

# NSB 100FT Red Battery®

Long float life at elevated temperatures



Red Star Technology® uses pure lead plates to deliver **exceptionally long float life even at elevated temperatures.**

- Pure lead AGM technology delivers long float life for telecom applications even at elevated temperatures
- 15 year float life at 20°C (68°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 - female M8 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)

**HELIOS**  
POWER SOLUTIONS

**NorthStar**®

Helios Power Solutions

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ECO-100527

# NSB 100FT Red Battery®

## Nominal Technical Specifications



### Electrical

	International Standard 20°C (68°F)	North American Standard 25°C (77°F)
8 hour capacity to 1.75 VPC	98 Ah	100 Ah
10 hour capacity to 1.80 VPC	99 Ah	100 Ah
Float Voltage	2.29 +/- 0.02 Volts/Cell	2.27 +/- 0.02 Volts/Cell
Nominal Voltage	12 V	
Impedance (1kHz)	3.9 mΩ @ 25°C (77°F)	
Conductance	1,298 S	
Short Circuit Current	3,500 A	

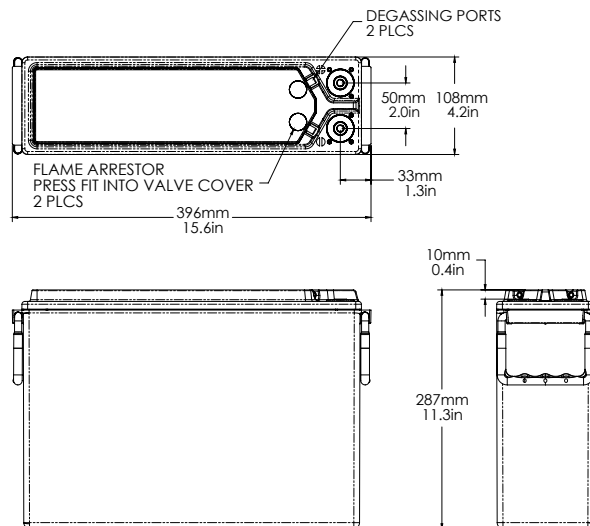
### Dimensions

Height	287 mm (11.3 in)	Weight	33 kg (72 lbs)
Width	108 mm (4.2 in)	Terminal	Female M8 x 1.25
Depth	396 mm (15.6 in)	Terminal Torque	8.0 Nm (71 in-lbs)

### Ah Capacity Ratings @ 25°C (77°F)

Capacity Discharge / hours	1	2	4	8	10
Capacity @ 25°C /Ah	81	88	94	100	100
End of Discharge / VPC	1.70	1.75	1.75	1.75	1.80

### Drawings



All NorthStar batteries are compliant with: Telcordia SR4228, IEC 60896; Bellcore GR-63-Core, Issue 1; British, German, and Russian telecom standards; UL approved. NorthStar is registered to ISO 9001 and ISO 14001.

# Northstar 100FT Red Battery™



## Discharge Tables - 20°C (68°F)

### Current / A

Duration		End of Discharge Voltage								
Mins	Hours	1.85	1.80	1.75	1.70	1.67	1.65	1.60	1.55	1.50
2	0.03	268.2	330.1	395.2	460.3	497.7	521.4	574.6	615.9	642.1
5	0.08	251.9	289.6	326.8	361.9	381.4	393.5	420.0	439.9	452.3
10	0.17	204.0	225.1	245.1	263.4	273.3	279.4	292.3	301.9	307.7
15	0.25	170.4	184.3	197.2	208.9	215.0	218.8	226.8	232.6	236.0
20	0.33	146.6	156.6	165.8	173.9	178.2	180.8	186.3	190.2	192.4
30	0.50	115.2	121.2	126.6	131.4	133.8	135.3	138.4	140.5	141.7
45	0.75	87.8	91.2	94.3	96.9	98.3	99.1	100.7	101.8	102.3
60	1	71.2	73.5	75.5	77.1	78.0	78.5	79.5	80.1	80.4
120	2	41.1	41.8	42.5	43.0	43.3	43.5	43.8	43.9	43.9
180	3	29.0	29.5	29.8	30.1	30.2	30.3	30.5	30.5	30.5
240	4	22.5	22.8	23.0	23.2	23.3	23.4	23.5	23.5	23.5
300	5	18.4	18.6	18.8	19.0	19.1	19.1	19.2	19.2	19.2
480	8	12.0	12.1	12.3	12.4	12.4	12.4	12.5	12.5	12.6
600	10	9.7	9.9	10.0	10.1	10.1	10.2	10.2	10.3	10.3
1200	20	5.1	5.2	5.3	5.4	5.4	5.5	5.5	5.6	5.6

### Capacity / Ah

Duration		End of Discharge Voltage								
Mins	Hours	1.85	1.80	1.75	1.70	1.67	1.65	1.60	1.55	1.50
2	0.03	8.9	11.0	13.2	15.3	16.6	17.4	19.2	20.5	21.4
5	0.08	21.0	24.1	27.2	30.2	31.8	32.8	35.0	36.7	37.7
10	0.17	34.0	37.5	40.9	43.9	45.6	46.6	48.7	50.3	51.3
15	0.25	42.6	46.1	49.3	52.2	53.8	54.7	56.7	58.1	59.0
20	0.33	48.9	52.2	55.3	58.0	59.4	60.3	62.1	63.4	64.1
30	0.50	57.6	60.6	63.3	65.7	66.9	67.7	69.2	70.3	70.8
45	0.75	65.8	68.4	70.7	72.7	73.7	74.3	75.5	76.3	76.7
60	1	71.2	73.5	75.5	77.1	78.0	78.5	79.5	80.1	80.4
120	2	82.1	83.7	85.0	86.1	86.6	86.9	87.5	87.8	87.9
180	3	87.1	88.4	89.4	90.3	90.7	90.9	91.4	91.6	91.6
240	4	90.1	91.2	92.2	93.0	93.3	93.5	93.9	94.1	94.1
300	5	92.1	93.2	94.1	94.9	95.3	95.5	95.8	96.0	96.0
480	8	95.7	96.9	98.0	98.9	99.3	99.6	100.0	100.3	100.4
600	10	97.2	98.6	99.8	100.8	101.3	101.6	102.2	102.6	102.8
1200	20	102.1	104.3	106.3	108.1	109.0	109.6	110.7	111.7	112.3

### Power / W per cell

Duration		End of Discharge Voltage								
Mins	Hours	1.85	1.80	1.75	1.70	1.67	1.65	1.60	1.55	1.50
2	0.03	475.2	569.7	666.6	761.5	815.4	849.3	924.6	982.7	1019.5
5	0.08	470.0	528.1	584.3	636.4	664.9	682.5	720.6	749.1	766.8
10	0.17	390.5	423.0	453.3	480.6	495.2	504.0	522.9	536.7	545.0
15	0.25	329.6	351.0	370.7	388.1	397.2	402.8	414.5	422.8	427.6
20	0.33	285.2	300.7	314.7	326.9	333.4	337.2	345.2	350.9	354.0
30	0.50	225.5	234.9	243.3	250.5	254.2	256.4	261.0	264.1	265.7
45	0.75	172.6	178.1	182.9	187.0	189.1	190.3	192.8	194.4	195.1
60	1	140.4	144.0	147.2	149.9	151.3	152.1	153.6	154.6	155.0
120	2	81.2	82.6	83.8	84.8	85.2	85.5	86.0	86.3	86.3
180	3	57.5	58.3	59.0	59.6	59.8	60.0	60.3	60.4	60.4
240	4	44.6	45.2	45.7	46.1	46.3	46.4	46.6	46.7	46.7
300	5	36.5	37.0	37.4	37.7	37.8	37.9	38.1	38.2	38.2
480	8	23.8	24.1	24.4	24.6	24.7	24.7	24.8	24.9	24.9
600	10	19.4	19.6	19.9	20.0	20.1	20.2	20.3	20.4	20.4
1200	20	10.3	10.4	10.6	10.7	10.8	10.8	10.9	10.9	11.0