

DT2-550

Dead Tank Circuit Breakers for 550 kV

The DT2-550 is a dead tank circuit breaker suitable for application at 550 kV levels and below, including 420 kV transmission systems. It is specifically designed and tested for general or definite purpose applications and for severe environmental conditions: including low temperatures, highly active seismic areas, regions with high pollution levels and corrosive atmospheres.

GE Vernova's advanced self-blast interrupters, leak resistant cast aluminum enclosures and durable low energy mechanisms characterize the DT series. More than 100,000 circuit breakers with self-blast interrupters and spring-operated mechanisms have been in service since 1989.

High Performance

The DT2-550 is suitable for application up to nameplate ratings, including definite purpose ratings for capacitor bank switching. Extensive mechanical operation design testing – in excess of 10,000 operations – assures trouble-free operation for the lifetime of the circuit breaker. Intensive production leak testing assures superior in-service SF₆ performance. All external surfaces are corrosion resistant, without the need for maintenance-intensive paint.

Reliable Operation

The DT2-550 is a rugged performer even in the most severe operating conditions and is tested to meet or exceed IEEE/ANSI and IEC standards. The DT2-550 maximizes GE Vernova's technology and in-service experience by utilising the same interrupter and mechanism platform as the durable T155 gas-insulated substation.

Choice of Operating Mechanism

The DT2-550 can be provided with reliable spring-spring-operated mechanisms for 2.5 cycle operation or a compact, lo -pressure hydraulic mechanism for 2 cycle operation.

Design Customization

The DT2-550 is available with design options and ratings to best fit your needs. Designed with a footprint that minimizes foundation costs, the DT2-550 adapts to retrofit live tank or dead tank foundations.

Synchronized Switching

The DT2-550 is an IPO (Independent Pole Operation) circuit breaker provided with one mechanism per pole. The DT2-550 circuit breaker can be supplied with the Point-on-Wave controller for synchronous closing in capacitor bank and line switching applications, or synchronous opening in reactor switching applications.



Options

The DT2-550 can be supplied with many customized options such as:

- Closing resistors,
- Electronic density monitors
- Composite bushings

The generous enclosure allows space for up to three current transformers per bushing to accommodate complex measurement and protection schemes

Key Benefits

- Application support for special duties
- Cost-effective solution
- Customized solution based on standardized modules
- User-friendly interface



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Technical Data

	VALUE	UNITS
Ambient temperature range*	-30 to +40	degrees C
Seismic withstand in accordance with IEEE 693-2005		
Creepage distance	630/16,000	inches/mm
Closing resistor (optional)*		
Weight (without current transformers)	39,000 17,730	lbs kg
Weight of SF ₆	1,440 655	lbs kg

*Optional values available on request.

Ratings

IEEE/ANSI	IEC	VALUE	UNITS
Rated maximum voltage	Rated voltage	550	kV
Rated power frequency	Rated frequency	50/60	Hz
Dry withstand	At power frequency: dry	860	kV
Rated lightning impulse withstand voltage	At lightning impulse	1,800	kV
Rated chopped wave impulse voltage 2us		2,070	kV
Rated switching impulse withstand voltage terminal to terminal	Rated switching impulse withstand voltage terminal to terminal	1,300	kV
Rated continuous current	Rated normal current	3,000/4,000/5,000	A
Rated short-circuit current	Rated short-circuit breaking current	40/50/63	kA
Rated closing, latching and short time carrying		164	kA
	Rated short-circuit making current	163	kA
Rated capacitance switching*			
	Rated break time (spring/hydraulic)	500	A
Rated interrupting time (spring/hydraulic)		22.5/2.0	cycles
	Rated break time (spring/hydraulic)	42/33	ms
Rated standard operating duty		O-0.3s-CO-15s-CO	

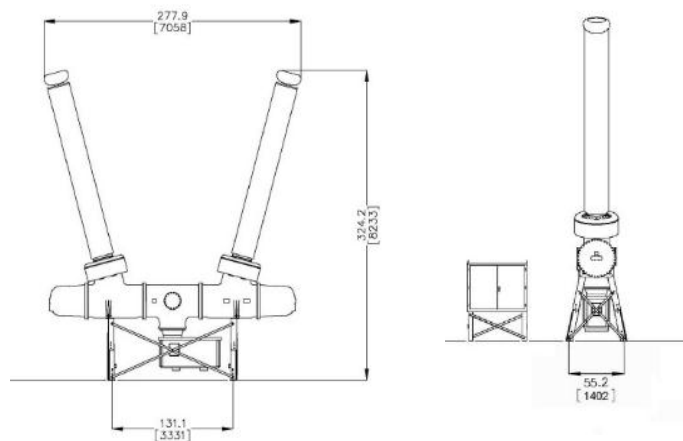
*Rating available upon request.

**Please contact GE Vernova for special purpose high TVR, high X/R or other ratings requirement.

Installation and Maintenance

The DT2-550 is factory tested, adjusted and prepared for shipment with the bushings disassembled. On-site installation requires only a few simple steps. Thanks to the low energy spring mechanisms and low pressure hydraulic mechanisms, the DT2-550 is considered virtually maintenance free.

Dimensions



For more information, visit
[gevernova.com/grid-solutions](https://www.gevernova.com/grid-solutions)

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GEA-N50012
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