

# NSB 92FT *Red Battery*<sup>®</sup>

Long float life at elevated temperatures



*Red Star Technology*<sup>®</sup> 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)



# NSB 92FT 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	90 Ah	91 Ah
10 hour capacity to 1.80 VPC	91 Ah	92 Ah
Float Voltage	2.29 +/- 0.02 VPC	2.27 +/- 0.02 VPC
Nominal Voltage	12 V	
Impedance [1kHz]	3.7 mΩ @ 25°C [77°F]	
Conductance	1,344 S	
Short Circuit Current	3,200 A	

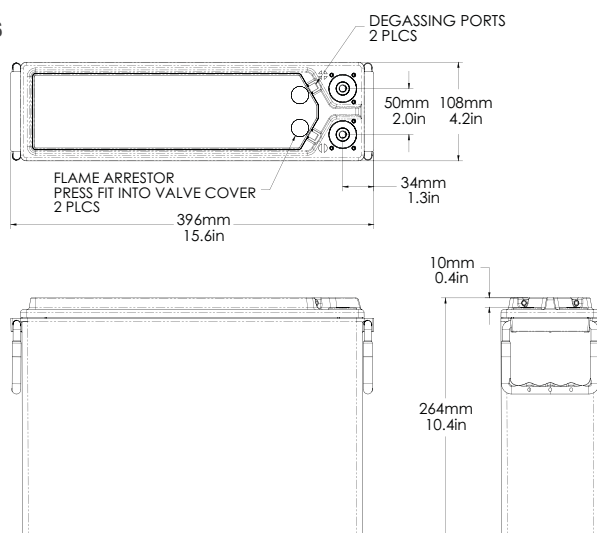
### Dimensions

Height	264 mm (10.4 in)	Weight	30 kg (66 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	70	77	85	91	92
End of Discharge / VPC	1.70	1.75	1.75	1.75	1.80

### Drawings



# Northstar 92FT 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	247.7	306.3	367.8	428.8	463.5	485.4	533.5	569.4	590.1
5	0.08	225.9	258.4	290.5	321.0	338.0	348.5	371.9	389.9	401.7
10	0.17	180.5	197.5	213.7	228.6	236.8	241.9	253.1	261.9	268.0
15	0.25	150.1	160.8	170.8	180.0	184.9	188.0	194.8	200.1	203.8
20	0.33	128.9	136.3	143.2	149.5	152.8	154.9	159.5	163.0	165.5
30	0.50	101.2	105.4	109.3	112.8	114.6	115.8	118.2	120.1	121.4
45	0.75	77.2	79.5	81.6	83.4	84.3	84.9	86.1	87.0	87.6
60	1	62.7	64.2	65.5	66.6	67.2	67.5	68.2	68.7	69.0
120	2	36.5	37.0	37.4	37.7	37.8	37.9	38.1	38.1	38.1
180	3	25.9	26.2	26.5	26.7	26.7	26.8	26.8	26.8	26.8
240	4	20.2	20.4	20.6	20.8	20.8	20.9	20.9	20.9	20.9
300	5	16.6	16.8	17.0	17.1	17.1	17.2	17.2	17.2	17.2
480	8	10.9	11.1	11.2	11.3	11.4	11.4	11.5	11.5	11.5
600	10	8.9	9.1	9.2	9.3	9.4	9.4	9.5	9.6	9.6
1200	20	4.8	4.9	5.0	5.2	5.2	5.3	5.4	5.5	5.5

## 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	8.3	10.2	12.3	14.3	15.5	16.2	17.8	19.0	19.7
5	0.08	18.8	21.5	24.2	26.8	28.2	29.0	31.0	32.5	33.5
10	0.17	30.1	32.9	35.6	38.1	39.5	40.3	42.2	43.6	44.7
15	0.25	37.5	40.2	42.7	45.0	46.2	47.0	48.7	50.0	50.9
20	0.33	43.0	45.4	47.7	49.8	50.9	51.6	53.2	54.3	55.2
30	0.50	50.6	52.7	54.7	56.4	57.3	57.9	59.1	60.0	60.7
45	0.75	57.9	59.6	61.2	62.5	63.3	63.7	64.6	65.3	65.7
60	1	62.7	64.2	65.5	66.6	67.2	67.5	68.2	68.7	69.0
120	2	72.9	73.9	74.7	75.4	75.7	75.8	76.2	76.3	76.3
180	3	77.8	78.7	79.4	80.0	80.2	80.3	80.5	80.5	80.5
240	4	80.9	81.8	82.5	83.1	83.3	83.4	83.6	83.6	83.6
300	5	83.1	84.1	84.8	85.5	85.7	85.9	86.1	86.2	86.2
480	8	87.3	88.6	89.7	90.7	91.1	91.4	91.9	92.2	92.3
600	10	89.2	90.7	92.1	93.3	93.9	94.3	95.0	95.6	95.9
1200	20	95.3	98.1	100.7	103.1	104.4	105.3	107.3	109.1	110.6

## 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	453.0	536.4	621.9	706.1	754.4	785.2	855.0	911.8	952.2
5	0.08	416.4	467.8	517.5	563.6	588.7	604.2	637.8	662.9	678.2
10	0.17	337.7	366.6	393.3	417.2	429.9	437.5	453.5	464.7	470.8
15	0.25	283.9	302.7	319.8	334.8	342.6	347.2	356.9	363.4	366.6
20	0.33	245.8	259.1	271.1	281.4	286.7	289.9	296.4	300.7	302.7
30	0.50	195.3	203.0	209.7	215.5	218.5	220.2	223.7	226.0	227.0
45	0.75	150.8	154.8	158.4	161.4	162.9	163.8	165.6	166.7	167.2
60	1	123.5	125.9	128.1	129.9	130.8	131.3	132.4	133.1	133.4
120	2	72.9	73.5	74.0	74.5	74.7	74.9	75.2	75.4	75.5
180	3	52.2	52.5	52.7	52.9	53.1	53.1	53.3	53.4	53.5
240	4	40.8	41.0	41.2	41.4	41.5	41.5	41.6	41.8	41.8
300	5	33.5	33.7	33.9	34.1	34.2	34.2	34.4	34.4	34.5
480	8	21.9	22.2	22.4	22.6	22.7	22.8	22.9	23.0	23.0
600	10	17.9	18.2	18.4	18.6	18.7	18.8	18.9	19.0	19.0
1200	20	9.4	9.7	10.0	10.3	10.4	10.4	10.6	10.6	10.6

# Northstar 92FT Red Battery™



Discharge Tables - 25°C (77°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	274.9	339.9	408.1	475.8	514.4	538.6	592.0	631.9	654.9
5	0.08	245.9	281.4	316.3	349.5	368.0	379.5	404.9	424.5	437.3
10	0.17	193.9	212.2	229.6	245.6	254.4	259.9	271.9	281.4	287.9
15	0.25	160.1	171.5	182.2	192.0	197.3	200.5	207.7	213.4	217.4
20	0.33	136.8	144.7	152.0	158.6	162.2	164.4	169.2	173.0	175.7
30	0.50	106.7	111.2	115.3	118.9	120.8	122.0	124.6	126.6	128.0
45	0.75	80.9	83.3	85.5	87.4	88.4	89.0	90.2	91.2	91.8
60	1	65.4	67.0	68.3	69.5	70.1	70.4	71.2	71.7	71.9
120	2	37.7	38.2	38.6	38.9	39.1	39.2	39.3	39.4	39.4
180	3	26.7	27.0	27.2	27.4	27.5	27.5	27.6	27.6	27.5
240	4	20.7	20.9	21.1	21.3	21.3	21.4	21.4	21.4	21.4
300	5	17.0	17.2	17.3	17.5	17.5	17.5	17.6	17.6	17.6
480	8	11.1	11.3	11.4	11.5	11.6	11.6	11.7	11.7	11.7
600	10	9.0	9.2	9.3	9.5	9.5	9.6	9.6	9.7	9.7
1200	20	4.8	4.9	5.1	5.2	5.3	5.3	5.4	5.5	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	9.2	11.3	13.6	15.9	17.1	18.0	19.7	21.1	21.8
5	0.08	20.5	23.4	26.4	29.1	30.7	31.6	33.7	35.4	36.4
10	0.17	32.3	35.4	38.3	40.9	42.4	43.3	45.3	46.9	48.0
15	0.25	40.0	42.9	45.6	48.0	49.3	50.1	51.9	53.4	54.3
20	0.33	45.6	48.2	50.7	52.9	54.1	54.8	56.4	57.7	58.6
30	0.50	53.3	55.6	57.6	59.5	60.4	61.0	62.3	63.3	64.0
45	0.75	60.6	62.5	64.1	65.5	66.3	66.7	67.7	68.4	68.8
60	1	65.4	67.0	68.3	69.5	70.1	70.4	71.2	71.7	71.9
120	2	75.3	76.3	77.2	77.9	78.2	78.4	78.7	78.8	78.8
180	3	80.0	80.9	81.6	82.2	82.4	82.5	82.7	82.8	82.8
240	4	82.9	83.8	84.5	85.1	85.3	85.4	85.6	85.7	85.7
300	5	84.9	85.9	86.7	87.3	87.6	87.7	88.0	88.0	88.0
480	8	88.7	90.0	91.2	92.1	92.6	92.9	93.4	93.7	93.8
600	10	90.4	92.0	93.4	94.6	95.2	95.6	96.4	96.9	97.2
1200	20	96.1	98.8	101.4	103.8	105.2	106.1	108.1	109.9	111.5

## 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	502.7	595.2	690.1	783.6	837.2	871.3	948.8	1011.8	1056.7
5	0.08	453.3	509.3	563.4	613.6	641.0	657.9	694.5	721.7	738.5
10	0.17	362.9	393.9	422.6	448.3	461.9	470.1	487.3	499.3	505.8
15	0.25	302.8	322.9	341.1	357.1	365.4	370.4	380.6	387.6	391.1
20	0.33	260.9	275.0	287.7	298.7	304.3	307.7	314.6	319.1	321.3
30	0.50	205.9	214.0	221.1	227.2	230.3	232.1	235.9	238.3	239.3
45	0.75	157.9	162.2	165.9	169.0	170.6	171.6	173.4	174.6	175.2
60	1	128.8	131.4	133.6	135.4	136.4	136.9	138.1	138.8	139.1
120	2	75.3	75.9	76.5	76.9	77.2	77.3	77.6	77.9	78.0
180	3	53.6	53.9	54.2	54.4	54.5	54.6	54.8	54.9	55.0
240	4	41.7	42.0	42.2	42.4	42.5	42.5	42.6	42.8	42.8
300	5	34.2	34.4	34.6	34.8	34.9	35.0	35.1	35.2	35.3
480	8	22.3	22.6	22.8	23.0	23.1	23.2	23.3	23.4	23.4
600	10	18.1	18.4	18.7	18.9	19.0	19.1	19.2	19.2	19.3
1200	20	9.4	9.8	10.1	10.3	10.4	10.5	10.6	10.7	10.7