

TELECOM



ALL NORTHSTAR PRODUCTS ARE COMPLIANT WITH:

- ✦ Telcordia SR4228
- ✦ Bellcore GR-63-Core, Issue 1
- ✦ DOT 49CFR173.159(d) (i) and (ii)
- ✦ UL Approval
- ✦ British and German telecom standards

Northstar Battery Company is proud to be registered to ISO-9001:2000 and ISO-14001 standards.

NSB 90 FT

KEY FEATURES

- Specifically designed for mission-critical applications. Excels at high-rate discharge and recharge, extreme temperature range, deep or shallow cyclic applications.
- High cyclic life capability +500 C/3 @ 80% DOD.
- 10 year float life at 25°C (77°F) — 15 year float life at 20°C (68°F).
- Flame retardant (UL 94 VO) PC-ABS plastic case and cover.
- 3 step terminal seal design to ensure leak-free operation. Female M8 brass terminals provide maximum high rate performance and no annual retightening.
- Integral handles ensure ease of handling.
- Approved as non-hazardous cargo for ground, sea and air transportation.

ELECTRICAL CHARACTERISTICS

Refer to the NSB detailed performance tables for additional current, capacity and power information.

	Int'l Standards @ 20°C □	NA Standards @ 77°F
8 hour capacity to 1.75 VPC □	86.4 amp-hours □	87.1 amp-hours □
10 hour capacity to 1.80 VPC □	87.7 amp-hours □	89.0 amp-hours
Float voltage □	2.29 +/- .02 volts per cell □	2.27 +/- .02 volts per cell
Cyclic Recharge □	2.45 VPC — no current limit	
Shelf life □	2 years	
Impedance (1KHz) □	2.9 m □	
Short Circuit Current □	3,000 Amps □	
Voltage □	12 Volts □	

MECHANICAL CHARACTERISTICS

	SI Units □	English Units
Height □	255.0 mm □	10.04 inches □
Width □	107.6 mm □	4.24 inches
Length □	396.0 mm □	15.59 inches
Weight □	31.1 kilograms □	70.6 pounds
Terminal Torque □	8.0 Newton-meters □	71 inch-pounds

NOTHING IS MORE RELIABLE

NSB+90+FT

PERFORMANCE TABLES @ 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	433.9	491.5	547.7	600.6	629.8	647.9	687.8	718.5	738.4
5	0.08	304.5	334.9	363.4	389.0	402.6	410.8	428.0	440.0	446.2
10	0.17	213.0	229.2	243.9	256.8	263.4	267.4	275.4	280.5	282.6
15	0.25	167.4	177.9	187.4	195.5	199.7	202.1	206.9	209.9	211.0
20	0.33	139.2	146.8	153.6	159.3	162.2	163.9	167.2	169.1	169.7
30	0.50	105.6	110.2	114.2	117.6	119.2	120.2	122.1	123.2	123.4
45	0.75	78.7	81.3	83.6	85.5	86.4	86.9	88.0	88.5	88.6
60	1	63.2	64.9	66.4	67.6	68.2	68.6	69.2	69.6	69.6
120	2	36.2	36.8	37.2	37.6	37.8	37.9	38.2	38.3	38.3
180	3	25.7	26.0	26.2	26.4	26.5	26.6	26.7	26.8	26.8
240	4	20.0	20.2	20.4	20.5	20.6	20.6	20.7	20.7	20.8
300	5	16.4	16.6	16.7	16.8	16.9	16.9	17.0	17.0	17.0
480	8	10.8	10.9	11.0	11.1	11.1	11.1	11.2	11.2	11.0
600	10	8.8	8.9	9.0	9.1	9.1	9.1	9.2	9.2	9.2
1200	20	4.6	4.7	4.8	4.9	4.9	5.0	5.0	5.0	5.0

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	14.5	16.4	18.3	20.0	21.0	21.6	22.9	23.9	24.6
5	0.08	25.4	27.9	30.3	32.4	33.5	34.2	35.7	36.7	32.7
10	0.17	35.5	38.2	40.7	42.8	43.9	44.6	45.9	46.8	47.1
15	0.25	41.8	44.5	46.8	48.9	49.9	50.5	51.7	52.5	52.7
20	0.33	46.4	48.9	51.2	53.1	54.1	54.6	55.7	56.4	56.6
30	0.50	52.8	55.1	57.1	58.8	59.6	60.1	61.0	61.6	61.7
45	0.75	59.0	61.0	62.7	64.1	64.8	65.2	66.0	66.4	66.5
60	1	63.2	64.9	66.4	67.6	68.2	68.6	69.2	69.6	69.6
120	2	72.4	73.5	74.5	75.3	75.7	75.9	76.3	76.6	76.6
180	3	77.1	77.9	78.7	79.3	79.6	79.8	80.1	80.3	80.4
240	4	80.1	80.8	81.5	82.0	82.3	82.4	82.8	83.0	83.0
300	5	82.2	82.9	83.5	84.1	84.3	84.5	84.8	85.0	85.1
480	8	86.2	87.1	87.8	88.4	88.7	88.9	89.3	89.5	89.7
600	10	88.0	89.0	89.8	90.5	90.9	91.1	91.6	91.9	92.0
1200	20	92.8	94.8	96.5	98.0	98.7	99.1	99.9	100.4	100.4

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	808.7	898.5	983.9	1061.9	1104.0	1129.7	1184.6	1224.3	1247.2
5	0.08	580.0	628.0	672.2	711.2	731.6	743.8	768.8	785.6	793.4
10	0.17	411.2	437.1	460.5	480.5	490.8	496.8	509.0	516.5	519.4
15	0.25	325.4	342.5	357.6	370.5	377.0	380.8	388.3	392.9	394.3
20	0.33	272.0	284.3	295.2	304.4	309.0	311.6	316.8	319.9	320.7
30	0.50	207.5	215.1	221.7	227.1	229.8	231.4	234.4	236.1	236.5
45	0.75	155.4	159.8	163.6	166.8	168.3	169.2	170.8	171.8	171.9
60	1	125.3	128.2	130.7	132.8	133.8	134.3	135.4	136.0	136.1
120	2	72.2	73.2	74.1	74.8	75.1	75.3	75.7	75.9	75.9
180	3	51.4	52.0	52.4	52.8	53.0	53.1	53.3	53.4	53.4
240	4	40.1	40.5	40.8	41.1	41.2	41.3	41.4	41.5	41.5
300	5	33.0	33.3	33.5	33.7	33.8	33.9	34.0	34.1	34.1
480	8	21.7	21.9	22.1	22.2	22.3	22.3	22.4	22.4	22.5
600	10	17.7	17.9	18.1	18.2	18.3	18.3	18.4	18.4	18.4
1200	20	9.4	9.5	9.7	9.8	9.9	9.9	10.0	10.0	10.0