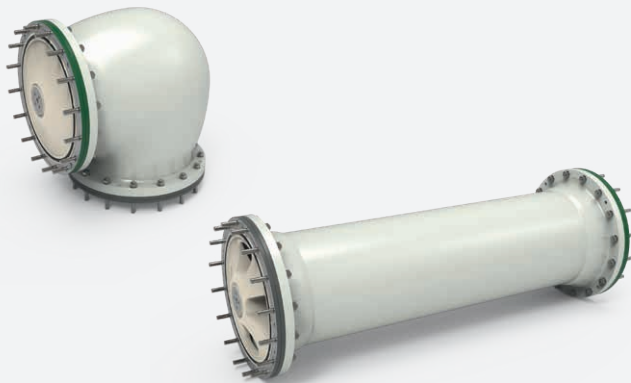


HIGH VOLTAGE PRODUCTS | GAS-INSULATED SWITCHGEAR

**EconiQ™ busducts ELK-3, 420 kV**

Integration of eco-efficient design into reliable and well-proven GIS technology



EconiQ busducts  
ELK-3, 420 kV

EconiQ busducts ELK-3, 420 kV showcase Hitachi ABB Power Grids' commitment to reducing the volume of sulfur hexafluoride (SF<sub>6</sub>) in transmission GIS voltage ratings. This product introduces an important step towards complete 420 kV eco-efficient switchgear by substituting the insulation gas in the product's busducts with SF<sub>6</sub>-free gas mixture.

EconiQ busducts ELK-3, 420 kV is the ideal solution for a reliable eco-efficient energy supply up to a rated voltage of 420 kV. Based on a few building blocks with standardized dimensions, a small footprint and easy operation, the product allows multiple layouts and incremental substitution of the insulation gas with an eco-efficient solution.

The EconiQ busducts of ELK-3, 420 kV, are operating with an insulation gas mixture of Fluoronitriles (C<sub>4</sub>-FN), Carbon dioxide (CO<sub>2</sub>) and Oxygen (O<sub>2</sub>). This mixture essentially eliminates the CO<sub>2</sub> equivalent emissions of the insulation medium compared to SF<sub>6</sub> gas.

EconiQ is Hitachi ABB Power Grids' eco-efficient portfolio for sustainability where products, services and solutions are proven to deliver exceptional environmental performance.

The EconiQ busducts for gas-insulated switchgear (GIS) ELK-3, 420 kV enables significant reduction of SF<sub>6</sub> gas, compared to standard layouts. The modular design of the product allows multiple configurations and substitution of the insulation gas with an eco-efficient alternative.

**Key product benefits**

- Highly reliable switchgear technology with eco-efficient insulation gas in the busducts
- EconiQ busducts of ELK-3, 420 kV are SF<sub>6</sub>-free
- Minimal product size allows to fit in existing layouts
- Complete single-phase encapsulation
- Earthquake resistant up to ground acceleration of 1g
- Low life cycle and maintenance costs
- Ideal solutions for hydropower plants, offshore wind farms, and container solutions in combination with complete bays
- Based on the well-proven ELK-3 family and five decades of experience in the GIS technology
- Future proof to environmental regulations
- No risk of accidental leakage of SF<sub>6</sub>

**Ease of gas handling**

- A common eco-efficient insulation gas for high-voltage equipment will enable the industry to adopt a standardized eco-efficient gas approach from sub-transmission to ultrahigh voltage
- Standard service concept and use of common auxiliary equipment



#### Performance data - EconiQ busducts ELK-3, 420 kV

|  |    |                  |
|--|----|------------------|
| Rated voltage  | kV | 420              |
| Rated short-duration power-frequency withstand voltage | kV | 650              |
| Rated lightning impulse withstand voltage              | kV | 1425             |
| Rated frequency  | Hz | 50 / 60          |
| Rated normal current                                   | A  | 5000             |
| Rated withstand current                                | kA | 63               |
| Rated duration of short-circuit                        | s  | 3                |
| Rated peak current                                     | kA | 171              |
| Installation   |    | Indoor / Outdoor |

The data are not limiting values. Additional data on request

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