



NorthStar Red Batteries



Red Star Technology[®] uses advanced Pure Lead AGM electro-chemistry to deliver long float life even at elevated temperatures.

- 15 year float life at 20°C (68°F)
- 4 year float life at 40°C (104°F)
- EUROBAT design life definition: Long Life (12+ years)
- High energy density
- Operating temperature range:
-40°C to +65°C (-40°F to 149°F)
- State-of-the-art automated manufacturing ensures consistency and reliability
- Advanced 3 stage terminal design to ensure leak-free operation - brass terminals provide maximum performance
- 2 year shelf life at 25°C (77°F)
- High modulus Polyphenylene Oxide (PPO) plastic materials designed to withstand extended elevated operating temperatures and maintain high battery compression essential for reliable operation
 - Non-halogenated, thermally sealed plastic casing
 - Flame retardant (UL 94 VO) and LOI of at least 28%
- Integral handles and front access terminals ensure ease of installation and maintenance
- Approved as non-hazardous cargo for ground, sea, and air transport - DOT 49CFR173.159(d), (i) and (ii)



SPECIFICATIONS



NSB 13TT Red



NSB 125TT Red



NSB 40FT Red



NSB 60FT Red



NSB 92FT Red

Height	129 mm (5.1 in)	275 mm (10.8 in)	208 mm (8.2 in)	263 mm (10.4 in)	264 mm (10.4 in)
Width	175 mm (6.9 in)	345 mm (13.6 in)	97 mm (3.8 in)	108 mm (4.2 in)	108 mm (4.2 in)
Length	83 mm (3.3 in)	173 mm (6.8 in)	250 mm (9.8 in)	287 mm (11.3 in)	396 mm (15.6 in)
Weight	5 kg (11 lbs)	45 kg (98 lbs)	14 kg (31 lbs)	21 kg (45 lbs)	30 kg (66 lbs)
Terminal Torque	6.0 Nm / 53 in-lbs	8.0 Nm (71 in-lbs)	8.0 Nm / 71 in-lbs	8.0 Nm / 71 in-lbs	8.0 Nm / 71 in-lbs
1 hour capacity to 1.70 VPC*	10 / 10 Ah	101 / 106 Ah	29 / 30 Ah	44 / 46 Ah	67 / 70 Ah
3 hour capacity to 1.75 VPC*	12 / 12 Ah	116 / 119 Ah	34 / 35 Ah	51 / 52 Ah	79 / 82 Ah
8 hour capacity to 1.75 VPC*	13 / 13 Ah	126 / 129 Ah	39 / 39 Ah	58 / 59 Ah	90 / 91 Ah
10 hour capacity to 1.80 VPC*	13 / 14 Ah	127 / 129 Ah	40 / 40 Ah	59 / 60 Ah	91 / 92 Ah
Float voltage*	2.29 / 2.27 VPC	2.29 / 2.27 VPC	2.29 / 2.27 VPC	2.29 / 2.27 VPC	2.29 / 2.27 VPC
Impedance (1KHz)	11.5 m Ω	2.7 m Ω	4.1 m Ω	4.8 m Ω	3.7 m Ω
Conductance	326 S	1,952 S	1,042 S	965 S	1,344 S
Short circuit current	650 A	3,600 A	1,500 A	2,100 A	3,200 A
Nominal voltage	12 V	12 V	12 V	12 V	12 V



NSB 100FT Red



NSB 110FT Red



NSB 155FT Red



NSB 170FT Red



NSB 190FT Red

Height	287 mm (11.3 in)	227 mm (8.9 in)	280 mm (11.0 in)	320 mm (12.6 in)	320mm (12.6in)
Width	108 mm (4.2 in)	125 mm (4.9 in)	125 mm (4.9 in)	125 mm (4.9 in)	125mm (4.9in)
Length	396 mm (15.6 in)	560 mm (22.0 in)	560 mm (22.0 in)	560 mm (22.0 in)	560mm (22.0in)
Weight	33 kg (72 lbs)	39 kg (86 lbs)	53 kg (117 lbs)	55 kg (121 lbs)	60 kg (132 lbs)
Terminal Torque	8.0 Nm / 71 in-lbs	8.0 Nm / 71 in-lbs	8.0 Nm / 71 in-lbs	8.0 Nm / 71 in-lbs	8.0 Nm (71 in-lbs)
1 hour capacity to 1.70 VPC*	77 / 81 Ah	82 / 85 Ah	114 / 119 Ah	126 / 131 Ah	143 / 150 Ah
3 hour capacity to 1.75 VPC*	89 / 92 Ah	97 / 99 Ah	131 / 135 Ah	156 / 160 Ah	171 / 176 Ah
8 hour capacity to 1.75 VPC*	98 / 100 Ah	107 / 109 Ah	148 / 150 Ah	171 / 174 Ah	188 / 191 Ah
10 hour capacity to 1.80 VPC*	99 / 100 Ah	109 / 110 Ah	151 / 154 Ah	172 / 174 Ah	191 / 193 Ah
Float voltage*	2.29 / 2.27 VPC	2.29 / 2.27 VPC	2.29 / 2.27 VPC	2.29 / 2.27 VPC	2.29 / 2.27 VPC
Impedance (1KHz)	3.9 m Ω	2.6 m Ω	2.3 m Ω	3.3 m Ω	2.6 m Ω
Conductance	1,298 S	1,841 S	2,240 S	1,554 S	2,041 S
Short circuit current	3,500 A	3,800 A	5,000 A	6,000 A	6,000 A
Nominal voltage	12 V	12 V	12 V	12 V	12 V

* Capacity and float voltages given at 20°C (68°F) and 25°C (77°F)

Delivering reliable and sustainable power to the world.



ADVANTAGES

Pure Lead Thin Plate AGM Technology

Conventional flooded and AGM lead acid batteries use lead alloys with additives which increase the strength so they can withstand the handling during the battery making process. The downside of using these alloys and additives is that the batteries suffer from faster corrosion and component aging. Conventional batteries must also allow space inside the battery for positive grid growth.

The manufacturing process used by NorthStar eliminates the need for lead alloys, additives, and wasted space. The plates are inserted into the battery under high compression, which improves performance characteristics, virtually eliminating life limiting failures in high vibration applications.

NorthStar batteries have a longer lifetime and virtually no internal grid growth. Unlike conventional batteries, Pure Lead AGM batteries never experience catastrophic failures.



NorthStar Advanced Manufacturing

NorthStar products are designed to be ultra-high performance and premium quality, with a much longer lifetime than standard products. But to build batteries to such a high standard requires the latest robotic processing and manufacturing technology.

That's why we built the industry's most technologically advanced battery manufacturing facilities in Missouri, USA. We don't cut corners by outsourcing to other countries - all NorthStar batteries are proudly made in the USA.

Our facilities are also built and run to meet the toughest possible environmental requirements, to prevent lead poisoning of the surrounding air, ground, and water.

Our mission is to deliver reliable and sustainable power to the world. Don't settle for an inferior product - when you need the best, you need a NorthStar Battery.



CONTACTS



NorthStar in the Americas

NorthStar Battery Company LLC
4000 Continental Way
Springfield, MO, 65803,
United States of America
info@northstarbattery.com
Tel: +1 417 575 8200
Fax: +1 417 575 8250

Netsphere in Hongkong

Rm 1203, 12/F, Kwong Sang Hong Centre
151-153 Hoi Bun Road
Kwun Tong, Hong Kong
sales@netsphere.com.hk
Tel: +852 2344 3728
Fax: +852 2344 3778

Netsphere in Thailand

919/431, 36/F, Jewelry Trade Center
Silom Road, Silom Bangrak
Bangkok 10500 Thailand
sales@netsphere.co.th
Tel: +66 2 630 3368
Fax: +66 2 630 3367



All NorthStar batteries are compliant with:
Telcordia SR4228, IEC 60 896; Bellcore GR-63-Core, Issue 1; British, German, and Russian telecom standards; UL approved. NorthStar is registered to ISO 9001 and ISO 14001.

www.northstarbattery.com

