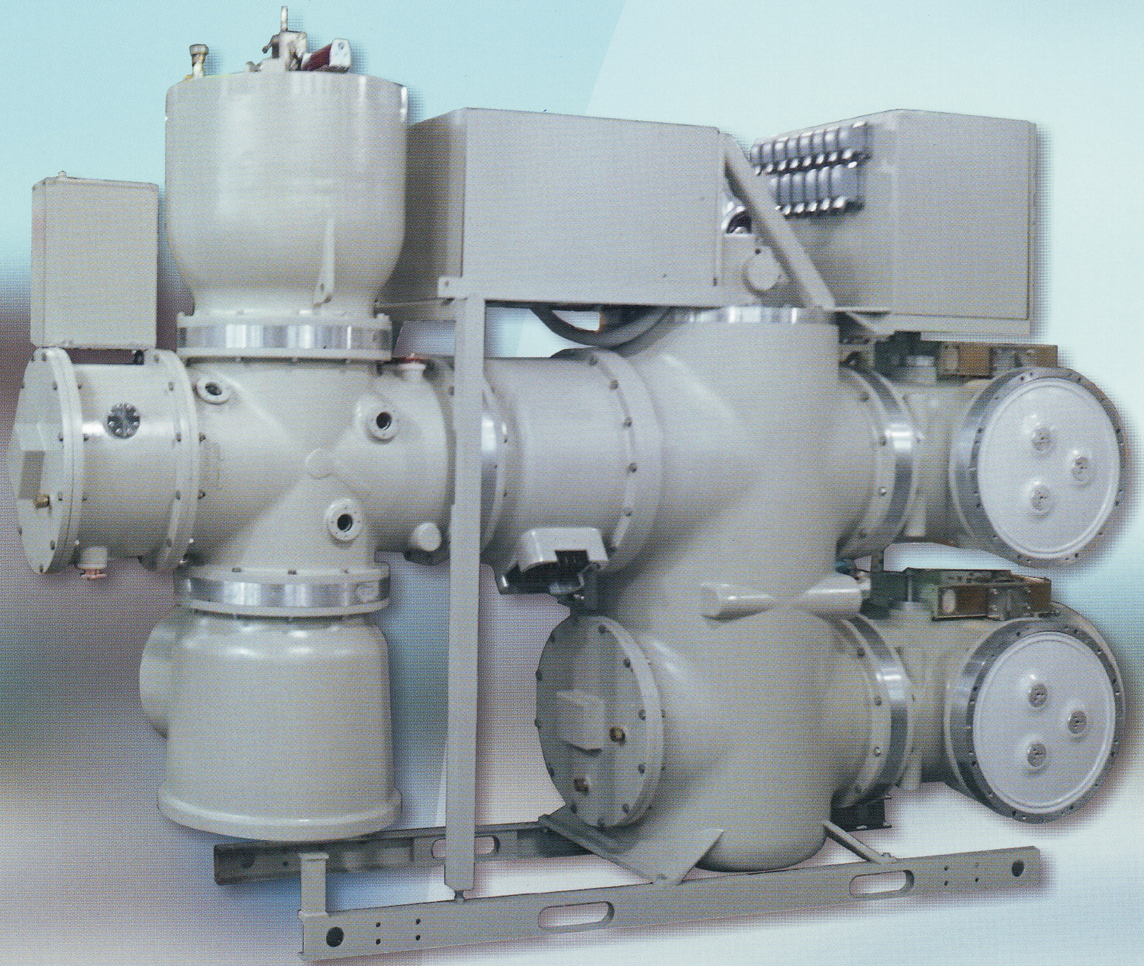
KONČAR
Switchgear, Inc.



SF6 GIS za 72.5 - 145 kV
SF6 GIS for 72.5 - 145 kV

KONČAR proizvodi visokonaponske prekidače već više od 60 godina, a SF6 plinom izolirana postrojenja (engl. kratica "GIS") više od 30 godina.

Na osnovi stečenog znanja i dugogodišnjeg iskustva, KONČAR uz prvu generaciju postrojenja tipa K8D.6 nudi i novu, kompaktniju izvedbu plinom SF6 izoliranog postrojenja tipa K8D.6-N.

Glavne karakteristike

- Potreban vrlo mali prostor.
- Visoka sigurnost za pogonsko osoblje.
- Autokompresijski tip prekidača.
- Mala električna naprezanja.
- Neosjetljivost na utjecaje okoline.
- Minimalan gubitak plina.
- Laka i brza montaža na terenu.
- Minimalno održavanje.

Opis

Postrojenje tipa K8D.6-N se proizvodi kao tropolno oklopljeno s aluminijskim kućištem u različitim konfiguracijama koje se postižu korištenjem standardnih modula.

Osnova polja postrojenja K8D.6-N je okomito postavljeni prekidač sa integriranim strujnim transformatorom koje nosi ostale elemente postrojenja (Sl. 1).

Standardno se isporučuje tropolno sastavljeno i ispitano polje, kao jedinstvena transportna jedinica pretpunjena plinom SF6.

KONČAR has been manufacturing high voltage circuit-breakers for more than 60 years and SF6 gas insulated switchgears (in short "GIS") for more than 30 years.

Based on acquired know-how and many years of experience, KONCAR offers besides first generation of switchgear type K8D.6 also new, more compact design of SF6 GIS type K8D.6-N.

Main features

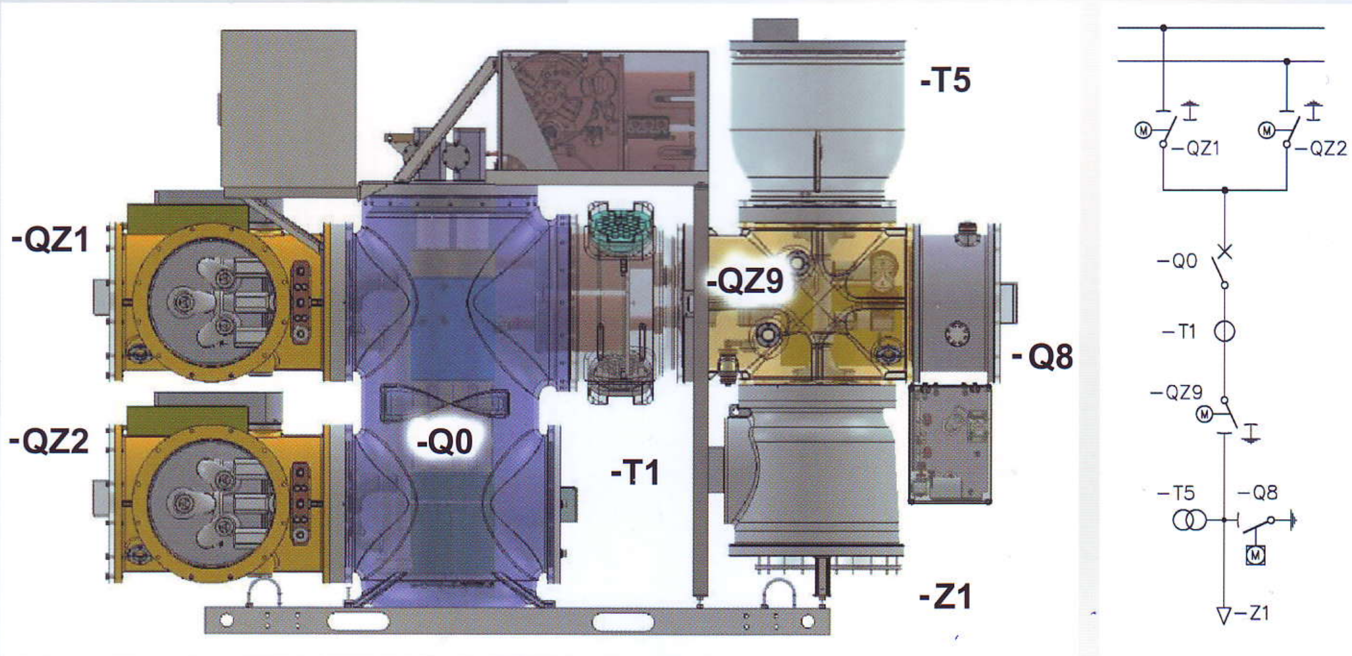
- Only very small space required.
- High safety for operating personnel.
- Auto-puffer type circuit-breaker.
- Low electrical stressing.
- No environment influences.
- Minimum gas leakage.
- Easy and fast installation at site.
- Minimum maintenance.

Description

Gas insulated switchgear type K8D.6-N is made as a three-pole enclosed switchgear with aluminium-alloy encapsulation in different configurations using standard modules.

Main part of the switchgear bay K8D.6-N is vertically placed circuit-breaker with integrated current transformer and it carries all other bay components (Fig. 1).

Typical switchgear cable bay is assembled, tested and delivered to site as complete transport unit with SF6 pre-filling.



Sl. 1 Presjek vodnog polja s dvostrukim sabirnicama tipa K8D.6-N
Fig. 1 Cross section of double busbar cable bay type K8D.6-N

QZ1,QZ2 - Tropoložajni aparat sabirnički rastavljač/zemljospojnik
Combined disconnectors/earthing switches

Q0 - Prekidač / Circuit-breaker

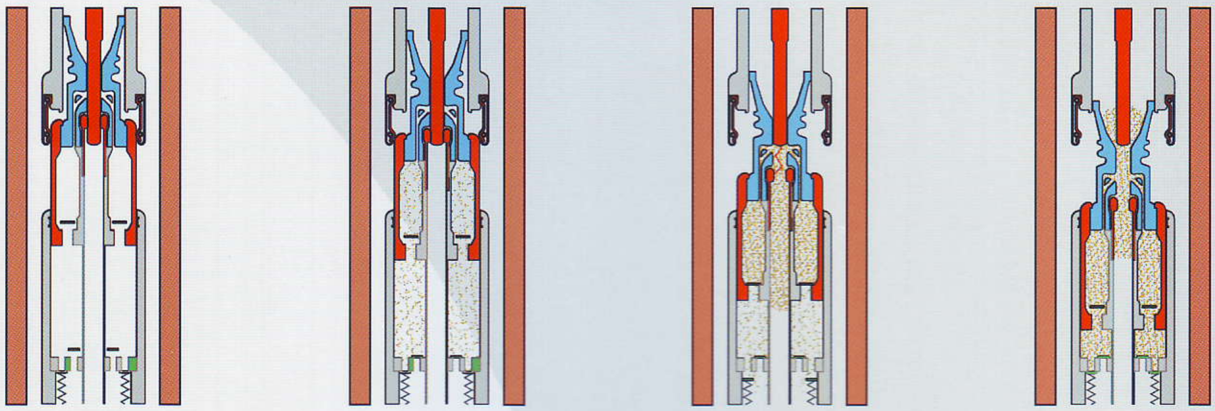
QZ9 - Tropoložajni aparat izlazni rastavljač/zemljospojnik
Combined disconnector/earthing switch

T5 - Naponski transformator / Voltage transformer

T1 - Strujni transformator / Current transformer

Q8 - Brzi zemljospojnik / High-speed earthing switch

Z1 - Kabelsko kućište / Cable connecting compartment



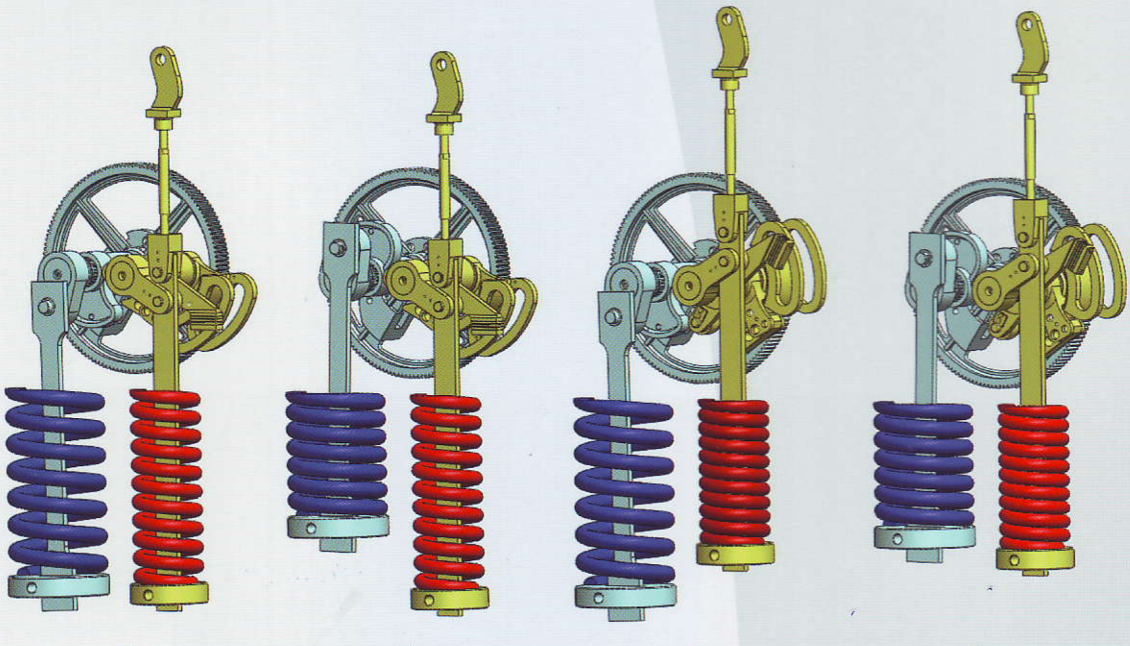
Sl. 3 Shematski prikaz gašenja luka autokompresijskim principom s korištenjem energije luka
Fig. 3 Arc-quenching principle with the self-blast technology

Pogonski mehanizam

Motorno-opružni pogonski mehanizam koji se odlikuje pouzdanošću, brzom i jednostavnom montažom te respektabilnim vremenima otvaranja/zatvaranja kontakata komore smješten je u aluminijskom pogonskom ormaru koji uz manju masu prekidača osigurava otpornost na koroziju. Uz već standardnu pomoćnu električnu opremu koju je prema zahtjevima moguće prilagoditi kupcu, posebnost prekidača je ispitni konektor koji se tijekom korištenja može iskoristiti za monitoring ili terensku dijagnostiku. Informacije o dodatnoj opciji monitoringa dostupne su na upit.

Operating mechanism

Motor-spring operating mechanism that is characterized by its reliability, fast and simple mounting and respectable contact closing/opening time, is placed in an aluminum operating mechanism cubicle which ensures lower circuit-breaker mass and corrosion resistance. Besides the standard electrical auxiliary equipment that can be adapted on customer demands, a circuit-breaker uniqueness is a test connector that can be used for monitoring or diagnostic purposes during the usage time. Informations regarding the additional monitoring option are available on request.

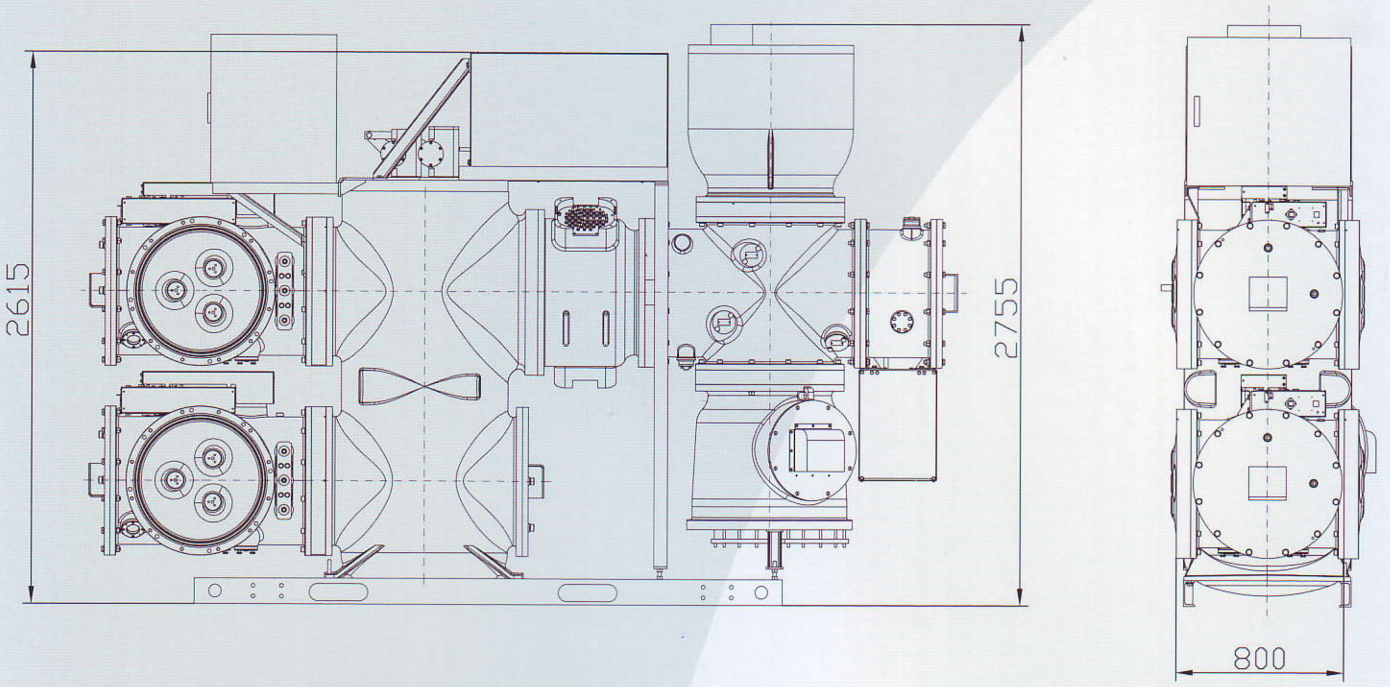


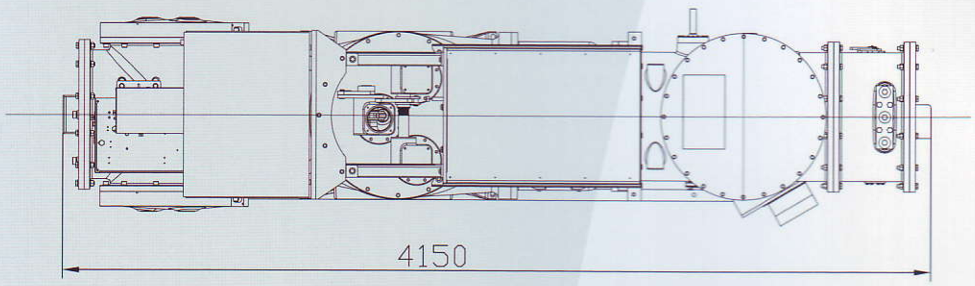
a) b) c) d)

Sl. 4 Shematski prikaz motorno-opružnog pogona prekidača u četiri karakteristična stanja (plavo – uklopna opruga, crveno – isklopna opruga)
Fig. 4 Schematic representation of the circuit breaker's motor-spring operating mechanism in four characteristic states (blue - closing spring, red - opening spring)

a) obje opruge nenapete;
b) uklopna opruga napeta, isklopna opruga nenapeta;
c) uklopna opruga nenapeta, isklopna opruga napeta;
d) obje opruge napete.

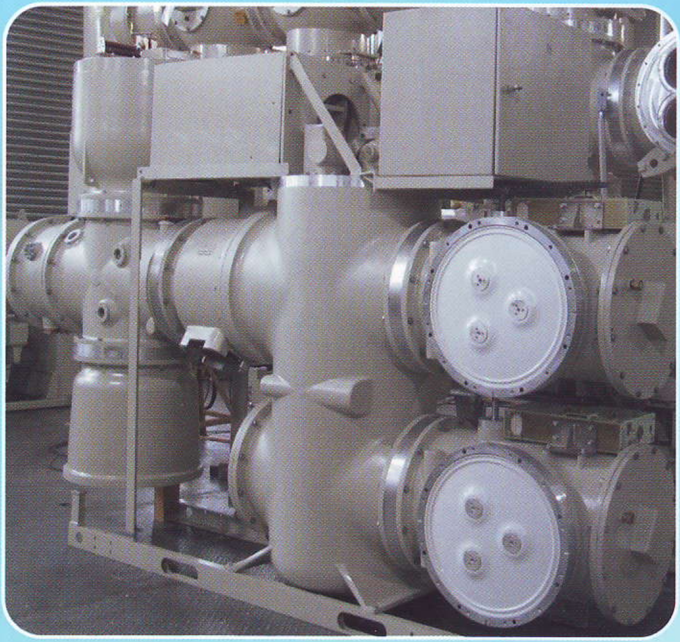
a) both springs discharged;
b) closing spring charged, opening spring discharged;
c) closing spring discharged, opening spring charged;
d) both springs charged.

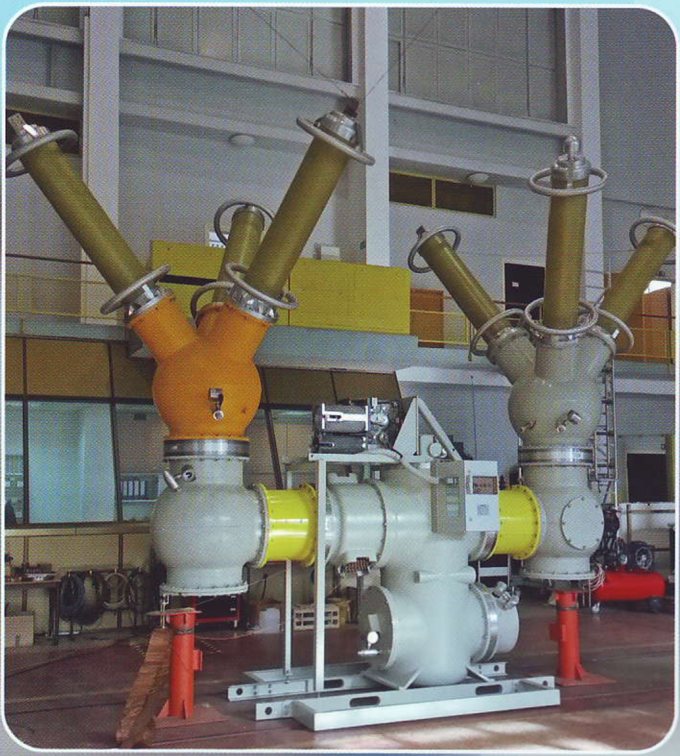


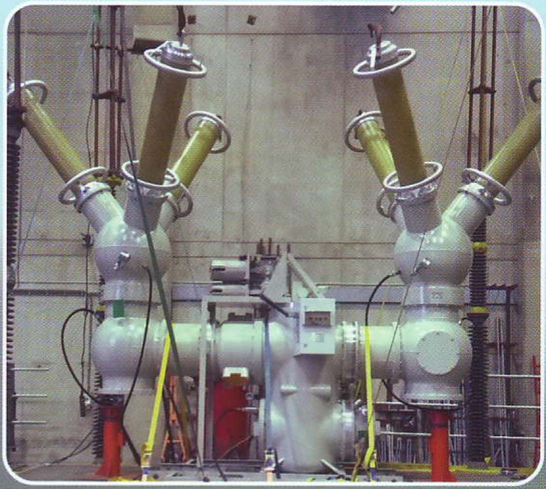


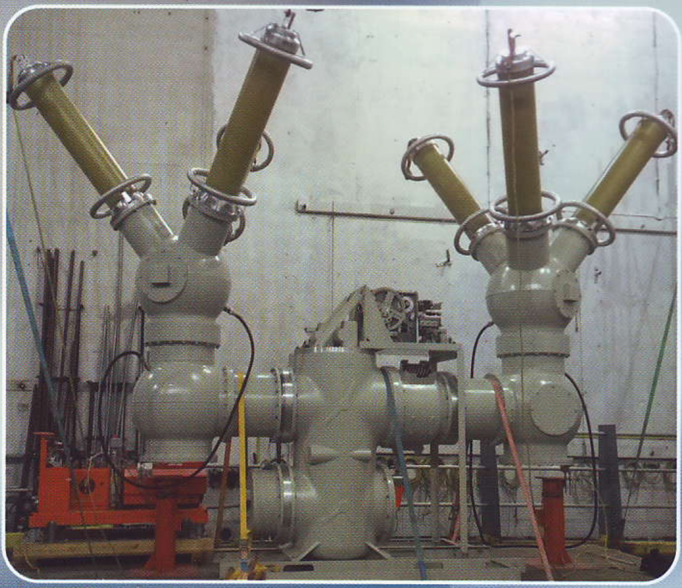
Tehnički podaci	Technical data		72.5-145 kV		
Nazivni napon	Rated voltage	kV	72.5	123	145
Nazivni podnosivi atm. udarni napon (1.2/50μs)	Rated lightning impulse whitstand voltage (1.2/50μs)	kV	325	550	650
Nazivni podnosivi napon ind. frekvencije (1 min)	Rated power frequency whitstand voltage (1 min)	kV	140	230	275
Nazivna frekvencija	Rated frequency	Hz		50/60	
Nazivna struja	Rated normal current	A		...3150	
Nazivna prekidna struja kratkog spoja	Rated breaking current	kA		... 40	
Nazivna kratkotrajno podnosiva struja (1/3 s)	Rated short -time whitstand current (1/3 s)	kA		... 40	
Nazivna podnosiva udarna struja	Rated peak whitstand current	kA		... 104	
Nazivni sklopni ciklus	Rated duty cycle			O-0,3 s-CO-3 min-CO ili/or CO-15 s-CO	
Vrijeme otvaranja	Opening time	ms		25	
Vrijeme zatvaranja	Closing time	ms		60	
Klasa električne i mehaničke trajnosti	Electrical and mechanical endurance class			E2, M2	
Napon upravljanja	Control voltage	V DC		110 / 125 / 220	
Napon motora	Motor voltage	V DC/V AC		110 / 125 / 220	
Temperatura okoline	Temperature range	°C		-5...+50	
Primjenjeni standardi	Applied standards			IEC 62271 - 1, IEC 62271 - 203	

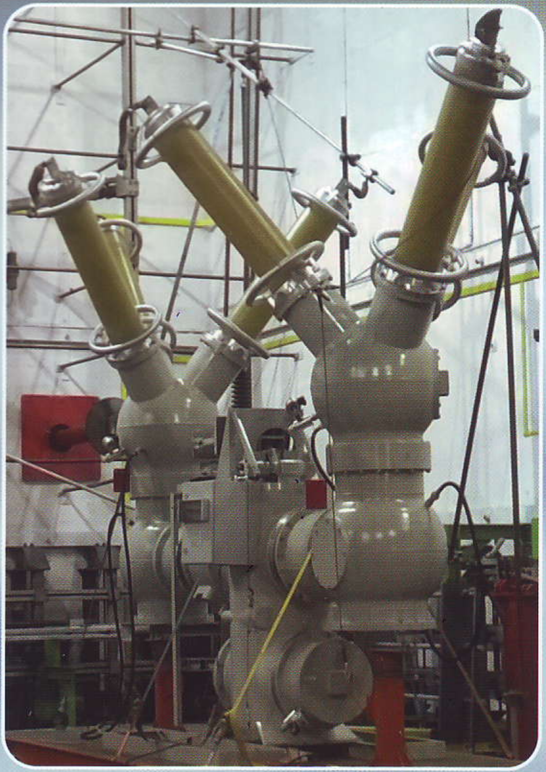
Sve druge vrijednosti i podaci mogu se dobiti na upit. All other values are available on request.



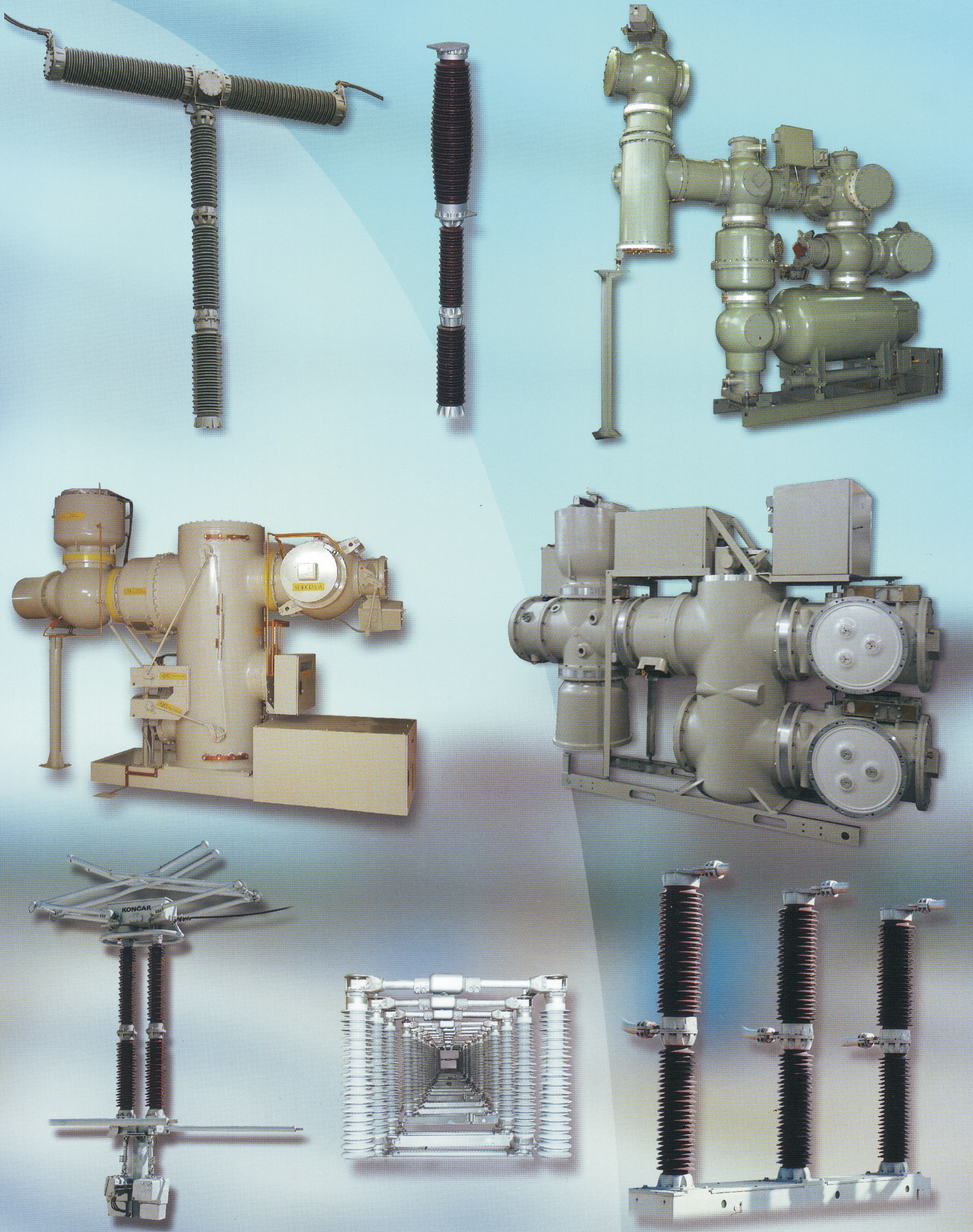








Design&print: STUDIO HRG, Zagreb Photo: STUDIO HRG and KONČAR High Voltage Switchgear - 690 004 R4 / 02.2016.



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