



FBX

Gas-insulated Ring Main Unit



In electrical energy distribution, responsible handling of ecological resources requires the use of economical medium-voltage switchgear units with low acquisition and operating costs, proven reliability and the flexibility to adapt to different system requirements.

Our environmentally friendly products and systems are ideally suited for this role thanks to their long service life, compact design and recyclability.

The FBX gas-insulated ring main unit is a leading product from both economical and ecological points of view.

THE ECONOMICAL AND ECOLOGICAL SOLUTION

With a wide choice of options, our FBX is well suited to meet customer's specific requirements up to 24 kV. The use of specially selected materials and high quality production methods ensure reliability and extremely low life cycle costs.

The well proven, sophisticated components that make up FBX ensure virtually zero maintenance.

The entire chain from production to operation and up to disposal has been designed to systematically save resources.

FBX meets the requirements of IEC international standards and many national standards including China National Standards (CNS) and the GOST standards of the Russian Federation.



Customer benefits

- Economical and compact design
- Extendable to your needs
- Easy installation without gas work
- Independence from environmental influences
- Long service life and low life cycle costs
- Environmentally friendly and easily recyclable product





FBX

Gas-insulated Ring Main Unit

ECONOMICAL AND FLEXIBLE

The FBX ring main unit is small enough to be located wherever it is needed.

With its compact design the unit is delivered ready for immediate connection.

The choice of the primary and secondary components meets the requirements for operation in the distribution networks of public power supply companies, industry and infrastructure.

FBX can be supplied as a panel of up to four switching units within a gas-filled compartment. Available in two variants – FBX-C non-extendable and FBX-E extendable – the switchgear can be used in all secondary electricity distribution applications.

The FBX-E can be installed easily without requiring gas work.

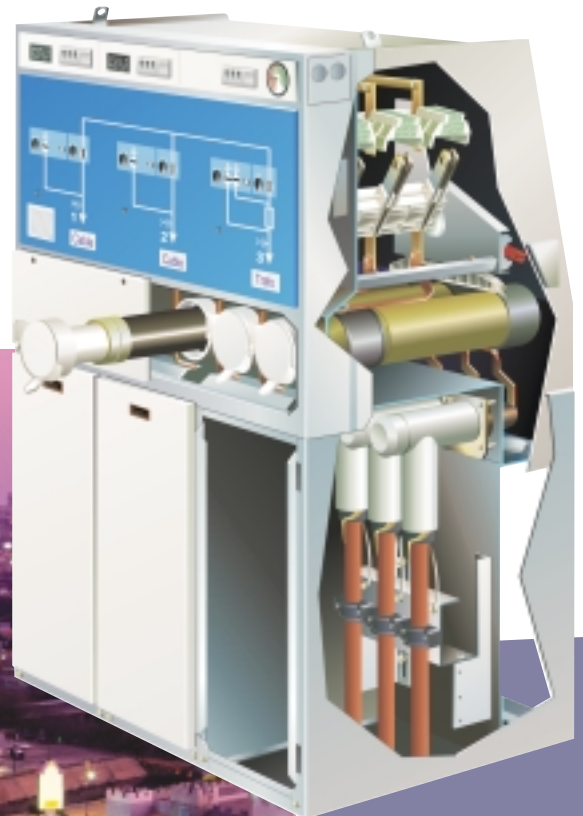
The FBX gas-insulated ring main switchgear provides a choice of switch disconnector, switch fuse combinations and vacuum circuit-breaker for transformer protection.

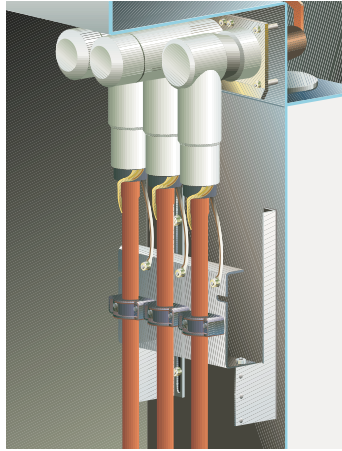
OUTSTANDING ENVIRONMENTAL INDEPENDENCE AND OPERATOR SAFETY

With its independence from environmental influences, corrosion-proof chromium-nickel steel gas-filled metal-clad compartments and continuous switchgear interlocking, FBX provides maximum operational reliability and operator safety.

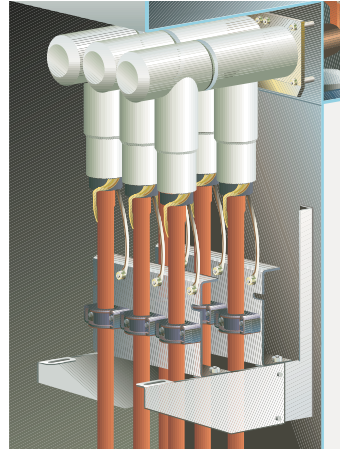
The FBX gas chamber is a hermetically sealed pressure system, designed according to IEC 60694 and VDE 0670, part 1000.

This eliminates the need for insulating gas to be replenished throughout the switchgear's service life. The colour-coded control panel displays operational status in a very clear and straightforward manner.

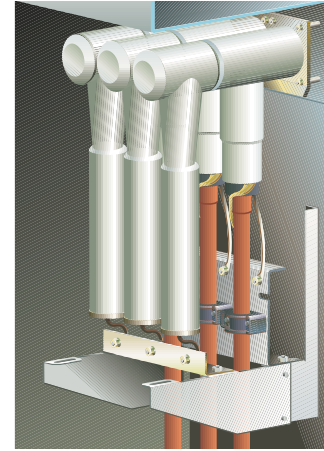




Single cable connection



Double cable connection



1 cable and 1 surge arrester

EASY AND RELIABLE CABLING

Spacious cable connection compartments allow easy and reliable cabling with a choice of cable connection systems:

- > fully insulated
- > metal enclosed
- > partially insulated

Up to two connectors per phase can be accommodated within the switchgear profile.

A WIDE RANGE OF APPLICATIONS

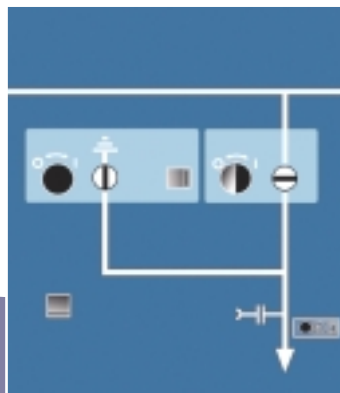
FBX ring main units can be used in non-accessible or walk-in substations as part of secondary distribution networks, for example:

- > public power supply systems
- > wind farms
- > industrial areas
- > industry
- > buildings
- > infrastructure

USER FRIENDLY OPERATION

Operation of FBX is simple and safe, with clear displays and reliable mechanisms:

- > mimic diagram with integrated mechanical position indicators and operation facilities
- > integrated interlocks for fool-proof protection against maloperation
- > padlocking for all operation facilities available



Gas-insulated ring main units FBX the economical and ecological solution



Available versions

A wide choice of options to meet your specific requirements

FUNCTIONAL UNITS:

FBX is available in non-extendable and extendable versions with the following functions:

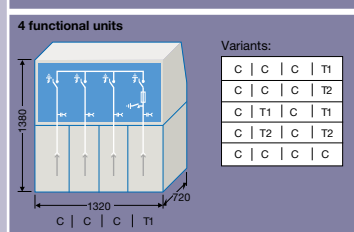
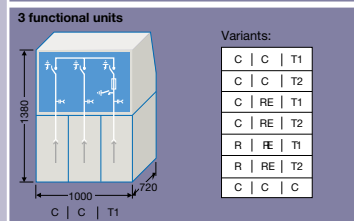
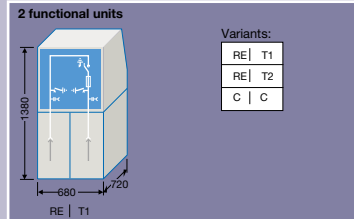
C = Cable-feeder with switch disconnecter

T1 = Transformer-feeder with switch fuse combination

T2 = Transformer-feeder with vacuum circuit-breaker

R = Busbar riser

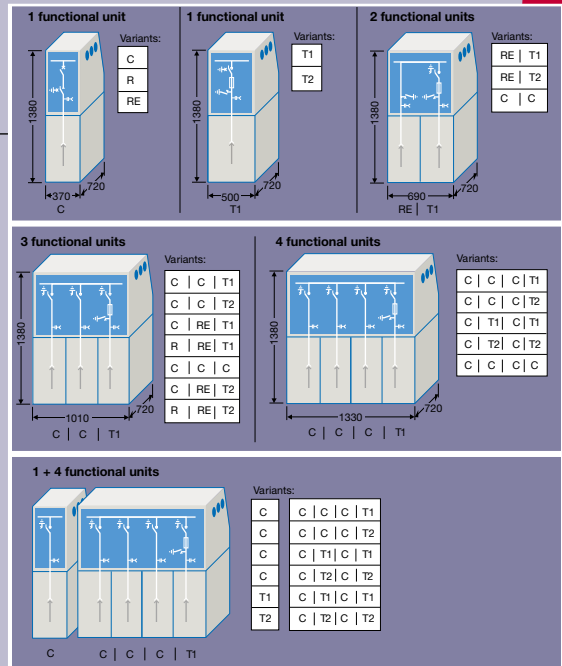
RE = Busbar riser with earthing switch.



FBX-C versions (non-extendable)

FBX-E versions (extendable)

TECHNICAL DATA		FBX		
>> Rated voltage	kV	12	17.5	24
>> Rated lightning impulse withstand voltage	kV	75	95	125
>> Rated power frequency withstand voltage	kV	28	38 (42)	50
>> Rated nominal current of busbar	A	630	630	630
>> Rated nominal current for cable feeders C max.	A	630	630	630
>> Rated nom. current for transf. feeders T1 max.	A	200	200	200
>> Rated nom. current for transf. feeders T2 max.	A	400	400	400
>> Rated short time withstand current 1s	kA	16/20 ¹⁾	16/20 ¹⁾	20
>> Rated short time withstand current 3s	kA	16/20 ¹⁾	16/20 ¹⁾	16 ¹⁾
>> Rated peak withstand current	kA	40/50	40/50	40/50
>> Rated making withstand current	kA	40/50	40/50	40/50
>> Rated frequency	Hz	50/60	50/60	50/60
>> Cable testing (DC) voltage 15 min.	kV	48	60	96
>> Rated filling pressure SF 6 at 20 °C	MPa	0.03		
Performance in case of an internal fault acc. to IEC 60298 (criteria 1-6, 1s) 20 kA (1s)				
¹⁾ For higher ratings or detailed information, please contact us.				



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