

# INDRIVETEC AG

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### FlexConvert BESS

the flexible, compact and versatile  
energy storage system solution

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**FlexConvert BESS** is the modular and flexible electrical energy storage system for a reliable power supply and provides energy storage for a large range of applications.

From generation to consumption, **FlexConvert BESS** helps to optimize asset performance by stabilizing frequency and voltage.

**FlexConvert BESS** is perfect for self-consumption increase and back-up power for commercial and industrial application, as well as for island operations.



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## Applications and use cases

**FlexConvert BESS** can be applied to multiple uses in the industrial, commercial and utility sectors and works with highly developed and weak grids to balance energy from various sources.

### On-grid solutions

- Voltage stabilization
- Frequency regulation
- Peak load management
- Load shifting
- Energy trading
- Ramp-Rate Control
- Uninterruptible power supply

### Off-grid solution

- Islanding
- Black start capability
- Fuel Save
- Power quality
- Power reliability
- Renewable penetration

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## FlexConvert BESS-Single

the flexible, compact and versatile **one** container energy storage system solution including: Enclosure, Inverter, Battery System, EMS and Control

BESS System Parameter	FC-BESS-1000	FC-BESS-2000
Nominal power range	up to 1150 kW	up to 2500 kW
Rated capacity range	1473 kWh	2580 kWh
Grid voltage (LV option)	170 V - 690 V	
Grid voltage (MV option)	6 kV – 33 kV	
Power factor cos (φ)	0 ± 1 (four-quadrant operation) BDEW / ARN 4110	
AC nominal operating current	1260 A	2520 A
Grid frequency	50 Hz / 60 Hz	
Cell Chemistry	Lithium Iron Phosphate LiFePO4	
Rated cycle life@25 °C	> 4000 with DOD 90%	
System efficiency (round-trip)	> 88%	
Inverter data		
Type	FC1000	FC2000
Maximum AC current	1400 A	2800 A
Harmonic distortion (THD I <sub>AC</sub> )	< 3 %	
Max. inverter efficiency	98,2 %	
General data		
Dimensions (L x W x H)	20 ft. 6100x2500x2900 mm	40 ft. 12200x2500x2900 mm
Weight	20 tons	32 tons
Ambient temperature	-25... +50°C (extended range upon request)	



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## FlexConvert BESS-Dual

the flexible, compact and versatile **two** container energy storage system solution including: Enclosure, Inverter, Battery System, EMS and Control

AC-Connection	FC-PCSU-1000	FC-PCSU-2000	FC-PCSU-3000
Nominal AC Power	1000 kW	2000 kW	3000 kW
Rated apparent power	1100 kVA	2200 kVA	3300 kVA
Fault Ride Through	ARN 4110 and BDEW, other upon request		
Power factor cos (φ)	± 0 - 1.0 (four-quadrant operation)		
Grid voltage (LV-option)	170 V - 690 V		
Grid voltage (MV-option)	6 – 33 kV		
AC operating current	1260 A	2520 A	3780 A
Maximal AC current	1400 A	2800 A	4200 A
Grid frequency	50 Hz/60 Hz		
Max. efficiency	98.2 %		
DC-Connection			
Compatible storage	Lithium-Ion, NAS, Redox-Flow, Lead Acid, SoNiCl, fuel cells		
Renewables	Solar, Wind, Bio-energy, Ground heat		
Max. DC current	1350 A	2600 A	4200 A
DC voltage-range	270 VDC — 1150 VDC		
General data			
Container size	20ft. Container		40 ft. Container
Weight	10 t	12 t	20 t
Operation temperature	-25... +50°C (extended range upon request)		



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## FlexConvert BESS-Dual

the flexible, compact and versatile **two** container energy storage system solution including: Enclosure, Inverter, Battery System, EMS and Control

Battery System Parameter	IDT BESS-1475	
Cell Chemistry	Lithium Iron Phosphate LiFePO4	
Rated capacity	1440 Ah	
Rated energy	737 kWh	1475 kWh
Charge / discharge current	0.5C	1C
FlexConvert BESS-Dual	FC-PCSU-1000 and FC-PCSU-2000	
Rated cycle life@25 °C	> 5000 with DOD 90%	> 4000 with DOD 90%
Rated voltage	1024 VDC	
DC voltage range	832 — 1152 VDC	
Cells in series	320	
Charging method	CC-CV	
General data		
Dimensions (L x W x H)	ISO 20 ft. Container 6100 x 2500 x 2900 mm	
Weight	16 tons	
Ambient temperature	-20... +50°C	
Noise level	< 78 dB(A) at 1 m distance	
Max. working altitude	1000 m (higher altitudes available upon request)	
Cooling	Forced air cooling	
Transportation Safety	UN 38.3 / IEC 62281	
Fire extinguishing system	Can be integrated upon request	



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## FlexConvert BESS-Dual

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Battery System Parameter	IDT BESS-3686	
Cell Chemistry	Lithium Iron Phosphate LiFePO4	
Rated capacity	3600 Ah	
Rated energy	1834 kWh	3686 kWh
Charge / discharge current	0.5C	1C
FlexConvert BESS-Dual	FC-PCSU-2000 and FC-PCSU-3000	
Rated cycle life@25 °C	> 5000 with DOD 90%	> 4000 with DOD 90%
Rated voltage	1024 VDC	
DC voltage range	832 — 1152 VDC	
Cells in series	320	
Charging method	CC-CV	
General data		
Dimensions (L x W x H)	ISO 40 ft. Container 12200 x 2500 x 2900 mm	
Weight	39 tons	
Ambient temperature	-20... +50°C	
Noise level	< 78 dB(A) at 1 m distance	
Max. working altitude	1000 m (higher altitudes available upon request)	
Cooling	Forced air cooling	
Transportation Safety	UN 38.3 / IEC 62281	
Fire extinguishing system	Can be integrated upon request	

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## Battery cell specifications

Lithium Iron Phosphate (LiFePO<sub>4</sub>)

Highest Energy density per volume

Superior intrinsic safety of Lithium Iron Phosphate

Thermal runaway temperature >250°C

Extinguishable with normal water

100% usable energy

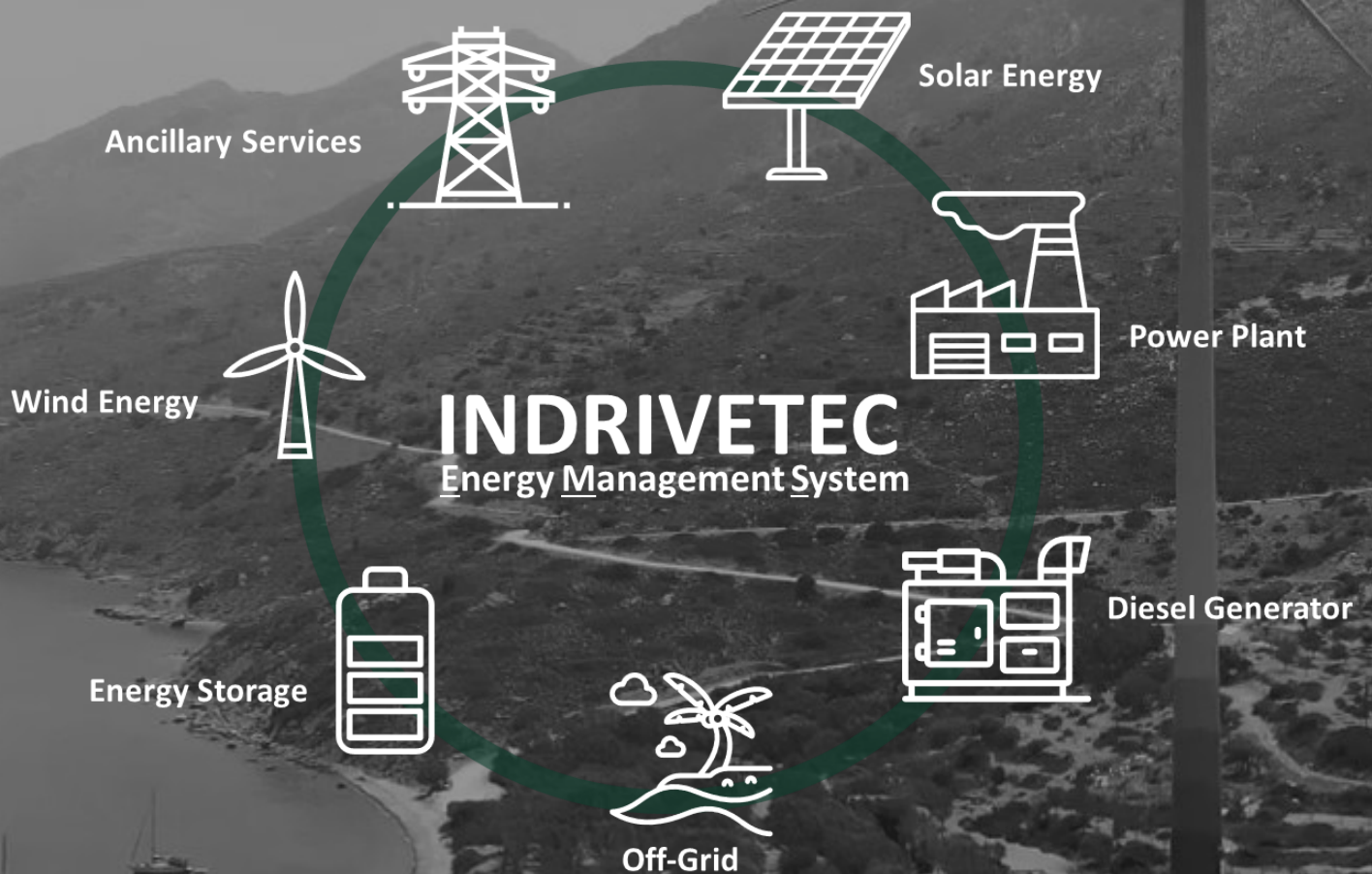
Power availability over entire State of charge range

LFP Lithium composition has the highest cycle life

The battery module has a modular design



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INDRIVETEC Energy Management System EMS has been design to monitor, control, and optimize the performance of the generation of renewable or transmission systems.

The EMS ensures the connection between the renewable energy sources, the gensets and loads and ensures maximum security and also minimizes CO2 emissions, fuel and maintenance costs.

The EMS Monitor enables the user to monitor their installations and to analyse the current load and grid conditions.



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## Service, commissioning and maintenance

Indrivetec offers its customers an interesting range of servicing and repair work. We keep devices, installations and systems in good shape thanks to preventive maintenance and servicing and ensure rapid repair.



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