

# NorthStar BLUE+ Series

## Pure Lead Carbon Batteries

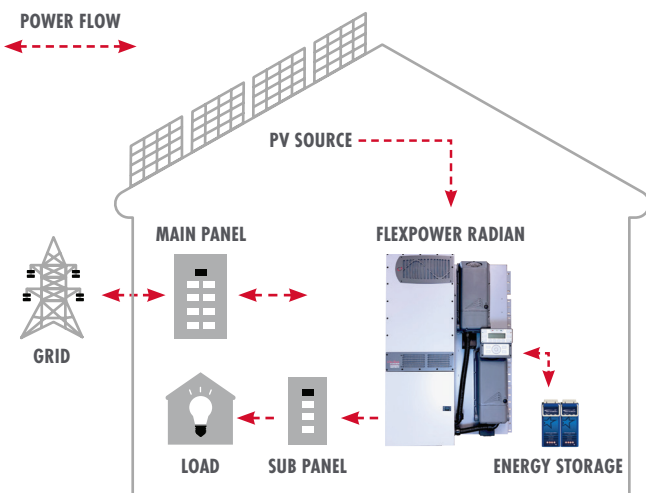


- Ideal use for off-grid and self-consumption applications
- Up to 2,050 cycles @ 50% DoD
- Exceptional fast charge acceptance
- Tolerant to high temperatures
- Pure lead extends life and efficiency
- Advanced carbon chemistry allows PSoC operation and extends battery life
- 24 month shelf life at 25°C
- 3 year warranty

**The NorthStar NSB BLUE+ (Pure Lead Carbon) is a front terminal 12VDC VRLA AGM battery offering a pure lead thin plate technology with an advanced carbon additive.**

NorthStar BLUE+ is an innovative solution specially designed to withstand today's demanding off-grid and self-consumption applications. The BLUE+ is built using a Thin Plate Pure Lead (TPPL) technology, providing low internal resistance allowing it to accept higher charge rates and tolerant to higher operating temperatures compared to traditional VRLA AGM batteries.

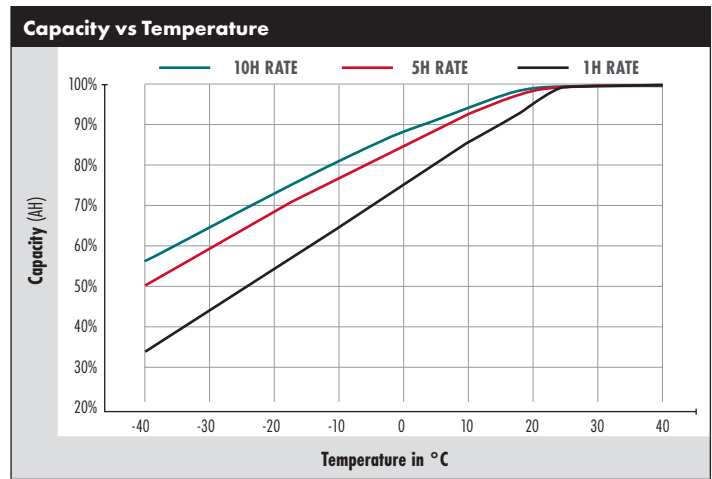
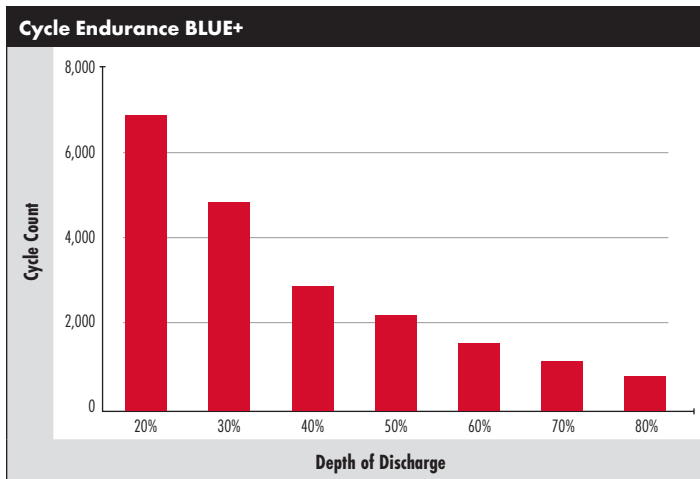
This allows for a fast recharge acceptance, combined with the advanced carbon chemistry. The BLUE+ delivers outstanding energy throughput, and high cyclic life. It has the ability to operate in a partial state of charge (PSoC) environment. The resulting combined solution gives its users the benefit of a reduced operational cost compared to traditional VRLA AGM batteries. In addition, the BLUE+ requires no periodic watering, no re-torquing of terminal connections and at the end of life, batteries are 96% recyclable.



Model:	NorthStar NSB BLUE+
Cells Per Unit	6
Nominal Voltage	12VDC
Cycle Life (50% DOD)	Up to 2050
Absorb Voltage (25°C)	14.1VDC
Absorb Time	4 Hours
Float Voltage (25°C)	13.6VDC
Float Time	Continuous
Equalize Voltage and Charge Frequency	14.4VDC, 4 hours, every 12 months
Re-Bulk Voltage	12VDC
Max. Charge Current (per Battery)	No limit
Min. Charge Current (per Battery)	2 × 110 hour rate
Max. Operating Temperature Range (w/Temperature Compensation)	-40 to 65°C
Temp-Comp Factor (Charging)	-2mV per degree C per cell
Self-Discharge Time	24 months at 25°C (77°F) before a freshening charge is required.
Terminal Type	M8 for NSB40FT & NSB100FT. M6 for NSB170 and higher.
Terminal Hardware Torque	8.0 Nm (71 in-lbs)
Warranty	3 years
Accessories	Ships with interconnecting flexible links, hardware and covers

Model:	NSB40FT BLUE+	NSB100FT BLUE+	NSB170FT BLUE+	NSB190FT BLUE+	NSB210FT BLUE+ *
System Dimensions H × D × W (in)	9.8 × 3.8 × 8.2	15.6 × 4.2 × 11.3	22 × 4.9 × 12.6	22 × 4.9 × 12.6	22 × 4.96 × 12.9
Weight (lb)	31	74	132	136	152

Discharge in Hours:	12V Ampere Hour Capacity to 1.75 Volts Per Cell @ 77°F (25°C)									
	1	2	3	4	5	8	10	20	100	
NSB40FT BLUE+	29.5	32.4	33.9	34.8	35.6	37.1	37.8	40.4	40.4	
NSB100FT BLUE+	75.6	86	91	94.1	96.3	100	101.5	105.3	105.3	
NSB170FT BLUE+	117.4	136.9	147.3	154.1	159	168.2	172.1	182.3	182.3	
NSB190FT BLUE+	134.9	152.2	160.7	166.2	170.4	179.5	184.2	202.4	202.4	
NSB210FT BLUE+	148.1	168.9	178.6	184.6	188.9	179.5	201.6	216.5	216.5	



\*NSB210FT BLUE+ does not physically fit in OutBack's Integrated Battery Rack (IBR)

