



**BATTERY CHARGER /  
RECTIFIER**

# **BDTe Series 50–2000 A**

## **Key features**

- ▶ Based on well proven technology platform
- ▶ Design life of 25–30 years
- ▶ Latest digital control technology
- ▶ Clear structured front panel
- ▶ State of the art communication software
- ▶ Fully monitored system platform
- ▶ Rugged and heavy industrial design
- ▶ Intelligent battery management

## **Operational benefits**

- ▶ High reliability
- ▶ Long durability
- ▶ High degree of customization and flexibility
- ▶ Easy operation and control
- ▶ Easy access and intuitive communication
- ▶ Low operational costs
- ▶ Low maintenance costs
- ▶ Extremely high degree of availability

# BDTe – The standard in reliability, functionality and serviceability

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The BDTe is a heavy-duty, thyristor-controlled rectifier, specifically designed for the harshest operating environment in industrial applications, such as oil and gas, power generation, or distribution and transmission plants. The modular and flexible system concept together with a high number of options enables a fully customized solution that allows to meet any requirement – irrespective where in the world and how specific it may be.



## Reliability through excellent design

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The outstanding reliability of the BDTe is ensured by a combination of high-end technology and robust design. In detail, the advantages are based on:

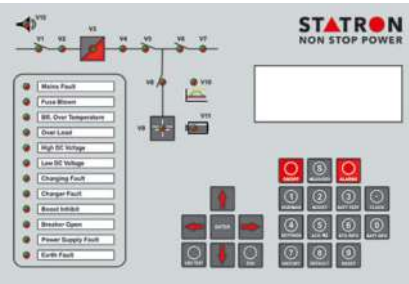
- Leading microprocessor-controlled thyristor technology
- Internal power supply with 5 independent DC converters including health monitoring
- Integrated watchdog circuits
- RS485 internal communication bus
- Ultra-cap real-time clock (RTC) back-up with time synchronization
- Dedicated I/O board with numerous configurable analogue and digital inputs
- CAN bus for parallel operation for robust digital communication
- 12-pulse operation with active load sharing (option)
- Control scheme for best diesel generator compliance
- Fully segregated, independent and redundant measuring facilities including mains power meter
- Independent microprocessor-based diode voltage dropper (DVR) controller
- On-board earth fault monitor with leakage current indication
- Real time temperature display and monitoring



## Durability due to use of proven technology

UPS solutions engineered by Statron have been protecting industrial installations for more than four decades. The outstanding durability of the BDTe is based on:

- Well proven system platform BDT
- Use of high-quality rugged industrial components
- Design life of 25–30 years
- Compliance to all relevant ISO and IEC/EN standards
- Electrical and physical integrated galvanic isolation
- Designed to withstand harsh environmental conditions (up to IP54)



## Easy Operation & Control

The front panel of the BDTe facilitates a comprehensive and flexible human machine interface (HMI). An easy and intuitive operation and control of the system is achieved through:

- Colour-coded and animated LED mimic flow diagram adapted to actual configuration
- Comprehensive 8-line LCD display
- Multi-language support
- 12 programmable alarms / indications
- Real time event recorder for 2500 events
- Continuous battery health check
- Multi-level user management
- Front access to key components to allow fast and cost-effective maintenance



## Easy accessible interface & intuitive communication

State of the art communication software and gateway supports the monitoring and control of the BDTe. Intuitive communication is achieved through:

- RS232/RS485 serial interface with MODBUS protocol
- Modbus TCP/IP interface
- PROFIBUS and IEC 61850 interface
- TCP/IP network interface with on-board web-server
- USB-stick interface for event log
- Remote display
- Programmable relays cards
- Digital inputs for EPO, generator operation etc.
- Programmable analogue inputs (battery temperature etc.) with clear text messages



## Reliable battery use and management

Battery monitoring and management is a key factor for a reliable and durable power back-up. The Statron BDTe has class leading built-in features, such as:

- Multi-string battery current monitoring
- Battery availability check
- Smart Battery Monitor (constantly updated battery capacity and battery back-up time)
- Automated / manual partial discharge testing
- Compatible with all battery types / wide DC range
- Four individual programmable battery charge voltages
- Two individual battery charge current limitation levels
- Float Current monitoring

# Technical specification | BDTe Series 50–2000 A

DC current (rating)		50 A	100 A	150 A	200 A	300 A	400 A	500 A	600 A	800 A	1000 A	1200 A	1600 A	2000 A	
<b>Rectifier input</b>															
Rectifier AC input voltage		3x400 V ±10% (3x380 V, 3x415 V, others on request)													
Rectifier input frequency		50 Hz / 60 Hz ±5%													
Rectifier input power factor		Typical > 0.8 ind.													
<b>Rectifier DC output</b>															
Nominal voltage		24 / 48 / 60 / 110 / 125 / 220 VDC													
Setting range:	Float voltage	100 – 120%													
	Boost voltage	100 – 130%													
	Initial charge voltage	100 – 150%													
DC voltage tolerance	Static	±1%													
	Dynamic	max. ±10% Vrms / ±2% Vrms within 100 ms													
DC ripple voltage		< 2% rms without battery connected (lower on request)													
Charging characteristics		IU / IUoU acc.DIN 41773													
<b>General Data</b>															
Efficiency		85% – 94% depending on model and DC load													
Noise level		55 dB(A) – 65 dB(A)													
Cooling		natural convection									forced air cooling (redundant and/or demand controlled)				
Operating temperature		–10 to +40 deg C (up to 55 deg C optional)													
Storage temperature		–30 to +80 deg C													
Maximum altitude without derating		1000 masl (up to 4000 masl with derating)													
Allowable relative humidity		< 95% (non condensing)													
Protection degree		IP20 (up to IP54)													
Colour / Paint		RAL 7035 (other colour optional)													
Safety		IEC/EN 62040-1													
EMC		IEC/EN 62040-2													
Performance & Test		IEC/EN 60146-1-1 / IEC/EN 62040-5-3													
Conformity		CE-Label													
Quality / Environment		ISO 9001:2008 / ISO 14001:2004													
Dimension (IP20, basic configuration)		1900 (2100, 2300 optional)													
Height* (mm)		1900 (2100, 2300 optional)													
Width* (mm)	24 V	600	600	600	600	800	800	800	1000	1000	1200	1600	1600	2000	on request
	48/60 V														
	110/125 V														
	220 V														
Depth* (mm)	24 V	800						800		800		on request			
	48 V	800						800		800		on request			
	110/125 V	800						800		1000		on request			
	220 V	800						1000		1000		on request			

\* dimensions for IP20 and basic configuration  
Further data available on request

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