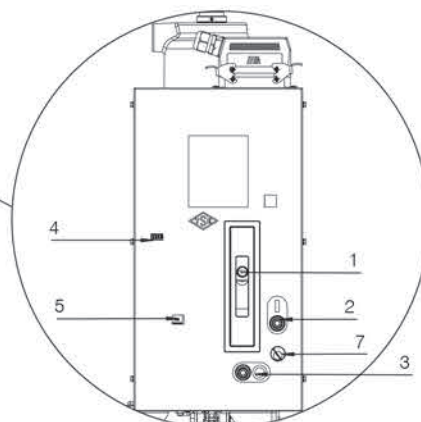
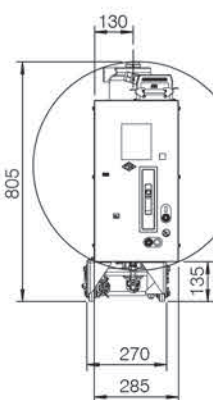
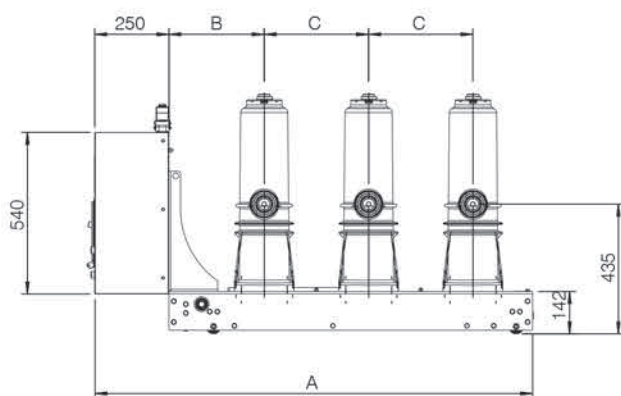


General Specifications

- BVK type vacuum circuit breaker guarantees high level of safety and reliability due to applied vacuum interrupter technic and BATEL's experience in medium and high voltage switchgear production more than 35 years.
- BVK type vacuum circuit breakers equipped with BVI type vacuum interrupters designed and manufactured by BATEL in its facilities.
- By these means BVK type circuit breakers provide high level continuity and availability for the electricity distribution systems. These specifications also obtain longer operational endurance and less maintenance.
- 3 separate poles have epoxy resin insulated housing which contains the vacuum interrupter and terminals. Operating mechanism can be charged manually by lever or by motor. Charged mechanism has stored energy for closing and opening. Closing and opening functions can be done by the push-buttons or by the release coils.
- BVK circuit breakers have both frontal mechanism and lateral mechanism versions.
For OPEN / CLOSED positions, 4NO + 4 NC or 6 NO + 6 NC auxiliary contacts can be selected optionally.



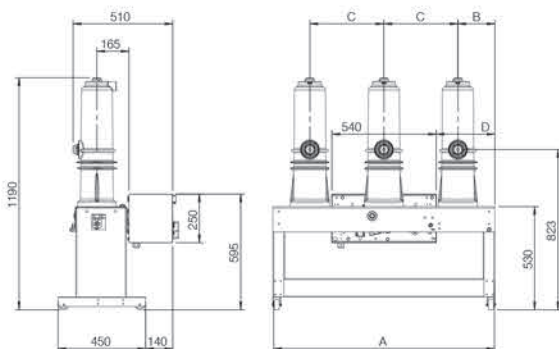
BVK 12 - 24 - 36 kV



1. Charging arm
2. Closing button
3. Opening button
4. Counter
5. Position indicator
6. Spring indicator
7. Mechanical lock

Lateral Type

Rated Voltage (kV)	Dimensions (mm)			Weight (kg)
	A	B	C	
12 - 17,5	1050	220	200	110
24	1180	250	250	115
36	1470	320	350	120



Frontal Type

Rated Voltage (kV)	Dimensions (mm)				Weight (kg)
	A	B	C	D	
12 - 17,5	840	190	250	170	115
24	940	190	280	200	120
36	1040	190	380	300	125

Technical Characteristics

Rated voltage	kV	24	36
Power frequency withstand voltage 50 Hz, 1 min	kV rms	50	70
Lightning impulse withstand voltage 1.2/50 μ s	kV peak	125	170
Rated frequency	Hz	50	50
Rated current	A	630/1250	630/1250
Short circuit breaking current	kA	16/20/25	16/20/25
Short time withstand current	kA, 3s	16/20/25	16/20/25
Short circuit making current	kA peak	40/50/62,5	40/50/62,5
Operating sequence	0 - 0.3 s - CO - 15 s - CO		
Related Standard	IEC 62271-100		
Electrical endurance class	E1 (E2 for non-reclosing)		
Mechanical endurance class	M1 (2000 operations)		
Capacitive current switching class	C2		
Ambient temperature for working	°C	- 15 / + 40	

Release coil and charging motor options :
Power supply

24 V DC - 48 V DC - 110 V DC - 220 V AC



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