



**SWITCHGEAR
RETROFIT
SOLUTIONS**

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**SELECTION
OF SWITCHING DEVICES**

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MEDIUM VOLTAGE CIRCUIT BREAKER RETROFIT SOLUTIONS UP TO 40.5 KV

OVERVIEW

- Retrofitting is defined as adding components to equipment on site so as to achieve additional features or ratings.
- Retrofit activities involves the replacement of out-dated MV CB's with modern updated SF6 or Vacuum CB'S.
- Retrofit activities involves the replacement of instrument transformers to handle increases in rated currents.
- Retrofit activities involves renewal of phase insulations & busbar system.

FEATURES & BENEFITS

- Increased reliability and safety.
- Significantly reduced maintenance costs.
- Increased remaining life time with minimum 20 years.
- Updated SWGR heart with modern technology CB's.
- Increased ratings, normal and short circuit currents.
- No modification of the existing panel or CB compartment.

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Utilizing
Modern SF6
and
Vaccum
Circuit Breakers



PROCEDURES

- Site investigation and data collection of existing SWGR.
- Engineering and virtual prototyping using state-of-the-art CAD software's.
- Prototype preparation using modern machining technology.
Prototype testing and validation.
- Production.
- Factory routine testing.
- Packing and shipment.
- Installation and commissioning.
- Substation personnel training.

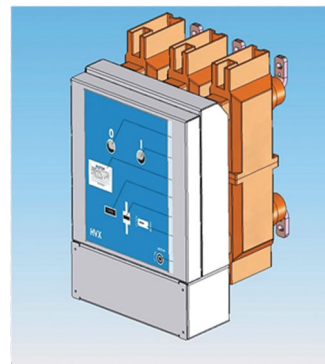


MEDIUM VOLTAGE CIRCUIT BREAKER RETROFIT SOLUTIONS UP TO 40.5 KV

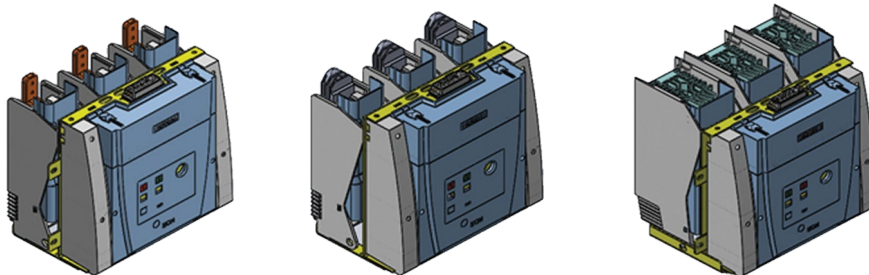
MODERN SF6 AND VACUUM CIRCUIT BEAKERS SOLUTIONS PORTFOLIO



HD4 SF6 CB -ABB



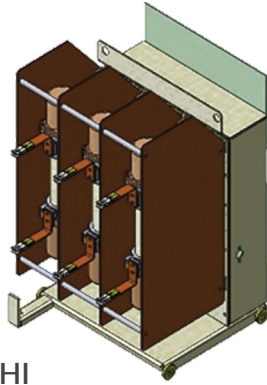
HVX Vacuum CB -AREVA



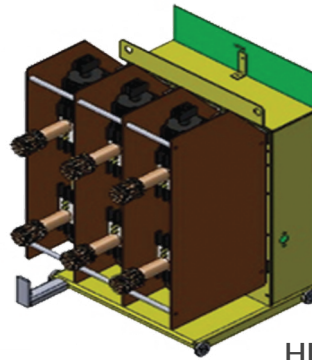
SION Vacuum CB -SIEMENS

MEDIUM VOLTAGE CIRCUIT BREAKER RETROFIT SOLUTIONS UP TO 40.5 KV

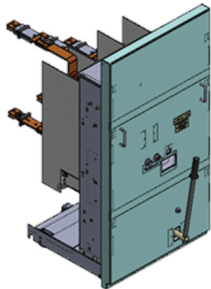
UTILIZING MODERN SF6 AND VACUUM CIRCUIT BREAKERS



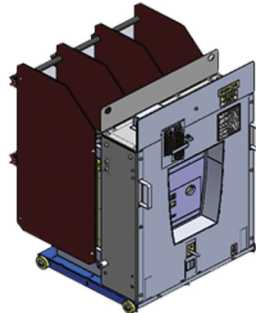
HITACHI
17.5 KV , 1250 A



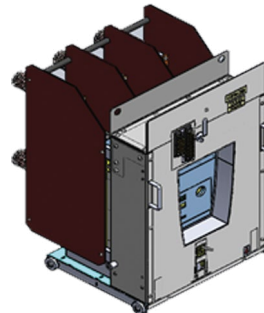
HITACHI
17.5 KV , 2000 A



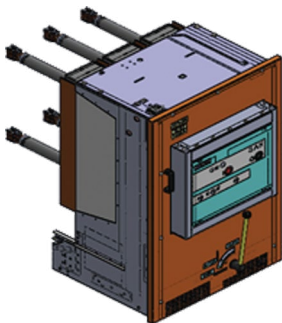
SIEMENS 8BD
17.5 KV , 1250 A



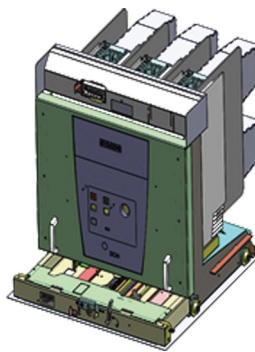
HITACHI
17.5 KV , 1250 A



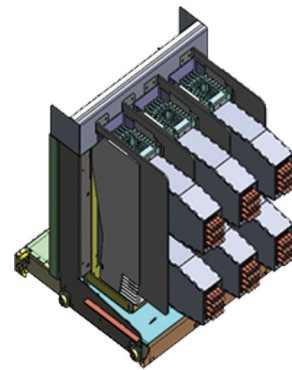
HITACHI
17.5 KV , 2000 A



MERLIN GERIN FG4
36 KV , 1250 A



ALSTOM AHA
17.5 KV , 3150 A



ALSTOM AHA
17.5KV, 3150A

MEDIUM VOLTAGE CIRCUIT BREAKER RETROFIT SOLUTIONS UP TO 40.5 KV

MODERN SF6 AND VACUUM CIRCUIT BREAKERS



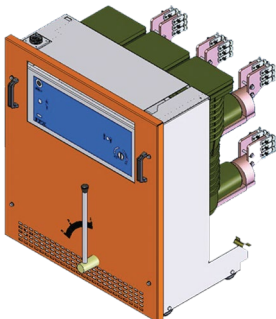
HITACHI
17.5 KV , 2000 A



BBC HC
17.5 KV , 3150 A



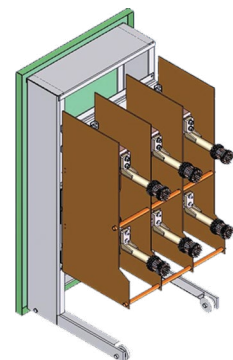
BBC HC
17.5 KV , 3150 A



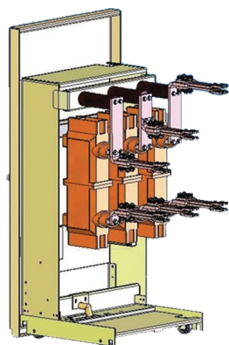
FPX 2500A,12 kV
on FG2 truck - MG



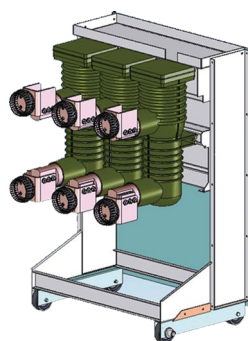
CALOR EMAG
36 KV, 1250 A



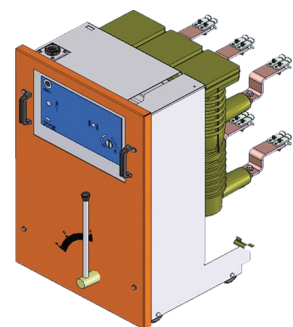
HD4 630A,12 kV
on FUJI truck



8BD truck - SIEMENS
With HVX circuit breaker



FPX 4000A on
BBC-HC Truck

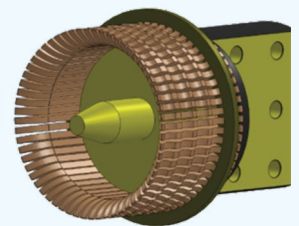
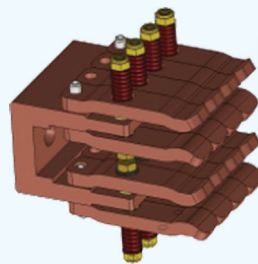
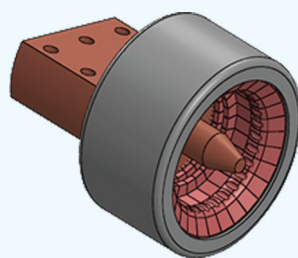
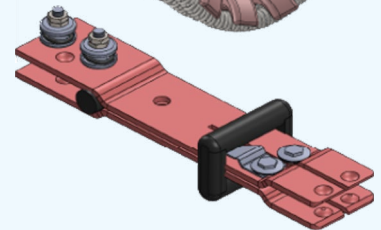
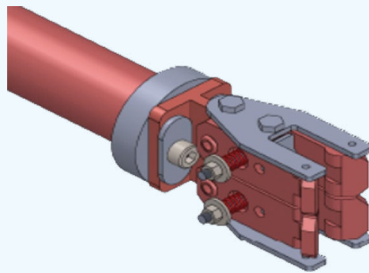
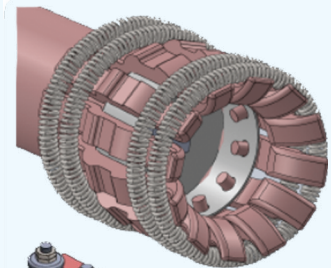
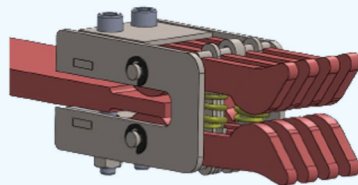
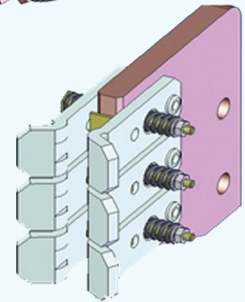
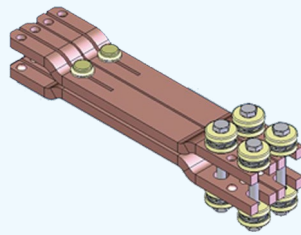
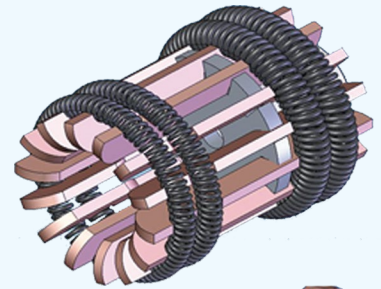
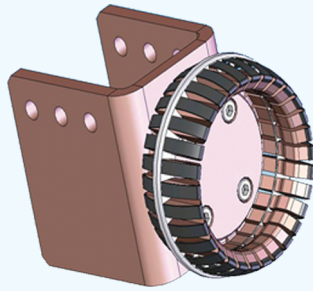


FPX 630A,12 kV on
FG2 truck - MG

MV SUBSTATION UPGRADE SOLUTIONS



PRIMARY CONTACTS SPARES UP TO 5000 A





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